SYNTACTIC RESTRUCTURING IN THE NOMINAL DOMAIN

A SYNTACTIC RESTRUCTURING ANALYSIS FOR A CLASS OF
PSEUDO-NOUN INCORPORATED BARE NOUN STRUCTURES IN
CANTONESE

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A thesis submitted to the Department of Linguistics & Languages and the School of
Graduate Studies of McMaster University in partial fulfilment of the requirements
for the degree of Master of Science.

Descriptive Note

Lay Abstract

I explore how idiomatic-like interpretations arise for certain combinations of Cantonese verbs and objects. For example, when the verb *read* appears with most objects like *this novel* or *a book*, *read* has the transparent meaning of *reading*. However, when *read* appears with *book*, *read book* has the idiomatic-like interpretation of *studying*. I argue that this idiomatic-like interpretation of *read book* is due to the internal structure of a class of nouns like *book* (in the context of *read book*) being more simplex than common nouns, and these simplex forms are known as *bare nouns*. This simplicity explains the interpretational contrast between *read book* and *read* with other objects. To explain the occurrence of these simpler structures, the theoretical proposal generalises existing observations about the syntax of subordinate clauses to noun objects. Therefore, the current proposal makes broader predictions about natural language syntax.

Abstract

I propose a novel structural characterisation for a class of bare nouns in Cantonese. In the Chinese linguistic tradition, these nouns are considered nominal complements of Verb-Object *Separable Compounds* and *Light Verb Constructions* (LVCs). I show that these bare nouns are structurally truncated nPs, and do not project a numeral phrase (#P) nor a division phrase (DivP, i.e. Borer, 2005). I argue that this structural truncation analysis accounts for the bare nouns' structural and Pseudo-Noun Incorporation (PNI) semantic properties. In the broader analysis, I show that the PNI effects of these bare nouns are directly caused by their truncated structure. I propose a novel formalisation which predicts the connection between the truncated nominal structure and PNI, by using a syntactic restructuring approach to explaining the phenomena. I extend Wurmbrand and Lohninger (2019)'s Implicational Complementation Hierarchy model for restructured clausal complements to the nominal domain, ultimately arguing that the bare noun phenomena is too, restructuring. The present analysis contributes novel insight and an alternative formal approach to understanding *Separable Compounds* and LVCs, which attributes their properties to a truncated nominal. Additionally, the thesis proposes an alternative explanation to some PNI phenomena, which I argue necessarily stems from a truncated nominal syntax. Finally, the overarching novel claim of the thesis is that restructuring is not limited to clausal phenomena. I adopt Wurmbrand and Lohninger (2019)'s *free merge* and interface modulation approach to restructuring, which predicts restructuring beyond subordinate clauses. As the current analysis assumes *free merge*, it makes broader predictions about how the syntax principally combines.

Acknowledgements

I am intellectually, professionally, and personally indebted to my academic supervisor, Dr. Ivona Kučerová for her guidance throughout my degree and for the opportunity to experience the lovely community in the Centre for Advanced Research in Experimental and Applied Linguistics (ARiEAL). I would like to sincerely thank her for her patience, and the time she dedicates to nuturing myself and other student colleagues in their appreciation for formal linguistic theory and rigorous scientific research. I would like to also express my sincere gratitude to Dr. Alison Biggs, who has consistently provided intellectual and professional mentorship to me throughout my degree.

I would like to thank my peers in the Syntax Lab, for giving me the opportunity to repeatedly practice and refine my proposal, and also for supporting me with critical feedback. An additional thank you must go out to the individuals who attended Read-and-Write Bootcamp in the last few months of my thesis writing, who have provided me with significant moral and intellectual support. I can now admit that this workshop was first and foremost a selfish endeavour to ensure the completion of this thesis, however I do hope that my fellow participants' productivity also benefitted from everyone elses participation as much as I did. I must also express my thanks to the audience at the Montreal-Ottawa-Toronto-Hamilton (MOTH) 2024 conference, who had seen the preliminary version of this proposal and given me useful advice and a confidence boost to commit to my ideas.

Finally, I would like to mention that a large professional endeavour such as this thesis would have been impossible without the endless everything-support from a few special people. First, my lovely parents, who are persistently intent on my pursuit of anything that brings me joy and fulfillment. Second, Brenda Marchand, who consistently fed me and extended her kindness and moral support to me during my whole degree. And most importantly, Ethan Stollar, for whom I cannot really find the words to express my deepest and most sincere gratitude to, because they are the person that carried me through the toughest and unforgiving moments in the last few years.

List of Abbreviations

ABS	Absolutive
ACC	Accusative
Asp	Aspect
Cl	Classifier
CL	Clitic
COMP	Complementizer
DEG	Degree Phrase (e.g. very)
EMPH	Emphatic
END	Resultative particle - *to the end*
FACT	Factual Mood
FUT	Future
GEN	Genitive
ICH	Implicational Complementation Hierarchy
IMP	Imperfective Aspect
INF	Infinitive
NEG	Negation
NI	Noun Incorporation
NOM	Nominative
PERF	Perfective Aspect
PERF	Present
PL	Plural
PROG	Progressive Aspect
PST	Past
SG	Singular
VCl	Verbal Classifier
1/2/3	1st/2nd/3rd Person
#	Numeral

Contents

1   A Restructuring Analysis for Bare Noun Complements

In this thesis, I argue for a novel structural characterisation of a class of Cantonese bare noun complements, which project up to an nP structure (a categorising projection). These bare nouns contrast canonical nominal complements which are not structurally truncated and project up to #P (a numeral phrase). The bare noun complements are part of VP constructions which are known in the Chinese linguistic literature as Verb-Object *Separable Compounds* and *Light Verb Constructions* (Chao, 1968; Huang, 1984, 2014; Li & Thompson, 1981; Luo, 2022; Matthews & Yip, 2011), and the current syntactic characterisation accounts for the properties of a subset of *Separable Compounds* and *Light Verb Constructions*. I show that a structural truncation theory accounts for the syntactic and semantic properties of the bare nouns, such as their incompatibility with structural elements like numerals and classifiers, and their subsequent semantic incorporation (pseudo-noun incorporation) at the semantic interface. I provide a supporting, novel pseudo-noun incorporation account to fully explain the bare nouns' semantic properties by adopting Luo (2022)'s semantic analysis of incorporated bare nouns in Mandarin.

Ultimately, I argue for a broader syntactic account to explain the properties of the bare nouns, by extending the intuitions from clausal *restructuring* literature to the nominal domain. I argue that the bare nouns restructure with their sister verb, adopting the perspective that restructuring phenomena is primarily a result of verbs merging with truncated complement structures of varying sizes (e.g. CP, TP, *v*P) which correspond to varying structural and semantic complexities (Wurmbrand & Lohninger, 2019). I provide a novel formalisation of the structure-semantic correlations, by proposing a nominal version of Wurmbrand and Lohninger (2019)'s Implicational Complementation Hierarchy, which I show accurately reflects the properties of the nominal phenomena from a restructuring perspective. I show that as a result of restructuring, both truncated nominal and clausal complements parallel in broader structural and semantic outcomes. The overarchingly shared property of both domains is that the structural truncation of complements triggers systematic interpretive effects at the semantics interface. I argue for syntactic restructuring of nominals, under the assumption that restructuring is the result of a *free merge* syntax (Chomsky et al., 2019) which is modulated by the interfaces (Wurmbrand & Lohninger, 2019). Therefore, the bare noun phenomena are readily explained by an account of syntactic restructuring in the nominal domain.

The current analysis broadly contributes a novel perspective of syntactic restructuring, in which I argue that restructuring is not restricted to clause-level phenomena. This theoretical account predicts that restructuring can potentially generalise even further, to domains outside of verbs and their complement (e.g. adjuncts, specifier relationships, and other syntactic categories), given that the analysis hinges on a *free merge* syntax. This account provides further arguments for a *free merge* syntax, which contrasts syntactic proposals that are underpinned by a c-selectional theory of syntax. Therefore, this analysis makes predictions about how syntactic structures

principally combine.

The narrower structural analysis, which provides a formal characterisation for the syntactic and semantic properties of the Cantonese bare noun complements, provides a novel contribution to Chinese linguistic theory in two main ways. For one, the formal analysis contributes an alternative approach to understanding constructions which have been descriptively characterised as Verb-Object *Separable Compounds* and *Light Verb Constructions*. *Separable Compounds* and *Light Verb Constructions* have also been analysed from a lexicalist perspective, where they have mixed properties of both lexical and phrasal items (Feng, 2019; Huang, 1984, 2014; Liao, 2014). The current analysis introduces a novel non-lexicalist approach to explaining the properties of a subset of *Separable Compounds* and *Light Verb Constructions*, in which I argue that many of the *Separable Compound* or *Light Verb Construction* properties can be attributed to the syntax of a truncated nominal complement. Additionally, while I preserve the empirical semantic insights from Luo (2022)'s semantic analysis of bare noun semantic incorporation in Mandarin (which I now extend to Cantonese), I argue that the pseudo-incorporation semantics are derived from a fundamentally different explanation. In the current account, I argue that this particular type of pseudo-incorporation is directly a result of a truncated nominal structure. Therefore, the present analysis also contributes an alternative explanation for the semantic properties of pseudo-noun incorporated bare noun complements in Chinese languages which I argue are derived from structure underlyingly.

In the final chapter, I tentatively extend the analysis to some cross-linguistic pseudo-noun incorporation phenomena (i.e. Niuean and Hindi). In principle, the analysis promises to extend quite robustly to pseudo-noun incorporation phenomena in other languages which are also underpinned by a truncated nominal syntax.

1.1 An Outline of the Present Proposal

I argue for a formal syntactic characterisation of the bare noun complements in (1a), which contrast the structure of canonical nominal complements in (1b). In (1a), the noun *book* only projects an *n*P, and is a *Kind*-denoting nominal which is pseudo-incorporated by its sister verb *read*.

(1) a. ngo duk su
      1.SG read book
      I study
      V BareNounObject

    b. ngo duk siu.sut
      1.SG read novel
      I read a novel
      V CanonicalObject

By contrast, canonical nominal complements like *novel* project DivP (as in Borer, 2005) and #P, and they semantically saturate the event of *reading* as a canonical object argument. The basic structural contrast between the bare nouns and the canonical nouns is made explicit in (2). In (2a) the bare noun *book* is incompatible with a numeral and a classifier, and so the VP cannot have the interpretation of

#studying once. There is no such interpretational contrast for canonical nouns when numerals and classifiers appear. The canonical nominal complements are compatible with numerals and classifiers – this is evidenced by the nominal *novel* in (2b).

(2) a. ngo duk yut bun su   b. ngo duk yut bun siu.sut/zap.zi
        1.SG read one Cl   book   1.SG read novel/magazine
        I read a book   *I read a novel/magazine*
        (#I study once)   **V CanonicalObject**
        V CanonicalObject

In this thesis, I show using novel structural tests, that this interpretational contrast is due to a structural difference of the nominal complement in (1a, 2a), versus (1b, 2b)[1]. Using novel structural tests, I show that the bare nouns are truncated complements that do not project #P and DivP.

In order to fully characterise the interpretational contrast, I provide a supplementary semantic analysis for these bare nouns. I show using novel semantic tests, that the Cantonese bare nouns empirically pattern as expected of Pseudo-Noun Incorporation (PNI) phenomena, and therefore I argue that they are pseudo-noun incorporated. I extend Luo (2022)'s semantic incorporation analysis of Mandarin bare nouns to the Cantonese bare nouns accounted for presently. In contrast to canonical VPs which denote *Events*, the PNI VPs denote *Event-kinds*. The incorporated bare nominals (such as *book* in 1a) are *Kind*-denoting whereas the canonical nominals are *Individual*-denoting. The semantic incorporation gives rise to a contrast in the interpretation of the VPs, where the PNI VP structures have an institutionalised (and sometimes idiomatic-like) *Event-kind* interpretation, which contrasts the canonical *Event-property* interpretation of canonical VPs.

I argue that this particular type of PNI incorporation is a result of truncated nominal complement structure, given that the presence of the semantic incorporation is directly correlated with the truncated structures. I show that even the diagnostic PNI properties of the bare nouns can be correlated with the absence of #P and DivP structure. Therefore, I argue for a version of pseudo-noun incorporation that is structurally based.

As the proposal argues that the semantic phenomena too are triggered by a structural condition, the core analysis for both the structural and semantic properties of this class of Cantonese bare nouns are captured by the truncated nominal syntax of the nominal complements. I argue that (3) is the relevant structure for the VPs containing bare nouns, reflecting the VP in the natural language example (1a). The

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[1]Although I do not deny that there is a necessary verbal component to analysing this structural and intepretational contrast, I show in chapter 3, that the core structural contrasts which are correlated with the interpretational effects are really derived from a difference in the structure of the nominal complement. Therefore, in this proposal, I focus on providing a systematic analysis for the bare nouns only. A detailed analysis of the verbs are beyond the scope of the current project. I leave it to future research.

bare nouns only project the nominal categorising phrase nP. I argue that this truncated structure captures the structural contrast between this class of bare nouns and canonical nominals. Because the bare nouns do not project #P and DivP, they are incompatible with numerals, classifiers, relative clauses, and most adjectives. They also cannot be coordinated with canonical nominals and cannot be topicalised. Their core semantic properties such as their lack of referentiality properties, number neutrality, and narrow scope (with respect to other scope-bearing elements) can be tied to the absence of functional structure.

(3)

```
            VP
          /    \
         v      nP
        / \    /  \
       v  √read n  √book
```
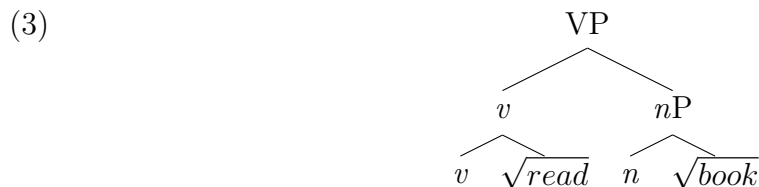
I propose that (4) is the relevant structure for VPs which contain canonical nominal complements. The nominal complement in (4) projects all the way until #P, and is fully-projected[2]. Because the canonical nominals are fully-projected, they are compatible with numerals, classifiers, and modifiers such as adjectives and relative clauses. They also are referential, are not number neutral, and can scope over scope-bearing elements. These aforementioned structural and semantic properties contrast the structural and semantic properties of the bare nouns. I argue that these contrasts are predicted and can be explained by the difference in structural size.

(4)

```
              VP
            /    \
           v      #P
          / \    /  \
         v √read #   DivP
                one  /   \
                   Div    nP
                   Cl    /  \
                        n   √book
```
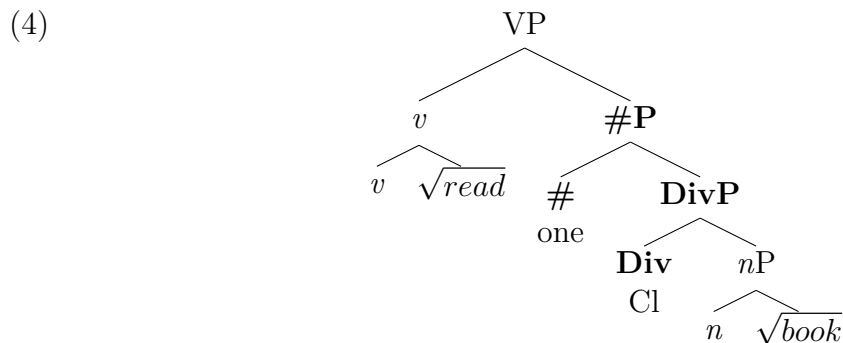
But why should verbs merge with differently sized nominal complements in the first place? I argue that truncated nominal complements are derived straightforwardly as a result of *free merge*, and that the Cantonese nominal phenomena are a result of *restructuring* in the nominal domain. I argue that the nominals restructure with their sister verb.

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[2]I follow previous analyses which assume that nominals in Cantonese and various other Chinese languages do not require a DP layer to be fully-projected complements/semantic arguments. For example, (Jenks, 2018) argues that languages like Cantonese and Mandarin that do not have a definite article (associated with a DP projection) are able to and must be able to derive definiteness by other means. I assume that a # is a fully-projected Cantonese nominal.

Cross-linguistically, clausal complements of matrix verbs appear in various structural sizes (e.g. vP, TP, CP) which results in a class of structural phenomena and semantic effects (e.g. clitic-climbing, an obligatorily shared tense with the matrix clause, an inability to introduce a subject unique from the matrix clause, increased acceptability of movement out of the restructured clause such as A-movement, scrambling, verb raising, cross-clausal NPI licensing, among others – Wurmbrand and Lohninger, 2019). One approach to restructuring is to argue that restructuring phenomena are primarily derived from verbs merging with complements of various sizes (categories), such as in Wurmbrand and Lohninger (2019), and I adopt this approach to understanding restructuring. I extend the truncated complement analysis of restructuring to the Cantonese bare noun data. I argue that the restructuring analysis extends straightforwardly to the Cantonese bare nouns, given that both truncated nominal and clausal complements share broad syntactic and semantic properties.

Broadly, the main parallelism between the Cantonese bare noun structures and clausal restructuring phenomena, the size of the complement systematically induces interpretive effects. The interpretive properties of the complement are directly correlated with the complement's structural size. For example, when the Cantonese truncated nouns project to the size of an nP, they are *Kind*-denoting nominals. In contrast, the Cantonese nominals that are fully-projected #Ps are *Individual*-denoting. In the case of clausal restructuring, structures like vPs are generally *Event*-denoting, TPs are *Situation*-denoting, and CPs are *Proposition*-denoting (Wurmbrand & Lohninger, 2019). The truncated clausal and nominal complements also influence the interpretation of their sister verb in a systematic manner. For example, the English restructuring verb *forget* has a factive interpretation when combining with a fully-projected CP complement (80a), but *forget* has an implicative interpretation when combining with a truncated infinitival TP complement (80b).

(5)   a.   She **forgot** $_{CP}$[that he watered the plants].
         (*factive*: e.g. The plant is alive.)

     b.   She **forgot** $_{TP}$[to water the plants].
         (*implicative*: e.g. The plant is dead/*factive*: e.g. The plant is alive.)

                                      Wurmbrand et al. (2022)

In the Cantonese nominal examples, when the verb *read* combines with the truncated nPs *book*, the whole VP has an *Event-kind* interpretation of *studying* (6a). In contrast, when the verb *read* combines with fully-projected nominals, it consistently maintains the interpretation of *reading* (6b).

(6)   a.   ngo   duk $_{nP}$[su]
        1.SG read $_{nP}$[book]
        I study
        Event-kind Interpretaion

b. ngo duk $_{\#P}$[siu.sut]/$_{\#P}$[zap.zi]/$_{\#P}$[yut   bun su]
1.SG read $_{\#P}$[novel]/$_{\#P}$[magazine]/$_{\#P}$[one Cl book]
I read a novel
Event Interpretation

Therefore, in both clausal restructuring and the Cantonese bare noun phenomena, the structural truncation of syntactic complements leads to systematic interpretive effects.

Following Wurmbrand and Lohninger (2019)'s Implicational Complementation Hierarchy proposal, I argue for a novel and paralleling semantic containment scale constraint for the nominal domain. Wurmbrand and Lohninger (2019) argue the complement structures grow to a size that corresponds to a particular semantic complexity (e.g. vPs roughly correspond to *Events*). They argue that the Implicational Complementation Hierarchy (ICH) is a universally obeyed hierarchy that models how clausal structure building is restricted to various sizes (7). Wurmbrand and Lohninger (2019) argue that larger structures and their associated semantic type are obligatorily more complex than the smaller structures and the associated semantic type they contain (e.g. TPs which roughly correspond to *Situations* are obligatorily more complex than vPs which roughly correspond to *Events*).

(7)
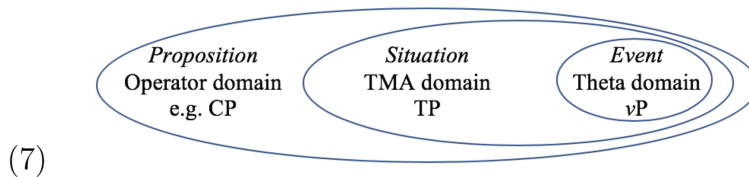
Wurmbrand and Lohninger (2019)

A structure has advanced enough in its complexity to graduate onto the next level on the ICH when that structure contains specific functional properties that are formally associated with the next level on the ICH. For example, an *Event* becomes a *Situation* if it contains any properties of the Tense-Modal-Aspect domain (7). A *Situation* becomes a *Proposition* when it contains properties of the Operator domain (7).

Given that the ICH makes explicit the correlations between structure and semantic effects, their proposal also has the advantage of capturing the interpretive effects of restructured clauses stemming from structural differences. This relationship is precisely what I argue for in the Cantonese bare noun phenomena, where I show that the pseudo-noun incorporation semantics is directly a result of a truncated structure. To reflect underlyingly structural nature of the Cantonese bare noun phenomena, I propose a novel Nominal ICH for Cantonese (8).

(8) Cantonese Nominal ICH

a. *Individual – Individuated (e.g. #P) » Kind – Non-individuated (e.g. nP)*

The ICH dictates that the Cantonese nominals grow in a containment fashion adhering to containment semantics of the proposed semantic primitives of *Individual » Kind* (8). I assume that *Individuals* are more semantically complex than *Kinds*. The structures which have the property of being individuated obligatorily contain non-individuated nominal structure. The Nominal ICH reflects that the structural size of nominal complements determines a given nominal's capacity for a class of structural and semantic outcomes, much like the structural and semantic outcomes of clausal restructuring complements which also vary in size. The ICH constraint in the nominal domain supports a theory of restructuring in both clausal and nominal domains.

In the final chapter, I tentatively extend the proposal to account for more cross-linguistic pseudo-noun incorporation phenomena which I argue are also based in a truncated nominal syntax. The cross-linguistic analysis tentatively yields a more advanced Nominal ICH (9).

(9) Nominal ICH

 a. *Individual – ?Definite (e.g. DP) » Property – Individuated (e.g. #P) » Kind – Non-individuated (e.g. nP)*

In this thesis, I argue for a novel formal analysis for a class of bare noun phenomena in Cantonese. I propose that their structural outcomes (banned interveners) and semantic outcomes (pseudo-noun incorporation) are a direct result of a truncated nominal complement syntax. To provide a theoretical motivation for truncated structures, I extend Wurmbrand and Lohninger (2019)'s theoretical approach to clausal restructuring to the nominal domain. I argue that both the Cantonese bare noun complements and the restructuring infinitival complements are broadly part of the same syntactic phenomena – *structural truncation*, of which I argue is the relevant explanation for restructuring phenomena. I propose a novel, nominal version of Wurmbrand and Lohninger (2019)'s Implicational Complementation Hierarchy to explain the interpretive effects of the Cantonese truncated bare nouns. Based on the empirical parallelisms between truncated nominal and clausal complements, I propose that syntactic restructuring occurs in the nominal domain, while also providing novel insight into the structural properties of *Separable Compounds* and *Light Verb Constructions* in Chinese languages.

2 Data

In this chapter, the basic data is introduced in the context of Chinese linguistic theory. This class of bare noun complements are part of VP constructions known in the Chinese linguistic literature as Verb-Object *Separable Compounds*, or *Light Verb Constructions* (LVCs). The current analysis provides a novel structural account for nominal complements which are part of a subset of *Separable Compounds* and LVCs. The current account of the nominal complements extends to account for the general properties of this subset of *Separable Compounds* and LVCs under a unified explanation. Therefore, the present analysis contributes a novel insight and an alternative approach to understanding *Separable Compound* and LVC structures, based in a truncated nominal syntax.

These bare nouns are object complements of verbs which pseudo-incorporate them. For example, the verb and bare noun *eat smoke/cigarette* derives the meaning of *smoking* (10a). The bare noun *cigarette* as in (10) is incompatible with a classifier (10b), and also incompatible with a combination of both a numeral and a classifier (10c). The bare noun *cigarette* in (10a) is pseudo-incorporated, such that the whole VP has the has the interpretation of *smoking* generally, not about an event of *#eating a particular cigarette*[3].

(10)   a. ngo sik yin
               1.SG eat smoke/cigarette
               I smoke (cigarettes)
               V BareNounObject

        b. #ngo sik tsi yin
               #1.SG eat Cl smoke/cigarette
               Intended:#I smoke once
               V Cl BareNounObject

        c. #ngo sik yut tsi yin
               #1.SG eat one Cl smoke/cigarette
               Intended:#I smoke once
               V Num Cl BareNounObject

Verbs that pseudo-incorporate this class of bare nouns have an *Event-kind*[4] interpretation when it combines with a particular class of nominals, which are the core of the analysis at present. For example, *eat* has the interpretation of the *Event-kind* *smoking* in (11a) when combining with the bare noun complement *cigarette*. However, *eat* in (11b) has the interpretation of *wasting (time)* or *using up (time)*, in the context that it combines with the bare noun *wind*.

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[3]This pseudo-incorporation example is a Cantonese equivalent for *smoking* in Mandarin, which is also pseudo-incorporated (as shown in Luo, 2022).

[4]to be defined in Chapter 4.

(11) a. ngo sik yin   b. sik fung
         1.SG eat smoke/cigarette   eat wind
         I smoke (cigarettes)   *(to) waste time*
         V BareNounObject   **V BareNounObject**

Although the focus of the analysis is on the bare noun structure, the syntactic context of the bare nouns appearing as verb complements is critical to understanding their properties. This is because of their semantic interactions with their verb sister (pseudo-noun incorporation) is a key prediction under a restructuring proposal. An exemplary set of Cantonese VP constructions which i) contain this class of bare nouns and ii) pseudo-incorporate these bare nouns are illustrated from (12-20). The proposal seeks to explain the structure of the bare nouns in constructions (12-20).

(12) diu yu   (15) yum zau   (18) duk su
      fish fish   drink wine   read book
      (to) fish   *(to) drink alcohol*   *(to) study*

                                                 (19) da din.wa
(13) gong siu   (16) sik yin   hit phone
      talk smile   eat cigarette   *(to) make a phone
      (to) joke   *(to) smoke*   call*

                                                 (20) da bo
(14) gong fo   (17) sik fung   hit ball
      talk class   eat wind   *(to) play a ball
      (to) give a lecture   *(to) waste time*   game*

2.1 In the Context of Descriptive Chinese Linguistic Analyses

In the descriptive tradition, the verbal constructions from (12-18) are known as Verb-Object *Separable Compounds*, and the descriptive properties of the verb and nominal complement are analysed as a unit rather than separate structural components (Chan & Cheung, 2020; Chao, 1968; Huang, 1984; Li & Thompson, 1981; Luo, 2022; Matthews & Yip, 2011). *Separable Compounds* are loosely characterised by descriptive criteria such as in Li and Thompson (1981)[5]:

(21) Structural Properties of Verb-Object *Separable Compounds* (Adapted from Li and Thompson, 1981)

      1. One or both of the constituents being bound morphemes

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[5]This is just one of various versions of criteria that have been used to characterise Verb-Object *Separable Compounds*. However, the main structural criteria represented in Li and Thompson (1981)'s criteria are consistently shared between traditional Chinese literature proposals (Chao, 1968; Huang, 1984). I refer to Li and Thompson (1981) as a reference point of traditional Verb-Object *Separable Compounds* analyses. Variation in how criterion are individuated is also minimal between classic analyses of *Separable Compounds* (Chao, 1968; Huang, 1984; Li & Thompson, 1981).

2. Non-transparently compositional semantic meaning of the entire unit

3. Inseparability or limited separability of the constituents (to be formalised in the following section *Syntactic Properties*)

4. *Implied: The construction comprises a verb and a syntactic nominal object.*

For constituents to be classified as *Separable Compounds*, they need to adhere to a portion of these criteria (Chao, 1968; Huang, 1984; Li & Thompson, 1981). I argue that these properties can be accounted for under a formal structural analysis. In the present account, I provide a formal structural characterisation for the properties that are described in (21), which I argue is primarily a result of a truncated nominal complement.

My proposal in principle extends to a subset of *Light Verb Constructions* (LVCs), such as in (19-20). In the Chinese linguistics literature, the previously proposed core distinctions between the *Separable Compounds* and the LVCs are as follows: i) *Light Verbs* contain very elementary semantics which abstractly denote an event such as "a causing, an action, a becoming, or a state" (Huang, 1997, p. 7) (an *eventive* predicate), and ii) its final interpretation is determined heavily by the nominal that it combines with (Huang, 1997, 2014; Lin, 2001). For example, the *Light Verb* in (19) and (20) contain the elementary interpretation of *a hitting action*, and in the context of (19), *hitting* is really *making a call*. By contrast, *hitting* in (20) is interpreted as *playing a ball game* which may involve hitting. I argue, that the interpretive effects from the *Separable Compunds* and LVCs from examples (12-20) pattern the same empirically.

All verbs from (12-20) have an interpretation which is systematically influenced by the structural size of the nominal complement. For example, in both LVC *Separable Compound* constructions, an *institutionalised*/idiomatic-like meaning is produced when the nominal complement is truncated (in chapter 4, I show that this insitutionalised interpretation is due to pseudo-noun incorporation).

In the *Separable Compound* (22a), the verb *eat* has the interpretation of *smoking* when combined with a truncated bare noun *cigarette*. In contrast, when the nominal is fully-projected (a #P), the verb *eat* has the interpretation of *eating* (22b).

(22) Verb-Object *Separable Compound*

    a. ngo   sik yin
       1.SG eat smoke/cigarette
       I smoke (cigarettes)
       V BareNounObject

    b. #ngo   sik yut tsi yin
       #1.SG eat one Cl smoke/cigarette
       Intended:#I smoke once; Actual: I eat a cigarette
       V CanonicalObject

In the LVC (23a), the verb *hit* has the interpretation of *playing*, when combined with the truncated nominal complement *ball*. In contrast, the verb *hit* has the interpretation of *hitting* when combined with a fully-projected nominal complement in (23b).

(23)   *Light Verb Construction*
  a. ngo   da bo
      1.SG hit ball
      I play a ball game
      V BareNounObject
  b. #ngo   da yut go bo
      #1.SG hit one Cl ball
      Intended:#I play one ball game
      V CanonicalObject

Based on the interpretational contrasts in (22) and (23), it is not obvious why there should be a systematic difference in the malleability of the verb semantics between the *Separable Compound* and the LVC. Instead, what is notable is that there is systematic correlation between the structure of the nominal and the interpretation of the whole VP.

In chapter 3, I show that the nominal complements in both *Separable Compounds* and LVCs contrast canonical nominal complements in that they do not project #P and DivP, and are therefore structurally truncated. Hence, I argue for a unified analysis for a subset of both *Separable Compounds* and LVCs, based on a truncated nominal complement syntax. I argue that both (22a) and (23a) contain truncated nominals and pseudo-noun incorporation semantics[6]. I provide further empirical justification for this correlation in the following chapters.

To summarise, there are three main empirical reasons why the proposal accounts for both *Separable Compounds* and *Light Verb constructions*: i) the nominal complements in both contexts share structural properties (truncation), ii) the nominal complements in both contexts share semantic properties (pseudo-incorporation), iii) the semantic interpretation of the verbs in both contexts the verbs display systematic semantic properties only when combined with a particular class of nominal complements. For the reasons outlined above, the current proposal does not distinguish between the subset of LVC and *Separable Compound* structures the analysis seeks to explain.

A theoretical reason to treat the two types of constructions similarly under the current account comes from predictions that stem from a broader restructuring account. Restructuring verbs from the Wurmbrand and Lohninger (2019) and Wurm-

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[6]Huang (2014) has previously argued that Chinese (e.g. Mandarin, Cantonese) LVCs such as (19) or (20) undergo a semantic (pseudo)-incorporation much like in Niuean (as in Massam, 2001). In chapter 4, I argue for a pseudo-noun incorporation semantic proposal, adopting Luo (2022)'s theory of bare noun incorporation for Cantonese.

brand (2004) proposals, which predicts semantic variation in the types of verbs that restructure. More specifically, Wurmbrand (2004) has shown that both lexical verbs and functional verbs (such as auxiliaries, which have very elementary verbal semantics) both restructure. The intuition remains that any restructuring verb is influenced by the semantics of the complement it combines with, regardless of whether they are lexical or functional (Wurmbrand, 2004; Wurmbrand & Lohninger, 2019). This intuition diminishes the core difference between what constitutes a *Light Verb* and all other verbs (such as those in *Separable Compounds*) under the assumption that *Light Verbs* are systematically distinguished from other verbs from being semantically influenced by the complement they combine with. Therefore, under my analysis where I adapt Wurmbrand and Lohninger (2019)'s restructuring analysis to the nominal domain, the proposal predicts variation in how pronounced a given verb's semantics are amongst all other restructuring verbs. As such, the current analysis should extend to *Light Verb* examples in (19) and (20).

Given that the current analytical focus is on the structure of a class of bare noun complements which have empirically consistent properties from (12-20), and the theory I am adopting assumes a degree of semantic and functional variation in the types of verbs that can restructure, I believe that these are reasons enough to justify treating the nominals in both *Separable Compounds* and LVCs under the same analysis. I leave the precise structure and semantics of the verbs from the current data of the proposal, and for future research.

The current theoretical approach sharply departs from the prior descriptive analyses of these structures as *Separable Compounds* and *Light Verb Constructions* in the following respects: i) the main claim of this thesis focuses on the nominal structure, ii) the main claim explains the structural properties of the nominal by proposing a systematic structure for the bare nominals which is shared in both *Separable Compound* and *Light Verb Construction* contexts, iii) the semantic outcomes for the verb+bare nominal constituents (pseudo-noun incorporation) are explicitly connected to the bare nominal structure, iv) the overall syntax-semantics observations are tied to similar outcomes in the domain of clausal complements, and finally, v) I remain agnostic as to whether these structures should be formally treated or labelled as compounds in the sense of the Chinese linguistic tradition or cross-linguistically. For these reasons, I treat this line of inquiry as orthogonal to the question of whether these bare nouns are parts of compounds or sisters of *Light Verbs*. The current proposal is principally focused on a theory which explains the structure of the bare nouns in the particular contexts of (12-20), which is an alternative approach to explaining the properties of Verb-Object *Separable Compounds* and LVCs. The present analysis is therefore, not concerned with how the data empirically fits (or does not fit) into either classification. As such, I leave the literature regarding *Separable Compounds* and *Light Verbs* (in the Chinese context) mostly out of the present discussion.

2.2 In the Context of Formal Chinese Linguistic Analyses

The syntax of *Separable Compounds* and LVCs have also been analysed from a lexicalist perspective in which the properties of *Separable Compounds* and LVCs are distinguished from canonical VPs due to the lexical nature of the constructions themselves (Feng, 2019; Huang, 1984, 2014; Liao, 2014). In contrast, canonical VPs are considered definitively phrasal (Feng, 2019; Huang, 1984, 2014; Liao, 2014). In the Chinese linguistic tradition, lexical elements are distinguished from phrases in accordance with the Lexical Integrity Hypothesis.

(24)   The Lexical Integrity Hypothesis (LIH)

  a. Phrasal (syntactic) rules cannot be applied to any parts inside a word.

As in Huang (1984)

Various proposals suggest that *Separable Compounds* and LVCs have mixed properties of both lexical and phrasal elements, and such properties are defined in accordance with the LIH (Feng, 2019; Huang, 1984, 2014; Liao, 2014). The *lexical* component explains why *Separable Compounds* and LVCs have limited intervention properties, while the *phrasal* component explains why the *lexical* component explains why *Separable Compounds* and LVCs have intervention properties at all.

For example, Feng (2019)'s proposal argues, under a lexicalist framework, that Verb-Object *Separable Compounds* in Mandarin (among other types of *Separable Compounds*) form a *Prosodic Word*, which is a lexical element and not a phrasal elemnet. Feng (2019) argues that the prosodic properties constrain the structure of *Separable Compounds*, which is both prosidically a word and a phrase, and therefore structurally a word and a phrase. Therefore, their prosodic makeup predicts the mixed lexical and phrasal properties of the constructions.

Feng (2019) assumes that that words are distinguished from phrases in their lexical nature, abiding by the LIH. Given the *Prosodic Word* status of the *Separable Compounds*, in which *Separable Compounds* are defined as both words and phrases, *Separable Compounds* are predicted to be susceptible to syntactic constraints. Under a system where phrases are concretely distinguished from words by their capacity for syntactic properties, it is unclear why *Separable Compounds* have syntactic properties while simultaneously maintaining a lexical status. In Chapter 3, I show empirical evidence which suggests that the class of Cantonese *Separable Compounds* and LVC structures analysed presently are susceptible to structural interveners, showing that even under a lexicalist framework that the present phenomena is structural and that the distinction which arises between a subset of *Separable Compounds* and LVCs, versus canonical VPs is syntactic.

Additionally, as highlighted in the descriptive literature (such as in 21), and also to be formalised in Chapter 4 (following Luo, 2022's account of Mandarin), *Separable Compounds* and LVCs have systematic semantic properties which distinguish

them from canonical VPs. Assuming a Y-Model where prosody is interpreted at PF, prosodic conditions should not be able to affect the semantic interface given that the interfaces do not interact. The systematic semantic properties associated with *Separable Compounds* suggests that while these constructions may have systematic prosodic properties which can be correlated to structural properties, the prosodic properties of *Separable Compounds* are a reflection of syntactic differences which distinguish them from canonical VPs.

In a non-prosody-based approach, Huang (2014) develops their observations about Mandarin (and broadly Chinese language) *Separable Compounds* and LVCs from Huang (1984) in arguing that the properties of both LVCs and *Separable Compounds* can be captured under various degrees of (Pseudo-)Noun Incorporation. For LVCs and some *Separable Compounds*, Huang (2014) argues for a covert N-to-V head movement of the nominal complements to capture the structural and semantic properties of LVCs, which results in a noun incorporation construction, which Huang (2014) maintains are lexical constructions (as in the LIH). Despite the fact that the LIH suggests that syntactic constraints should not be present within lexical items, Huang (2014)'s theory suggests that the properties of LVCs and some *Separable Compounds* are distinguished from canonical VPs due to the presence of head movement, which obligatorily obeys head movement syntactic constraints (Travis, 1984). Given that Huang (2014) broadly applies a (Pseudo-)Noun Incorporation analysis (which obligatorily has a structural component) to *Separable Compounds* and LVCs which Huang (2014) considers lexical, the analysis blurs the distinction between lexical and phrasal elements according to the LIH. At the same time, Huang (2014) application of a (Pseudo-)Noun Incorporation analysis suggestive of the intuition that structure-semantics-based analysis is necessary to articulate the syntactic (and phrasal) properties of the *Separable Compound* and LVC structures.

The LIH suggests a binary distinction between lexical and phrasal elements, which is determined by the capacity for structural constraints to apply to a particular construction. If *Separable Compounds* and LVCs obey the binary nature of the LIH, then their systematic structural properties, as shown in both Huang (2014) and Feng (2019) empirically suggest that they are phrasal elements with some additional properties that distinguish them from canonical VPs. If *Separable Compounds* and LVCs truly cannot be delineated between lexical and phrasal elements (as suggested by Feng, 2019; Huang, 1984, 2014; Liao, 2014), then these constructions empirically challenge the binary distinction set out by the LIH.

The current analysis departs from previous formal lexicalist analyses by arguing that *Separable Compounds* and LVCs are not distinct from canonical VP phrases because of the lexical nature of the constructions. The present analysis argues for an alternative approach to analysing *Separable Compounds* and LVCs in which I argue that the structural and semantic properties for at least a subset of *Separable Compounds* and LVCs are attributed to the the presence or absence of particular syntactic projections in the nominal complement. I argue that the structural properties of at

least a subset of *Separable Compounds* and LVCs can be attributed to a truncated nominal complement structure.

2.3 Chapter Summary

In this chapter, I dicuss the Cantonese bare noun complements in the wider context of the Chinese linguistic tradition. The current analysis contrasts previous descriptions of Verb-Object *Separable Compounds* and *Light Verb Consturctions*, in arguing that a subset of both systematically share the same structural and semantic properties. The current proposal also sharply departs from both formal and descriptive Chinese linguistic analyses, by positing that the defining feature of Verb-Object *Separable Compounds* and *Light Verb Constructions* are that they merge truncated nominal complements. As the proposal will show, the formal bare noun analysis accounts for a variety of the properties previously associated with Verb-Object *Separable Compounds* and *Light Verb Constructions*. As such, the current proposal provides an alternative approach to analysing a subset of *Separable Compounds* and *Light Verb Constructions* in Cantonese, and potentially other Chinese languages.

3   Structural Diagnostics

In this chapter, I argue for a novel structural characterisation of a class of nominal complements in Cantonese. These nominal complements are part of Verb-Object *Separable Compounds* and *Light Verb Constructions*, phenomena found quite commonly in Chinese languages and Cantonese (Chao, 1968; Huang, 1984; Li & Thompson, 1981; Matthews & Yip, 2011). I show that the structural and semantic properties of these nominals can be attributed to their truncated nominal structure, which contrasts canonical nominals which fully-project. I argue that this class of bare nouns are truncated, in that they do not project #P (numeral phrase) or DivP (division phrase), only projecting an *n*P structure. In contrast, canonical nominals project all the way up to #P. The truncated structural size of the bare nouns triggers systematic interpretive effects (pseudo-noun incorporation), which I provide further analysis for in the next chapter.

In (25a), the verb pseudo-incorporates its nominal complement *book* and the whole VP has the interpretation of *studying*. There is no such pseudo-incorporation relationship when the same verb *read* combines with other nominal complements. In (25b), *novel* and *magazine* are interpreted as arguments of the event of *reading* (assuming a compositional semantic model).

(25) a. ngo   duk su   b. ngo duk siu.sut/zap.zi
          1.SG read book   1.SG read novel/magazine
          I study   *I read a novel/magazine*
          V BareNounObject   **V CanonicalObject**

The main observation is that when the bare noun *book* combines with the verb *read* is interpreted as *study* and is not compatible with a numeral (#) and classifier (Cl). The interpretation of the whole VP changes depending on whether the nominal *book* appears with a # and a Cl. Without the # and Cl *read book* has the interpretation of *study* (25a). When a # and Cl appears, *read one Cl book* has the interpretation of *reading a book*, where *book* is an argument of the event of *reading* (26a).

(26) a. ngo   duk yut bun su   b. ngo duk yut bun siu.sut/zap.zi
          1.SG read one Cl   book   1.SG read novel/magazine
          Intended: #I study once;   *I read a novel/magazine*
          Actual: I read a book   **V CanonicalObject**
          V CanonicalObject

When the verb *read* combines with other nominals like *novel* or *magazine*, it maintains the interpretation of *reading* regardless of whether an overt # and Cl are present (25b, 26a). The interpretational contrast for the verb *read* only arises when the verb *read* combines with the bare noun *book*.

On the surface, this interpretational contrast may appear as a result of the lexical semantics of the noun *book* rather than its syntactuc structure. However, the inter-

pretational contrast only arises in the absence of functional items: the numeral and the classifier. This suggests that there is a correlation between a structural contrast (signalled by the presence or absence of # and Cl), and the semantic contrast. The interaction between the functional items of # and Cl and the interpretation of the VP indicate that the difference in interpretation is due to a structural contrast.

But recall that in the presence of a # and Cl, *book* is interpreted as an argument of the event of *reading*, much like how *novel* or *magazine* is interpreted as the argument of the event of *reading*. It is not true that the absence of a # and Cl alone triggers the interpretational difference. Why then, when the numeral and classifier appear absent, *book* becomes pseudo-incorporated while *novel* or *magazine* do not? The answer is, that the nominal structures in (25a) and (25b) are fundamentally different. *Book* in (25a) belongs to a class of bare nouns that do not project #P and DivP, while most nominals like *novel* project #P and DivP despite having no overt numeral or classifier. Given that other nouns outside of this class do not trigger the same semantic contrast like *book*, and are compatible with numerals and classifiers, I argue that canonical nominals such as *novel* in both (25b) and (26b) both fully-project #P and DivP.

Therefore, what underpins the interpretational difference of *book* in *read book* versus the other structures is actually a structural contrast in the size of the nominal (i.e. whether the nominal complement projects #P and DivP). What is presented here is a structural problem. The pseudo-incorporation of (25a) is reliant on the structure of the nominal complement being truncated. The 4-way contrast shown from (25a-26b) is actually a structural distinction between (25a) and (25b, 26a,26b). I argue that nominals in (25b, 26a,26b) fully-project all the way up to #P, but the nominal in (25a) belongs to a class of bare noun complements that do not project #P and DivP.

The structural and semantic properties of *read book* extend to a large number of VPs in Cantonese (an exemplary set of data was highlighted in the last chapter). A class of VP (or Verb-Object) constituents share the same structural properties of *read book*, where the combinations of select verbs and nominal complements are incompatible with the same structural interveners. This class of VP constituents also shares the same semantic properties of pseudo-incorporating the nominal objects.

(27) a. ngo yum zau   b. ngo yum sui/kuo.zup
         1.SG drink wine   1.SG drink water/juice
         *I **drink alcohol***   *I drink water/juice*
         V BareNounObject   **V CanonicalObject**

The distinctions are replicated here for *drink wine*. In (27a), *drink wine* is interpreted as an act of drinking any type of alcohol, not necessarily wine. When the verb *drink* combines with other nominals (such as *water* or *juice*), the semantic composition is transparent by comparison (27b).

(28)   a.   ngo   yum   yut bui zau
          1.SG drink one Cl   wine
          Intended: # I drink(alcohol) once;
          Actual: I drink one cup of wine
          V CanonicalObject

      b.   ngo   yum   yut bui sui/kuo.zup
          1.SG drink one Cl   water/juice
          I drink a cup of water/juice
          V CanonicalObject

Like *study*, the interpretation of *alcohol-drinking* is not compatible with a numeral and classifier – which are nominal interveners (28a). However, there is no interpretational contrast when *drink* combines with other nominals, such as *water* or *juice* (28b). Both *drink water* and *drink juice* are compatible with nominal interveners.

In this chapter, I show structural tests to prove that there is a clear structural difference between a class of nouns such as *book* in (25a) (which are semantically pseudo-incorporated) and *#-Cl-novel* or *#-Cl-book* which are interpreted as arguments of the VP event. The relevant structural difference which is tied to the semantic pseudo-incorporation is the structural size of the bare noun. The bare noun is truncated and does not project #P and DivP, whereas a canonical nominal complements are fully-projected and therefore project #P and DivP. The structural difference that is correlated to the interpretational contrast is not that of the verb, nor the structural position of the nominal.

The fact that a reduction in complement structural size is what underpins an interpretational contrast, is a pattern that is empirically mirrored in clausal restructuring phenomena (Wurmbrand & Lohninger, 2019). Therefore, I argue for a position where restructuring is not a type of phenomena restricted to the clausal domain, but rather, is a phenomena that reveals a much more fundamental property of syntactic complementation. The core property reflected in the current nominal scenario and the clausal scenario, is that syntactic complements merge as variety of syntactic categories (sizes). The property of merging different structural sizes can also be systematically correlated to shifts in the interpretation of the whole head-complement constituent at the semantic interface.

3.1   Structural Tests

3.1.1   *Complements of verbs*

This class of bare nouns have been treated as syntactic complements of verbs (Huang, 2014; Luo, 2022)[7]. I show that the bare nouns are complements of the verb

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[7]This criterion automatically excludes a subclass of verbal compounds in Cantonese (and also Mandarin) such as *worry* in (1), which can be in distribution with a direct object (1b). They are traditionally considered as part of a natural class with other Verb-Object *Separable Compounds*

like the fully-projected nominals, which suggests that the core structural-semantic contrast is isolated to the size of the nominal, and not a result of the structural position of the nominal.

The first reason is that the bare noun objects are in complementary distribution with canonical objects, which potentially suggests that they are in the same structural position in at least some point of their syntactic derivation. I provide a novel structural test in (29) which shows they complementary distribution with other canonical objects. In (29), the co-occurence of the bare noun with another nominal complement is impossible.

(29)   ngo   duk   su   (*siu.sut)
       1.SG read book (*novel)

Additionally, the VPs are ill-formed constituents without the bare noun complement in a novel ellipsis test. I assume, based on common syntactic knowledge that only well-formed constituents can be ellided when adequate discoursive context is provided. The ellipsis is ungrammatical if the verb alone is ellided in a *Question & Answer* test (30). In contrast, the verb+bare noun can be ellided together (31). The ellipsis test shows that the verb alone is not a well-formed constituent, but the verb+bare noun is. This suggests that the bare noun is a complement of the verb.

(30)   a. Q: Lei   zhong-mm-zhong.yi [duk] su?
           Q: 2.SG like-NEG-like   [read] book?
           Do you like studying?

       b. *A: Ngo   mm   zhong.yi < > su.
           A: *1.SG NEG like   < > book
           Intended: I don't like to study.

(31)   a. Q: Lei   zhong-mm-zhong.yi [duk su]?
           Q: 2.SG like-NEG-like   [read book]?
           Do you like studying?

       b. A: Ngo   mm   zhong.yi < >.
           A: 1.SG NEG like   < >
           I don't like to (study).

The ellipsis judgements together with the complementary distribution facts suggest that these bare nouns pattern as complements of their verb sister.

(Chao, 1968; Huang, 1984; Li & Thompson, 1981). I exclude structures like *worry* from the current analysis, therefore predicting that structure for constructions like *worry* systematically contrast the proposed structure for the data in (12-20).

(1)   a. dam sum   b. ngo dam sum **kui**
           carry heart   1.SG carry heart **3.SG**
           (to) worry   *I worry about them*

Because the bare nouns are complements of the verb, as are canonical complements, the structural properties that make them unique from canonical complements cannot be due to their structural position.

Another possibility is that the structure of the verb partially or wholly influences the overall interpretation of the VP. In the next section, I show that there is no detectable difference in the structure of the verb, regardless of whether the VP has a pseudo-noun incorporation interpretation. Therefore, the main correlation between structure and the pseudo-incorporation semantics is the structure of the nominal. I argue that the structural truncation of the nominal is the condition that underpins the pseudo-incorporation semantics.

3.1.2 Verbal Structure

Only particular verbs can combine with particular bare noun complements and elicit a pseudo-incorporation interpretation. For example, bare noun *book* can only combine with *read* (32a,32b). Bare noun *book* is not compatible with the structural interveners of # and Cl (32b). Despite this, I show using novel tests and theoretical assumptions from a broader restructuring account that the verb structure is not the main culprit which triggers the structural and semantic properties of these *Separable Compound* and *Light Verb Construction* VPs. Instead, the core structural property which distinguishes these VPs from canonical VPs is the truncated structure of the nominal.

The evidence for a bare noun structure comes from the nominal's incompatibility with a # and a Cl (among others). In (32b), the nominal is fully-projected, and therefore the pseudo-incorporation interpretation of *study* which requires a bare noun structure is not possible. The only possible interpretation of the VP in (32b) is *read a book*.

(32) a. ngo duk su
         1.SG read book

         I study
         V BareNounObject

b. ngo duk yut bun su
   1.SG read one Cl   book

   Intended: #I study once;
   Actual: I read a book
   V CanonicalObject

However, there is no such contrast when other verbs combine with the nominal *book*. For example, when the verb *borrow* combines with complement *book*, there is no interpretational difference in the nominal and the verb regardless of whether a # and Cl intervene (33a,33b). In both circumstances, the interpretation is that some quantity of *books* is being *borrowed*.

(33) a. ngo tse   su
         1.SG borrow book
         I borrow books
         V CanonicalObject

b. ngo tse   yut bun su
   1.SG borrow one Cl   book
   I borrow one CL book
   V CanonicalObject

I argue that the interpretational contrast between (32a, 32b) and (33a,33b) is really a structural contrast between (32a) and the other three structures. The structural contrast is that the verb *read* in (32a), but not *borrow* can combine with the bare noun *book*.

Why should only certain verbs be able to combine with truncated nominal complements? I argue that this is expected under a restructuring analysis. The basis of restructuring observations comes from the presence of a class of *restructuring verbs* that combine with infinitival clauses that are truncated (Rizzi, 1976, 1982; Wurmbrand & Lohninger, 2019). Further evidence for a class of *restructuring verbs* comes from the fact that certain verbs are more prone to combining with bare nouns and eliciting a PNI interpretation (34).

(34)   a.   ***ta* (hit):** *da din.wa* [hit phone]: make a phone call, *da bo* [hit ball]: play a ball game, *ta zim* [hit point]: cut in line

   b.   ***sik* (eat):** *sik yin* [eat smoke/cigarette]: smoke, *sik fung* [eat wind]: waste time, *sik fan* [eat rice]: have a meal

   c.   ***gong* (talk):** *gong siu* [talk smile]: joke, *gong fo* [talk class]: give a lecture, *gong ga* [talk price]: bargain

Although the verbal component of a restructuring analysis implementation remains important, I leave a detailed explication of the verbal component to future research. A detailed analysis of the verbal properties which would define this class of verbs is beyond the scope of the current proposal. The current focus of the proposal is to explain the productive presence of bare noun structures in Cantonese. In adapting a restructuring analysis for the nominal domain, I assume that the verbs that combine with the bare nouns belong to a special class which allows them to combine with bare noun complements.

Despite the fact that there is a lexical component at play where only certain verbs can pseudo-incorporate a class of nominals, I show using structural tests, that there is no striking difference in the structure of the verb, regardless of whether it patterns with the PNI interpretation or not. Therefore, the PNI interpretation does not arise due to a structural condition of the verbal projection.

A possible hypothesis is that the PNI semantics is derived from a structural difference in the verb, given that only certain combinations of verbs and nominals are incompatible with # and CL interveners and elicit a PNI interpretation. The structural tests reveal that there is no relevant difference in the structure of the verb that can be correlated with the PNI semantic interpretations. Instead, the limited intervention properties and the pseudo-incorporation semantics is underpinned by a truncated nominal structure, which I provide evidence for in the nominal structure section.

The main justification to argue that the verbal structure is not the relevant correlate for the structural and semantic properties of the class of VPs (which contain the bare nominals) is that they are compatible with verbal domain structural interveners

regardless of whether they are part of PNI structures. For example, verbs are compatible with functional aspectual morphology in both the bare noun PNI constructions (35a) and in the canonical constructions (35b, 35c). (35a) and (35b) contrast in PNI interpretation and the presence of nominal interveners, where only (35a) has PNI semantics and does not have nominal interveners. (35a) contrasts (35c), because (35c) does not have PNI semantics.

(35)   a. ngo duk-zho/-kun   su
            1.SG read-**PERF/-PROG** book
            I have studied/am studying
            V-Asp BareNounObject

        b. ngo duk-zho/-kun   yut bun su
            1.SG read-**PERF/-PROG** one Cl   book
            I have read one book/am reading one book
            V-Asp CanonicalObject

        c. ngo duk-zho/-kun   siu.sut
            1.SG read-**PERF/-PROG** novel
            I have read (a) novel(s)/I am reading (a) novel(s)
            V-Asp CanonicalObject

The pattern is consistent among different contrasting pairs of PNI versus non PNI (canonical object) structures. The difference between the PNI versus non PNI structures from (36a-37b) are in the nominal structure. This structural contrast suggests that the limited intervener and interpretational contrasts are not due to a contrast in the verbal structure.

(36)   a. ngo da-kun   bo
            1.SG hit-**PROG** bo
            I am playing a ball game
            V-Asp BareNounObject

        b. ngo da-kun   yut go bo
            1.SG hit-**PROG** one Cl ball
            I am hitting a ball
            V-Asp CanonicalObject

(37)   a. ngo yum-zho   zau
            1.SG drink-**PERF** wine
            I have drank alcohol
            V-Asp BareNounObject

        b. ngo yum-zho   yut bui zau
            1.SG drink-**PERF** one Cl wine
            I have drank a cup of wine
            V-Asp CanonicalObject

Verbs are also compatible with modificational interveners, regardless of whether or not the verbs are part of PNI structures. For example, a VP can be modified by a numeral and verbal classifier which structurally intervenes between the verb and the nominal complement[8]. This patterns the same for both the PNI (38a) and canonical VP constructions (38b,38c).

(38)   a. ngo duk leung ci   su
             1.SG read **two**   **VCl.times** book
             I study twice
             V-#-VerbalCl BareNounObject

        b. ngo duk leung ci   yut bun su
             1.SG read **two**   **VCl.times** one Cl   book
             I read a novel twice
             V-#-VerbalCl CanonicalObject

        c. ngo duk leung ci   siu.sut
             1.SG read **two**   **VCl.times** novel
             I read (a) novel(s) twice
             V-#-VerbalCl CanonicalObject

The aspectual and verbal classifying interveners can also co-occur regardless of the PNI semantics. (39a) contrasts (39b) because of the PNI interpretation of *study* in (39a), but the verb has no meaningful structural difference between the two examples.

(39)   a. ngo duk-zho   leung ci   su
             1.SG read-**PERF two**   **VCl** book
             I have studied twice
             V-Asp-#-VerbalCL BareNounObject

        b. ngo duk-zho   leung ci   yut bun su
             1.SG read-**PERF two**   **VCl** one Cl   book
             I have read one book twice
             V-Asp-#-VerbalCL CanonicalObject

Tentatively, I propose a head movement analysis to account for the linear order of the elements of the verbal projection, following the head movement intuition set out in Huang (1997). I assume that AspP projects above VP, and that the numeral+verbal classifier is an adjunct of the verb which is structurally higher than the verb[9]. Obeying the Head Movement Constraint (Travis, 1984) the verb undergoes movement locally,

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[8]Huang (1997) analyses verbal classifiers and their associated numerals as modifiers of the VP. Therefore, I assume here that they are adjuncts of the VP.

[9]Evidence for the numeral+verbal classifier as an adjunct: i) the numeral+verbal classifier is optional to the VP structure (the VP forms an acceptable constituent in absence of the numeral+verbal classifier), ii) the numeral+verbal classifier is compatible with a head movement analysis where it does not intervene due to its adjunct status, iii) it semantically patterns like adverbials, introducing additional quantifying information which modifies the event.

into Asp where it is higher than the verbal classifier. (40a) is the AspP structure prior to the head movement of the verb, and (40b) is the structure after the verb moves.

(40) a. $[_{AspP}$ **Asp** ***PERF*** $[_{VP}$ $[_{VP}$ **V** ***read*** $[_{nP}$ *n book*$]]$ $[_{?P}$ numeral VCl$]]]$

b. $[_{AspP}$ **V+Asp** ***read-PERF*** $[_{VP}$ $[_{VP}$ ***t*** $[_{nP}$ *n book*$]]$ $[_{?P}$ numeral VCl$]]]$

Given that both the aspectual and numeral+verbal classifier morphology intervene between the verb and the nominal, a morphological affix-lowering account would not be sufficient in explaining the resulting linear order of elements, assuming that affix-lowering occurs locally between heads and ignores adjuncts (Bobaljik, 1995). Affix-lowering of Asp would incorrectly predict that the numeral+verbal classifier linearly precedes the verb (41). Therefore, the account must be syntactic.

(41) *ngo leung ci duk-zho   su
      *1.SG two   Cl read-PERF book

Evidence for head movement comes from the linear order of the verb, the aspectual marking, and the verbal classifier. Assuming the *Mirror Principle* (as in Baker, 1985), the morphological order of elements (the verb, Asp, and the verbal classifier) reflects the underlying syntactic structure. The order of verbal elements in (39a) and (39b) can therefore be derived by an analysis where the verb undergoes head movement into Asp.

Additional evidence for the verb undergoing movement comes from the fact that the verbal numeral+verbal classifier is interpreted as quantifying and counting the VP event, and therefore must quantificationally scope over the VP, which includes the verbal head. I assume that quantifying elements (such as a numeral+verbal classifier) can only scope over (quantify) structural elements which they c-command (Reinhart, 1976). The linear order of the morphology of the verb, the aspectual marking, and the numeral+verbal classifier presently suggests that the verb is structurally higher than the numeral+verbal classifier. If the numeral+verbal classifier did not quantificationally scope over the event, then the sentence in (42) should be able to yield the interpretation in (42b), where the event of *studying* did *not* occur twice. Instead, the interpretation of the event having occured twice (as in 42a) is obligatory.

(42) ngo duk-zho   leung ci   su
      1.SG read-**PERF two**   **VCl** book

a. *I have studied twice.*

b. *# I have studied (not twice)*

Following the logic that quantificational elements can only scope over elements that they c-command, the obligatory interpretation where the numeral+verbal classifier scope over the event is only possible because the numeral+classifier c-commands the event structure (the VP) in the syntax.

The current analysis must account for the fact that the numeral+verbal classifier quantifies instances of the event, despite the fact that the surface linear order of the morphemes (V-Asp-two-VCl) suggest that the verb is not morphologically interpreted in structural position that is c-commanded by the numeral+verbal classifier. These co-occuring interpretational and morphological effects can be derived under a movement account (as in 40) where the verb moves to Asp, but originates from a structurally lower position as part of the VP structure where it is c-commanded by the numeral+verbal classifier. The interpretation that the event occurs twice is possible because the numeral+classifier still scopes over the verb's t and is interpreted as such.

A head movement analysis where the numeral+verbal classifier c-commands the t of the verb accounts for why i) the numeral+verbal classifier is able to scope over and quantify occurences of the event, ii) the resulting morphological linear order, and iii) there are semantic (quantificational scope) and morphological (morphological linear order) effects which connect the verb to two different structural positions.

The interaction of the verb with the external structural environment in a head movement capacity provides evidence against a lexical approach to analysing this class of Verb-Object structures as discussed in the previous chapter. For one, a lexical element should not internally obey syntactic constraints such as head movement. Additionally, the head movement analysis offers an formal account which explains the possibility of structural interveners (or separability effects) in these structures which have been described in the descriptive literature (Chao, 1968; Huang, 1984; Li & Thompson, 1981).

Since verbal structural interveners are consistently compatible with verbs regardless of whether the verb and object yield PNI semantics, I argue that there is no detectable difference between the verb structure and the PNI semantics of a given VP. The verbal structure is not truncated in either context. However, there is a detectable correlation between nominal structure and a PNI interpretation of the whole VP.

3.1.3 Nominal Structure

In this section, using novel structural tests, I argue that there is a systematic correlation between the structure of nominal complements and the pseudo-noun incorporation. Structurally, the reduced nominal complement size affects the permissible interveners between the verb and the nominal complement. The intervener bans only occur when the nominal structure is truncated, but not for canonical, fully-projected nominals. The structural tests show that the nominals in the PNI VPs cannot be categorically equivalent to canonical nominal objects, and that they are structurally truncated by comparison, since they do not project #P and DivP. I consider the truncated nouns *bare nouns.* Therefore, there is a systematic structural correlation between bare nouns and PNI semantics.

The main observation, as shown in (26a, 28a), is that nominal interveners (the

numeral and the nominal classifier) are incompatible with the PNI interpretation. The observation is reiterated below as (43a, 44a). In (43a), it is not possible to interpret *read one Cl book* in the PNI interpretation *#studying once*. The presence of the numeral and the classifier forces the canonical event argument interpretation of *a book*.

(43) a. ngo   duk yut bun su
          1.SG read one Cl   book
          Intended: #I study once;
          Actual: I read a book
          V CanonicalObject

      b. ngo duk yut bun siu.sut/zap.zi
          1.SG read novel/magazine
          I read a novel/magazine
          V CanonicalObject

In (28a), it is not possible to interpret *drink one Cl wine* as *#drinking one cup of any type of alcohol*, but the nominal must be interpreted as wine specifically. Therefore, the PNI interpretation obligatorily not available in the presence of an overt numeral and nominal classifier.

(44) a. ngo   yum yut bui zau
          1.SG drink one Cl   wine
          Intended: # I drink(alcohol) once;
          Actual: I drink one cup of wine
          V CanonicalObject

      b. ngo   yum yut bui sui/kuo.zup
          1.SG drink one Cl water/juice
          I drink a cup of water/juice
          V CanonicalObject

As signalled earlier in the chapter, the observation of an interpretational contrast is indicative of an underlying structural contrast. The systematic structural contrast lies in the correlation between the overt # and Cl not being compatible with the PNI semantics, which suggests that the syntactic functional projections of #P and DivP are not compatible with PNI semantics. Therefore, only a truncated nominal, which does not project #P and DivP can be pseudo-incorporated.

Further tests show that the PNI semantic interpretation is reliant on a truncated syntactic structure which does not project #P and DivP. Because there is a # and Cl present in examples (43a) and (44a), the nominal structure is obligatorily, fully-projected, containting #P and DivP. It is precisely because these examples are fully-projected nominals, that they cannot be pseudo-incorporated.

A core attribute of this class of bare nouns is that they ban structural interveners between them and their verb sister. These interveners are syntactic elements that are part of the nominal spine, hence the argumentation that they are structurally truncated. I have shown that numerals and classifiers are incompatible with the pseudo-incorporation interpretation, meaning that this type of pseudo-incorporation

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is restricted only to bare nouns. Other types of nominal interveners correlated with DivP are also not compatible with this class of pseudo-incorporated bare nouns.

For example, in most cases, nominal modifers are incompatible with a PNI interpretation. In (45b), the presence of the low adjective *thick* forces the interpretation of the bare noun as *book*, rather than the PNI interpretation of the VP as *studying*.

(45) a. ngo duk su
       1.SG read book
       *I **study***
       V BareNounObject

    b. #ngo zhong.yi duk hau su
       1.SG like read **thick** book
       I like to read thick books
       (**#I like to study thick books**)
       V-Adj (*Bare)NounObject

In the VP construction with the bare noun, *hit ball* is interpreted as *playing a ball game* (46a). When the low adjective (*fast*) structurally intervenes the verb *hit* and nominal complement *ball* in (46b), the *playing a ball game* PNI interpretation is no longer accessible.

(46) a. ngo da bo
       1.SG hit ball
       I play a ball game
       V BareNounObject

    b. #ngo zhong.yi da fai bo
       1.SG like hit **fast** ball
       I like to hit fast balls
       (**#I like to play ball games fast**)
       V-Adj (*Bare)NounObject

The generalisation that nominal adjectives are incompatible with nominal complements of PNI VP structures, suggest that bare nouns are structurally reduced in contrast to canonical objects. This is because canonical objects do not have restrictions on what adjectives are compatible.

There are acceptable examples of exceptional low adjectives which are compatible with exceptional PNI constructions of the type analysed presently, but these examples are uncommon ((47b)). On the whole, the generalisation still holds. In order to account for the possibility that these bare nouns can combine with some low adjectives, these bare nouns must obligatorily project an nP structure and cannot be smaller. I assume the low adjectives attach as an adjunct of the nP.

(47) a. diu yu
         fish fish
         (to) catch fish

      b. diu   dai yu
         hang/hook big fish
         (to) successfully accomplish something

<div align="center">Cantonese counterpart of Luo (2022, p. 256) Mandarin examples</div>

This class of bare nouns systematically ban modification via high adjectives[10] or relative clauses, both of which must occur with particle *GE*, which has been argued to project as an equivalent of Mandarin *de* - part of the extended classifier projection (Cheng & Sybesma, 2009; Duong, 2021), or higher as D-head (Paul, 2015). For example, it is impossible to retain the PNI interpretation of *study* from *read book*, when there is an intervening adjective+*GE* between the verb and the nominal (48).

(48) ngo   zhong.yi duk [**sum ge**]   su.
      1.SG like   read [**complex GE**] book.
      I like to read complex books. (# I like to study complex things.)

(49) #kui   sing.yut sik [**dong ge**] fong.
      #1.SG always   eat [**cold GE**] wind.
      3.SG always eat cold wind.
      (# They always waste ??cold time.)

eat wind becomes semantically strange when an adjective+*GE* is intervening the verb and nominal (49). The PNI interpretation of wasting time is unavailable when there is an intervening adjective+*GE*.

This class of bare nouns also cannot be modified by relative clauses[11] (50). Note that relative clauses in Cantonese obligate the presence of *GE*, like the high adjectives. For example, if the nominal *book* is modified by a relative clause, the VP can no longer have the PNI interpretation of *study* (50a).

(50) a. ngo   duk [**sin.san zhui zhong.yi duk ge**] su
         1.SG read [**teacher most like read GE**]   book
         I read the book that my teacher likes to read the most.
         (#I like to study the book that my teacher likes to read the most.)

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[10]I assume some structural distinction between high and low adjectives in Cantonese. I use the terms *high* and *low* descriptively. They illustrate the main contrast between the two possible positions and adjective can be spelt-out in Cantonese. Low adjectives are immediately adjacent to the noun (which I assume is structurally more local to the noun), while high adjectives appear with particle *GE* which necessarily intervenes between the high adjective and the nominal. Because the adjective that appears with *GE* is less local to the noun due to intervener *GE*, I assume that they end up higher in the nominal structure. At present, I am not committing to any proposal which argues for a structural relationship (or lack thereof) between the two descriptively different types of adjectives. Larson (1998) argues for adjectives being interpreted high and low in semantics. Perhaps Cantonese could be a language where there is actually some structural correlation for semantically high and low adjectives.

[11]I thank Keir Moulton for suggesting this structural test.

     b. ngo   yum [**mami sing.yut yum ge**] zau
          1.SG drink [**mum always drink GE**] wine
          I drink the wine that mum always drinks.
          (#I drink the alcohol that mum always drinks.)

Duong (2021) implements a version of Cheng and Sybesma (2009)'s analysis of Mandarin *de* for modifier-introducing *GE* in Cantonese, where *GE* is a functional head which is part of an extended ClP projection (the modifying adjective or relative clause would ultimately move into the Specifier of *GE*). Under the current proposal, it would be considered part of DivP. The *Limitations* section of the proposal shows i) the possibility for co-occurrence of more than one *GE* in a given DP, and ii) that there are differences in the possible interpretations of the modifiers attached to *GE* in different positions, and iii) those differences in interpretation are restricted based on their functional position. This suggests that there are various types of *GE* that are associated with different functional projections within the DP. Because it is not the focus of the current analysis, I remain agnostic to the precise structural position of Cantonese *GE*, which heads the relative clauses[12].

The important point here is that all the options for where *GE* can merge are DivP or higher. Therefore, the fact that a high adjective or relative clause construction, which necessitates the presence of *GE*, is incompatible with this class of bare nouns suggests that the bare nouns do not project DivP.

In addition to limitations on nominal interveners, this class of bare nouns show in other respects that they are not structurally or categorically equivalent to fully-projected nouns. Bare nouns such as *book* in *read book* cannot be coordinated with other nominals and retain the bare noun PNI interpretation. In (51), when *book* is coordinated with *magazine*, it is impossible to interpret the nominal *book* as part of a PNI construction which has the interpretation of *studying*. This suggests that only the fully-projected nominal *book*, which would have the interpretation of being an argument of the event of *reading*, can be coordinated with other canonical nominal objects. There is no interpretational difference between other nominals like *novel* are

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[12]Duong (2021)'s proposal does not explain the strict reading of the DP in (1).

(1)   A-Yun ge A-Ying ge soeng
      A-Yun GE A-Ying GE photo
      A-Yun's photo of A-Ying.
      (# A-Ying's photo of A-Yun.)

Adapted from Duong (2021)

In (1), the only possible interpretation is *A-Yun's photo of A-Ying*, where A-Yun is the possessor of the photo. If both *GE*'s were hierarchically equivalent, this would not predict a strict one way interpretation. This example suggests that there are two *GE*s associated with different functional projections/positions. The strict reading argument has been used to argue for *GE* as a D-head (Paul, 2015).

coordinated with *magazine* (52), versus when *novel* is not coordinated at all.

(51) ngo   zhong.yi duk **su tong zap.zi**
      1.SG like   read **book and magazine**
      I like to read books and magazines
      (#: **I like to study and read magazines**)

(52) ngo   zhong.yi duk **siu.sut tong zap.zi**
      1.SG like   read **novel and magazine**
      I like to read novels and magazines

(53) ngo   zhong.yi sik **yin tong tsoi**
      1.SG like   eat **cigarettes and vegetables**
      I like to eat cigarettes and vegetables
      (#: **I like to smoke and eat vegetables**)

(54) ngo   zhong.yi sik **yuk tong tsoi**
      1.SG like   eat **meat and vegetables**
      I like to eat meat and vegetables

The impossibility for the bare nouns to coordinate with non-bare nouns is also borne out in example (53). The meaning of *smoking* is impossible when the bare noun *cigarette* is coordinated with *vegetable*. There is no interpretational difference between other nominals like *meat* that are coordinated with *vegetables* (54), and when not coordinated at all.

The fact that bare noun complements which sytematically correlate with PNI cannot coordinate with other nominals, suggests that these bare nouns are not categorically equivalent to fully-projected, canonical nominals. A model which proposes that the bare nouns do not project #P and ClP in contrast to other nominals would predict the difference in category.

These bare nouns obligatorily cannot be definite, in contrast to nominals that fully project. Nominals that fully-project are compatible with definite demonstrative markers, while these bare nouns are not. I assume that demonstratives are associated with a higher functional projection that necessitates the appearance of #P and or ClP in Cantonese, given that they are only compatible with fully-projected nominals. The incompatibility of demonstratives with the bare nouns suggest that they do not project #P and ClP.

(55) a. *ngo   duk yi   su
          *1.SG read book
          Intended: I study this book

      b. ngo   duk yi   (yut) bun su
          1.SG read DEM (one) Cl   book
          I read this (one) book

Under certain structural conditions, the fully-projected Cantonese nominals without an overt numeral but an overt classifier can also be definite (Borer, 2005). In (56), the subject *Cl cat* without an overt numeral has a consistently definite interpretation. In (56a), *Cl fly* is ambiguous between an indefinite and definite interpretation with a preference for an indefinite interpretation. In contrast, *book* in (56b) obligatorily cannot be definite, and it is unclear whether it can be interpreted as indefinite[13].

(56)   a.   zek mau zhuk-zho   zek wu.ying
          Cl cat   catch-PERF Cl fly
          The cat caught a/the fly

      b.   ngo duk-zho   su
          1.SG read-PERF book
          I studied (# I studied a/the book)

Given that definiteness appears to have a correlation with the presence of an overt classifier (of which this class of bare nouns are incompatible with), (56b) provides further evidence to suggest that that the bare nouns are structurally truncated, given that they are incompatible with any functional structure that signal definiteness even in the absence of demonstratives.

Further evidence for the bare nominals lacking #P and DivP come from their inability to topicalise. Fully-projected nominals can acceptably topicalize if definite (59a). There is an acceptability gradient for the topicalisation of nominals, depending on its largeness and definiteness properties (as observed by Duong, 2021). For example, (58a) is strange, but still significantly more acceptable than (59a). The acceptability of the nominal topicalization improves as the structure becomes larger.

(57)   a.   yi   bun su,   ngo zhong.yi duk
          DEF.SG Cl   book, 1.SG like   read
          this book, I like to read
          topicalized fully-projected definite noun

      b.   duk yi   bun su,   ngo zhong.yi
          read DEF.SG Cl   book, 1.SG like
          Reading this book, I like to do
          topicalized V and fully-projected definite noun

(58)   a.   ?yut bun su,   ngo zhong.yi duk
          one Cl book, 1.SG like   read

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[13]In the proposal to come, I tentatively assume that only functionally individuated items can be specified for definiteness. I correlate the function of individuation with the DivP projection. Therefore, nominals that do not project DivP cannot be specified for definiteness. This explains why the class of bare nouns analysed presently are difficult to evaluate/potentially cannot be evaluated with respect to definiteness.

          one book, I like to read
          topicalized fully-projected noun

    b. duk yut bun su,   ngo zhong.yi
        read one Cl   book, 1.SG like
        Reading one book, I like to do
        topicalized V and fully-projected noun

(59) a. *su, ngo zhong.yi duk
        book, 1.SG like   read
        Intended: Studying, I like to do
        topicalized bare noun

    b. duk su,   ngo zhong.yi
        read book, 1.SG like
        Studying, I like to do
        topicalized V and bare noun

The fact that the bare nouns cannot acceptably topicalise in the same fashion as other nominals, suggests i) that the bare nouns are not structurally equivalent to other nominals, and ii) that there is a systematic bare noun structure that is associated with the PNI interpretation of the PNI constructions. The contrast between (59a) and (57a, 58a) corroborates the idea that the bare nouns are structurally truncated because the bare nouns cannot be structurally equivalent to canonical nominal objects.

3.2 Chapter Summary

In this chapter, I showed using novel structural tests that there is a structural contrast between a class of Cantonese verb-object structures where the nouns are semantically pseudo-incorporated, and other Cantonese verb-object structures. The structural contrast lies in bare nouns being structurally truncated in contrast to other nominals. They are truncated because they do not project #P and DivP. The evidence for the lack of # and DivP projection comes from the incompatibility of structural interveners that are associated with #P or DivP and the pseudo-incorporated interpretation of the nominals. The bare nouns also cannot coordinate with canonical nominals, and they also cannot topicalise like fully-projected nominals. In contrast, the verbal structure does not have any detectable difference in properties between the PNI and canonical constructions. What is relevant is that the nominal complements in the PNI VPs are systematically incompatible with numerals and nominal classifiers, unlike other canonical VPs. Based on this evidence, I argue that there is a systematic structural correlation between this class of bare noun complements and undergoing pseudo-noun incorporation.

In the next chapter, I argue that the relevant semantic analysis for the interpretation of the VPs which contain the bare nouns is semantic pseudo-incorporation. I

argue for an *Event-kind* semantic incorporation of this class of bare nouns in Cantonese (as in Luo, 2022), where the nominals aer *Kind*-denoting, contrasting canonical nominals which are *Individual*-denoting. I depart from Luo (2022)'s semantic incorporation analysis in arguing that this particular type of semantic incorporation is subtype of a broader set of Pseudo-Noun Incorporation phenomena.

The Cantonese nouns pattern as predicted by diagnostics of pseudo-noun incorporation proposals (Dayal, 2011; Massam, 2001; van Geenhoven, 1998, 2002). The value of the pseudo-incorporation analysis is in i) capturing the semantic properties of these bare nouns which contrasts other nouns ii) corroborating the current structural proposal in showing that the semantic observations can be corrolated to a missing #P and DivP, and iii) shows that nominal complement truncation is systematically tied to semantic outcomes that are predicted under a restructuring analysis of the nominals which builds on intuitions from Wurmbrand and Lohninger (2019)'s proposal.

4   Semantic Diagnostics

In this chapter, I argue that this class of Cantonese bare nouns undergo Pseudo-Noun Incorporation (PNI). This means that this class of bare nouns are semantically incorporated, but are not syntactically incorporated (i.e. Noun Incorporation). I therefore use the notional terms of semantic incorporation, pseudo-noun incorporation, or pseudo-incorporation interchangeably in the following semantic proposal, since these terms broadly illustrate that the bare nouns have a particular set of semantic properties that signal they undergo a semantic incorporation.

I argue for a pseudo-incorporation semantic analysis to explain the systematic interpretive effects of the VPs when this class of bare noun complements are present. I argue for an extension of Luo (2022)'s existing semantic proposal for *Separable Compounds* based on Mandarin data, which unlike most PNI proposals argues that the incorporated nominals denote semantic *Kinds* rather than properties. By applying semantic tests on Cantonese based on pseudo-incorporation literature (Chung & Ladusaw, 2004; Dayal, 2011; Gehrke & Lekakou, 2013; Hall, 2019; Luo, 2022; Massam, 2001; van Geenhoven, 1998, 2002), I show that the Cantonese Verb-Object constructions pattern as predicted for PNI theories. I show that Luo (2022)'s particular semantic incorporation analysis for bare noun complements of *Separable Compounds* as event-kinds is the relevant semantic analysis to explain the semantic properties of these bare nouns. Therefore, I propose that Cantonese bare nouns are incorporated as semantic *Kinds* which when composed with the verb creates an *Event-Kind*.

Luo (2022)'s terminology of *Bare Noun Incorporation* is unique from pseudo-incorporation analyses (such as Dayal, 2011) in the sense that the verb incorporates a nominal *Kind* rather than a *Property*. The semantic properties of the pseudo-incorporated nominals are otherwise generally constant, and Luo (2022)'s bare noun incorporation analysis is derived from a pseudo-incorporation semantic composition. I believe these semantic incorporation properties to be of the same class, and I group Luo (2022)'s analysis with other types of pseudo-incorporation, given that the term pseudo-incorporation itself is simply designated to contrast from a *true* syntactic incorporation (i.e. incorporation phenomena that is of the pseudo-type). Therefore, I do not assume that all pseudo-incorporation must incorporate the same semantic primitive, and compose under the same relationship. Based on these assumptions, I propose a novel perspective of Luo (2022)'s bare noun incorporation analysis as a type of pseudo-incorporation.

Ultimately, this purpose of this portion of my proposal is to show that Cantonese bare nouns undergo a pseudo-incorporation which must be derived from an underlying syntactic phenomenon of nominal truncation. Therefore, in combination with supporting empirical evidence from my novel structural tests in chapter 3, I am proposing an alternative explanation to Luo (2022)'s semantic analysis for *Separable Compounds* which pseudo-incorporate, which I argue is fundamentally derived from the structure of a truncated noun that does not project #P and DivP.

In this chapter, I first provide a brief literature overview to define pseudo-noun

incorporation phenomena and its properties. Pseudo-noun incorporation is defined with respect to *true* noun incorporation (Johns, 2017; Massam, 2001; van Geenhoven, 1998).

Next, I flesh out the semantic tests which suggest that the Cantonese bare nouns are pseudo-incorporated. I show, using semantic tests based on existing pseudo-incorporation literature, that the Cantonese nominals are pseudo-incorporated. Furthermore, I argue that the semantic properties of these bare nouns, as revealed by these diagnostics, corroborate the current structural account that they do not project #P and DivP. This is because the PNI diagnostics can be correlated with, and therefore traced back to a reduced functional structure. Therefore, the proposal offers an alternative explanation for a type of pseudo-noun incorporation which is rooted in truncated syntactic structure.

Then, I explain why Luo (2022)'s novel event-kind based pseudo-incorporation analysis of Mandarin *Separable Compounds* is the best fit semantic proposal. Given that both Mandarin and Cantonese have *Separable Compound* counterparts, I assume that an *Separable Compound* structural-semantic analysis should be overarchingly generaliseable to both languages. Despite the fact that a majority of the core semantic incorporation properties of the bare nouns cannot distinguish the bare nouns between properties and kinds, I point out several empirical reasons to argue for a kind-incorporation analysis.

Finally, I connect the semantic outcomes to the structural properties of the bare nouns. I briefly discuss how the pseudo-noun incorporation can be traced back to a truncated nominal syntax.

4.1 Pseudo-Noun Incorporation

From a syntactic perspective, Pseudo-Noun Incorporation (PNI) phenomena are defined with respect to Noun Incorporation (NI). Massam (2001) uses Pseudo-Noun Incorporation, to describe a class of bare noun phenomena in Niuean that exhibits some structural, and many semantic properties of NI as in Baker (1988), but empirically contrast the structure of fully incorporated nouns in Baker (1988).

The key structural contrast (as pointed out by Massam, 2001), is that Niuean incorporated nominals show no evidence for movement of the nominal, but still sharing other structural and interface properties with NI phenomena. Baker (1988) shows that noun incorporation is derived syntactically by head movement into V. Various NI proposals also argue for types of syntactic movement of incorporated nouns into some part of the VP (Johns, 2017). Upon movement, the verb and incorporated noun often morphologically fuse together, when the derived structures are interpreted at the interfaces (Johns, 2017). For instance, Kanien'kéha (Mohawk) is a noun incorporating language, and nouns undergo movement which results in a morphological fusing of the verb+incorporated noun together into one unit (60a)[14]. In contrast, Ni-

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[14]Renard et al. (2023) argue for a novel analysis of Kanien'kéha NI which separates the incor-

uean PNI does not reflect any movement of the noun and the verb and noun remain separate morphological units (60b).

(60) a. Kanekwarúnyu wa'-k-**akya'tawi'tsher-ú:ni**.
       it.dotted   FACT-I-**dress-make**
       I made a polka-dotted dress.
       Kanien'kéha (Mohawk) Noun Incorporation (Mithun, 1984)

    b. **Takafaga ika** tūmau nī   a   ia.
       hunt   fish always EMPH ABS he
       He is always fishing.
       Niuean Pseudo-Noun Incorporation (Massam, 2001)

PNI has some structural properties that are shared by NI phenomena (Johns, 2017; Massam, 2001). Some structural properties shared by PNI and NI are reduced valency, obligatorily close proximity of the verb and noun (structurally, and also phonologically), and a non-canonical object position (Johns, 2017). Another structural feature of both PNI and NI, is that they incorporate nominals that are structurally smaller than a non-incorporated nominals (Dayal, 2011; Luo, 2022; Massam, 2001). For example, in Niuean, nominals are generally DPs, but pseudo-incorporated nouns are systematically NPs (Massam, 2001). In Hindi, nominals are generally DPs but pseudo-incorporated nominals are arguably #Ps (Dayal, 2011). Therefore, in terms of structure, PNI is defined by a set of structural properties it shares with NI besides one: only NI, but not PNI is characterised by some syntactic movement of the incorporated noun (phrase) into some part of the VP (e.g. Baker (1988)).

Crucially, in the (P)NI literature, identification of (P)NI phenomena heavily relies upon semantic interface properties of the (pseudo-)incorporated noun. (P)NI cannot be defined purely by structural properties. The semantic literature reflects this intuition, and semantic analyses attribute a large component of the PNI properties to machinery at the semantic interface.

From a semantic perspective, NI and (P)NI nominals have the same or similar semantic properties, in that the nominal is semantically incorporated (van Geenhoven, 1998, 2002). These properties are as follows: number neutrality, limited modification, well-established interpretation (*institutionalised/common activity*), obligatorily narrow scope, incompatible with posessors, cannot be pronominals in most languages

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porated nouns between *active* and *inactive* incorporated elements. The terms *active* and *inactive* denote a structural distinction, whereby the *inactive* incorporated nominals are not syntactically categorised, but the root of the nominal projects a phrase (i.e. a $\sqrt{}$P, assuming that roots can have syntactic properties as in Harley, 2014). While this structural account may be able to explain a systematic structural and semantic binary distinction between two types of NI in Kanien'kéha, the current phenomena cannot be explained under this approach since th pseudo-incorporated Cantonese nominals can exhibit structural and semantic properties that would fall under both the *active* and *inactive* at once. For example, they PNI constructions can denote an idiomatic interpretation, and also allow limited modification of the nominal (exemplary contrasting properties of *inactives*: idiomatic interpretation, cannot be modified).

(Dayal, 2011; Gehrke & Lekakou, 2013; Hall, 2019; Johns, 2017; Luo, 2022; Massam, 2001; van Geenhoven, 1998, 2002). Crucially, a class of PNI analyses are also correlated with a truncated nominal structure (Dayal, 2011; Gehrke & Lekakou, 2013; Hall, 2019; Luo, 2022; Massam, 2001). Cross-linguistically however, there does not seem to be a single particular syntactic category that is associated with semantic incorporation (Dayal, 2011; Luo, 2022; McKenzie, 2020; van Geenhoven, 2002). In terms of semantic properties, pseudo-incorporation proposals systematically suggest that the incorporated elements are either kind or property-denoting (Dayal, 2011; Gehrke & Lekakou, 2013; Hall, 2019; Luo, 2022; Massam, 2001; McKenzie, 2020; van Geenhoven, 2002).

Additionally, van Geenhoven (1998)'s work is influential in arguing for a semantic analysis of incorporation which generalises over NI and PNI and does not rely on syntactic movement. This enables van Geenhoven (2002) to draw a meaningful semantic connection between English bare plurals, German split topics, and West Greenlandic (P)NI constructions which all semantically incorporate but do not show evidence of nominal head movement.

The intuition that semantic incorporation is independent from structure is reiterated in various other pseudo-incorporation proposals (e.g. Dayal, 2011; Gehrke and Lekakou, 2013; Luo, 2022). Despite this, a class of semantic incorporation proposals systematically use a truncated nominal structure as a systematic diagnostic indicator of semantic pseudo-incorporation (e.g. Chung and Ladusaw, 2004; Dayal, 2011; Gehrke and Lekakou, 2013; Hall, 2019; Luo, 2022; McKenzie, 2020).

An overview of (P)NI literature suggests that PNI is distinct from NI in that PNI phenomena lacks evidence for syntactic movement of the nominal into some part of the VP. Without a clearly defining structural correlate like NI (i.e. syntactic movement of the nominal), PNI is heavily defined by its semantic properties and semantic analysis of semantic incorporation. Therefore, PNI in principle can be defined by i) a set of semantic properties that has been repeatedly reproduced in (P)NI literature, a ii) a lack of a structural correlate (in to contrast NI), and iii) some limited structural correlations (e.g. obligatorily close proximity of the verb and noun). Therefore, the literature represents pseudo-noun incorporation as *mostly* a semantic phenomenon[15].

The literature also reveals that a particular class of PNI phenomena[16] are systematically associated with a truncated nominal structure. Using Cantonese as a case study, I argue that the correlation between truncated structure and PNI is not an accident. Rather, it indicates an underlying relationship between truncated syntactic

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[15]I use pseudo-incorporation and semantic incorporation interchangeably, as there is no particular reason to distinguish between the two in proving the semantic properties of the bare nouns in this section.

[16]van Geenhoven (1998) shows that a variety of types of nominal structures can semantically incorporate (pseudo-incorporate). The current hypothesis only extends to a particular class of pseudo-incorporation phenomena, which I argue is dependent on a structurally truncated nominal. The generalisation is still significant because, as I show with some suggestive cross-linguistic evidence, this pattern is cross-linguistically robust.

structure and interpretive effects at the semantic interface. Therefore, I propose a novel alternative explanation for pseudo-incorporation phenomena which hinges on an underlying structural truncation of the noun, rather than a purely semantic explanation. I propose that only structurally truncated nouns can be pseudo-incorporated.

4.2 Pseudo-Noun Incorporation Semantic Tests

In this subsection, I show using novel empirical data from Cantonese that the Cantonese nouns are semantically pseudo-incorporated. The Cantonese bare nouns share properties of pseudo-incorporated nouns from other pseudo-incorporation proposals cross-linguistically. Based on these properties, I conclude that this class of Cantonese bare nouns are systematically undergo pseudo-incorporation at the semantic interface.

Firstly, pseudo-incorporation across languages generally do not permit the semantic incorporation of pronominal structures (Dayal, 2011; Gehrke & Lekakou, 2013; Hall, 2019; Johns, 2017). Pronominals are not predicted to be able to be incorporated, because they obligatorily refer to individuals. Semantic incorporation proposals predict that only properties or kinds can be incorporated, which correctly rules out pronominals.Pronominals are not suitable candidates for pseudo-incorporation in Cantonese (61). (61) represents examples of verbs that commonly pseudo-incorporate (are in *Separable Compounds*) that cannot pseudo-incorporate or be interpreted grammatically with pronominal complements.

(61)   a. *kong kui/lei.dei/ngo
           *talk 3.SG/2.PL/1.SG
           *talk them/you(PL)/me

       b. da kui/lei.dei/ngo
           hit 3.SG/2.PL/1.SG
           hit them/you(PL)/me

       c. *duk kui/lei.dei/ngo
           *read 3.SG/2.PL/1.SG
           *read them/you(PL)/me

Even in (61b) which is grammatical, the pronominal does not have any of the other properties of a pseudo-incorporated nominal (e.g. obligatorily narrow scope, number neutrality, inability to refer, institutionalised interpretation etc.). Therefore, the pronominal in (61b) is not pseudo-incorporated. The fact that pronominals are excluded candidates for pseudo-noun incorporation in Cantonese, patterns with the expectations of a theory of pseudo-incorporation.

Number neutrality is another common diagnostic of PNI nominals, and is predicted under a semantic pseudo-incorporation proposal (Gehrke & Lekakou, 2013; Hall, 2019; Massam, 2001; van Geenhoven, 1998, 2002). The Cantonese bare nouns are obligatorily number neutral. Because the nouns are number neutral, they are ambiguous between a singular or plural interpretation. For example, *book* in (62a)

is incompatible with being interpreted as either *one/some books*. In contrast, the fully-projected nominal *book* in (62b) which has both the numeral and classifier, must be interpreted and counted as 3 individuated books.

(62) a. ngo duk su
         1.SG read book
         I study
         (**#: I read one/some books**)

   b. ngo duk sam bun su
         1.SG read three Cl   book
         I read 3 books
         (#: I have 3 study sessions)

In (63a), the bare noun *wine* is incompatible with being interpreted as either *one/some servings of wine*. In contrast, when the numeral and classifier are present, *wine* cannot be interpreted as number neutral, but is obligatorily interpreted with respect to the numeral and classifier associated quantity (63b).

(63) a. ngo yum zau
         1.SG drink wine
         I drink alcohol
         (**#: I drink one/some servings of wine**)

   b. ngo yum sam bui zau
         1.SG drink three Cl wine
         I drink 3 cups of wine
         (#: I drink 3 types of alcohol)

Examples (62) and (63) show that the bare nouns are interpreted as obligatorily number neutral in contrast to canonical nominal complements. The obligatory number neutrality of the bare nouns suggests that they are pseudo-incorporated.

The number neutrality of the bare nouns can be directly associated with the lack of functional structure – #P and DivP. Given that the function of DivP is to individuate (Borer, 2005), and #P is to count, a lack of #P and DivP predicts the number neutrality of the nominal. The truncated nouns lack the relevant functional structure to make it an individuated or countable element.

A semantic pseudo-incorporation theory predicts that the bare nouns lack referential capacity. This is borne out – like other pseudo-incorporated nominals, the Cantonese bare nouns also cannot refer (Gehrke & Lekakou, 2013; Hall, 2019; Luo, 2022; Massam, 2001; van Geenhoven, 1998, 2002). This particular class of bare nouns are unsuitable discourse antecedents. I provide a novel contrast between the bare nouns (64a), fully-projected nominals with an overt numeral and classifier (64b), and fully-projected nominals without an overt numeral and classifier (64c). The first contrast is the bare noun in (64a) and the fully-projected noun in (64b), where the bare noun cannot be co-indexed with the following discourse anaphor *Cl book*. However, the fully-projected nominal is an acceptable discourse antecedent in (64b).

(64) a. *kui hai to.su.gun duk su$_i$,   [bun su]$_i$ ho   ho   tai.
         3.SG at   library   read book$_i$, [**Cl** book]$_i$ COP good read
         #: They studied at the library, the studying/studying that one book went well.

b. kui   hai to.su.gun duk [yut bun su]$_i$,   [bun su]$_i$ ho   ho   tai.
   3.SG at library   read [one Cl   book]$_i$, [**Cl**   book]$_i$ COP good read
   They read a book at the library, that book was a good read.

c. kui   hai to.su.gun duk [siu.sut]$_i$, [bun siu.sut]$_i$ ho   ho   tai.
   3.SG at library   read novel$_i$,   **Cl**   novel$_i$ COP good read
   They read a novel at the library, the novel was a good read.

The second contrast is (64a) and (64c), where even without the presence of an overt classifier and numeral, *novel* is an acceptable discourse antecedent. This is not true for *book* (64a). The bare nouns lacking referential capacity, suggests that they are pseudo-incorporated.

Additionally, the fact that *novel* is a suitable discourse antecedent even in the absence of an overt numeral and classifier provides further evidence to suggest that the bare noun *book* in the context of *read book* has a different structure than other canonical nominal complements. Therefore, this semantic test provides additional interface evidence for the bare nouns being structurally different from other nouns that morphologically appear similar, but actually fully project #P and DivP such as *novel*. The reason why *book* cannot refer is ultimately because it is structurally truncated.

The lack of referential capacity is compatible with the idea that the structure of bare nouns like *book* are smaller than that of fully-projected nominals. Fully-projected structures (equivalents of a DP) generally correspond to semantic entities/individuals *e* which refer, but smaller nominal structures do not (Luo, 2022; Zamparelli, 2000). Because the lack of # and Div projections correlate with property of lacking referential capacity, I suggest that the property of being able to refer must be directly or indirectly parasitic on the presence of syntactic structure which is functionally equivalent to #P and DivP. Therefore, the inability to refer is a direct consequence of the structural truncation of the nominal.

PNI proposals generally predict that the incorporated nouns have obligatorily narrow scope (Gehrke & Lekakou, 2013; Hall, 2019; Luo, 2022; Massam, 2001; van Geenhoven, 1998, 2002). The following test shows that the Cantonese bare noun complements do obligatorily have narrow scope (65, 66,67).

The bare nouns cannot scope over universally quantified subjects. I provide novel Cantonese tests in (65, 66), where I assume *mui* is the universal quantifier (similar to *mei* in Mandarin as in Luo, 2022). In (65a), the the bare noun *book* (65a) cannot scope over the universally quantified subject *every student.* In contrast, a canonical nominal *one Cl book* which projects #P and DivP can (65b). Therefore, (65b) gives rise to an interpretational ambiguity, but (65a) has only the interpretation that *every student studies.* (65a) cannot mean that there is a specific book that every student is studying ($\exists > \forall$✗). In contrast, (65b) and (65c) can mean either every student reads any one book/novel ($\forall > \exists$✓), or every student reads one particular book/novel ($\exists > \forall$✓).

(65) a. mui   ko hok.san dou   duk **su**
         every Cl student DOU read **book**
         Every student studies
         i) ∀> ∃✔ ; ii) ∃> ∀✗

      b. mui   ko hok.san dou   duk **yut bun su**
         every Cl student DOU read **one Cl book**
         Every student reads one book
         i) ∀> ∃✔ ; ii) ∃> ∀✔

      c. mui   ko hok.san dou   duk **siu sut**
         every Cl student DOU read **novel**
         Every student reads one book
         i) ∀> ∃✔ ; ii) ∃> ∀✔

Similarly, in 66a, the bare noun *wine* in *drink wine* cannot scope over universally quanitified subject *every adult*. In contrast, the fully projected noun in (66b), and therefore there are two possible interpretations of the sentence: i) *every adult drinks their own cup of wine*, or ii) *every adult drinks one particular cup of wine*.

(66) a. mui   go dai.yun DOU yum   **zau**
         every Cl adult   DOU drink **wine**
         Every adult drinks (alcohol).
         i) ∀> ∃✔ ; ii) ∃> ∀✗

      b. mui   ko dai.yun dou   yum   **yut bui zau**
         every Cl adult   DOU drink **one Cl zau**
         Every adult drink one cup of wine.
         i) ∀> ∃✔ ; ii) ∃> ∀✔

The bare nouns also cannot scope over negation. I provide novel Cantonese tests in (67), where I assume *mo* is the relevant VP level negation element that also codes past tense. In (67a), negation scopes over the VP *read book*, and the only possible interpretation is that the person *didn't study*, but it cannot mean that the person *didn't read a particular book* (which would require the bare noun to scope over the negation). Similarly, in (67b), the bare noun *wine* cannot scope over negation, but negation scopes over *wine*. Therefore, the only possible interpretation is that the person *didn't drink alcohol* but not any wine in particular.

(67) a. kui   mo   duk **su**
         3.SG NEG.PAST read **book**
         They didn't study.
         i) ¬> ∃✔ ; ii) ∃> ¬✗

      b. kui   mo   yum **zau**
         3.SG NEG.PAST drink **wine**
         They didn't drink (alcohol).
         i) ¬> ∃✔ ; ii) ∃> ¬✗

In environments of both VP level negation and universal quantifiers, the bare nouns obligatorily take narrow scope. Their obligatorily narrow scope suggests that they pattern with a pseudo-incorporation analysis. I correlate the ability of nominal complements to be able to scope over scope-bearing elements with larger structure, the functional projections of #P and ClP. This is because entities, which are correlated with fully-projected structure, are able to scope over universal quantifiers and negation. Therefore, the obligatory narrow scope follows from the analysis that the bare nouns are structurally truncated.

Another property of pseudo-incorporation is that the VPs generally denote a well-established or *institutionalised* activity or state (Dayal, 2011; Luo, 2022; Mithun, 1984). This quality is present in the VP constructions in which these Cantonese bare nouns are incorporated.

In (68), I create a novel discoursive scenario in which one would expect to name an institutionalised activity, in the absence of any additional context. For example, (68a) sounds natural because *drink wine* represents an *institutionalised* activity of going out for drinks. In contrast, *drinking juice* is not a well-established or *institutionalised* activity and therefore elicits an unnatural reading (68b).

(68) a. ngo.dei yut.tsai hui yum **zau**   la!
        1.PL   together go drink **wine** LA!
        Let's go drinking!

     b. #ngo.dei yut.tsai hui yum **guo.zup** la!
        #1.PL   together go drink **juice**   LA!
        #Let's go drink juice!

Other examples include *read book*, which has the interpretation of *studying*, *eat cigarette* which has the interpretation of *smoking*, and *hit phone* which has the interpretation of *making a phone call*.

Therefore, the fact that these Cantonese bare nouns are interpreted in VPs that systematically denote well-established activities suggest that they are pseudo-incorporated.

The final semantic test comes from a structural observation that was observed in Chapter 3. In Chapter 3, I showed using novel syntactic tests, that this particular class of Cantonese bare nouns is incompatible with most nominal modifiers (all relative clauses, most adjectives). Only a limited set of adjectives are compatible with certain bare nouns. Reiterated again in (69), *fish fish* is generally not compatible with any adjectival interveners besides *big* (as in 69b). The fact that these Cantonese bare nouns pattern like other pseudo-incorporated nouns cross-linguistically in allowing limited to no modification suggests that they are pseudo-incorporated.

(69)　a.　diu yu
　　　　fish fish
　　　　(to) catch fish

　　　b.　diu dai yu
　　　　fish big fish
　　　　(to) successfully accomplish something

Cantonese counterpart of Luo (2022, p. 256) Mandarin examples

As argued in Chapter 3, the limited modificational properties of the bare noun are compatible with the analysis that they are structurally truncated. Their structural truncation is what makes them, incompatible with a large amount of modifiers since they do not project certain functional elements that fully-projected canonical nominals do. Therefore, the diagnostic in (69) is both a structural and semantic argument for the structural truncation of this class of nouns.

In a subset of pseudo-noun incorporation proposals, a critical diagnostic for PNI is that the pseudo-incorporated nouns are structurally *truncated* or *reduced* in contrast to non-incorporated nouns (Dayal, 2011; Gehrke & Lekakou, 2013; Hall, 2019; Luo, 2022; Massam, 2001). Given that Chapter 3 argues extensively for a truncated structure, the smaller size of the Cantonese bare nouns is predicted by and patterns with existing theories of pseudo-noun incorporation. Therefore, their structural truncation also suggests that the nominals are semantically pseudo-incorporated.

4.2.1 Semantic Proposal

In the previous section, I showed using a a variety of novel tests based in the pseudo-noun incorporation literature, that the Cantonese bare nouns diagnostically pattern as expected of theories of pseudo-incorporation. Therefore, based on the attributes of the Cantonese bare nouns, I argue that they are pseudo-incorporated.

Following the intuitions from Luo (2022)'s proposal, the verbs that incorporate bare nouns are different from transitive verbs in that they incorporate kinds instead of individuals. The primary distinction between the semantics of the bare nouns and canonical nominal complements, is that the bare nouns are semantic kinds and canonical nominals are individuals. While canonical verbs (which denote properties) and nominal arguments compose as an event-predicate, the incorporation verbs compose with the incorporated bare nouns to yield an *event-kind*. For instance, the Cantonese VP *drink wine* meaning *drinking (alcohol)* denotes an *alcohol-drinking event*.

The value of analysing the semantics of the bare nouns as kinds rather than individuals is meant to capture the following attributes of the nominals themselves: i) the narrow scope and lacking referential capacity of the bare nouns that are associated with individuals, ii) the fact that smaller functional structure (e.g. a truncated nominal that only projects nP) is associated with being a kind, and is only turned into an property, then an individual/entity as a result of semantic functions associated with higher structural projections (e.g. DP) (Zamparelli, 2000), and iii) the bare nouns are in structural complementary distribution with the canonical complements but have

systematically contrasting semantic properties which cause them to be interpreted with the verb differently.

Computationally, having kind-denoting bare nouns can straightforwardly explain why the bare nouns do not relate to event-predicates like fully-projected, individual-denoting nominals, because they do not have the right semantic type to saturate a canonical event predicate. Instead, they are only compatible with semantically incorporating verbs. The event-kind approach to semantically analyse the VPs which take the incorporated bare noun complements is also able to capture the intuitive interpretational relationship between the bare nouns and the verbs that pseudo-incorporate them.

4.3 Applying an Event-Kind Analysis of *Separable Compounds*

Luo (2022)'s proposal argues for a particular version of semantic incorporation to explain the properties of Mandarin bare nouns in Verb-Object *Separable Compounds*. Instead of the bare nouns denoting semantic properties, the bare nouns denote semantic *Kinds* (as in Chierchia, 1998). When the bare nouns semantically compose with the verb, the VPs end up with an event-kind interpretation, where the whole VP denotes a particular kind of an event (Luo, 2022).

For four main reasons I apply Luo (2022)'s semantic analysis to the current data instead of competing property-incorporation proposals. The typological closeness of the data in Luo (2022)'s analysis to the current data, empirical evidence for the Cantonese bare nouns in Chinese languages denoting kinds, empirical evidence for the Cantonese pseudo-incorporating VPs denoting event-kinds, and Dayal (2011)'s structural and semantic predictions under a property-type analysis which do not fit the current data. Therefore, I conclude that the best semantic analysis for the present class of Cantonese bare nouns is a pseudo-incorporation where the bare nouns denote kinds, and the incorporating VPs denote event-kinds, following Luo (2022).

In this section, I explicate my arguments for an event-kind semantic incorporation analysis in the context of competing pseudo-incorporation proposals which argue for the incorporated nominals as property-denoting (i.e. Dayal, 2011; van Geenhoven, 1998).

In principle, because the analysis accounts for bare nouns in *Separable Compounds*, for which Mandarin and Cantonese have almost direct counterparts, Luo (2022)'s analysis should extend to the Cantonese data at present. For example, both Mandarin and Cantonese have the pseudo-incorporating VP *read book*, that is interpreted as *to study* (70).

(70)   a. du   shu   b. duk su
           read book   read book
           to study   *to study*
           Mandarin   **Cantonese**

Other corresponding *Separable Compounds* in both languages include: *drink wine*, *hit phone*, *talk lesson*, etc.. These corresponding constructions suggests empirical similarity of the phenomena. The fact that Luo (2022)'s analysis is constrained to account for *Separable Compounds* from Chinese languages in mind, suggests that generalisations from Luo (2022)'s semantic theory more closely fit the current Cantonese data, which focuses on the bare noun complements of *Separable Compounds*.

Luo (2022) argues that bare nouns in Mandarin are kind-denoting, based on observations about bare nouns which are outside of the *Separable Compound* environment, and in prior analyses (Chierchia, 1998; Luo, 2022). Note that the bare nouns are classified as bare based on the lack of overt numeral and classifier. For example, Mandarin bare nouns appear in "argumental positions of kind-level predicates" (Luo, 2022, p. 237). Below, I replicate a novel Cantonese example of *book* without an overt numeral or classifier in subject position (71).

(71) **su**   hai   mui   go   to.su.gun DOU yau   ge zi.yun
      book COP every GE library   DOU have Cl resource.
      Books are a resource that every library has.

In (71), *book* is kind-referring. A property-incorporation analysis would not be able to straightforwardly account for the fact that bare nouns occur as properties only in the circumstance of the pseudo-incorporation.

The main empirical observation which suggests that the pseudo-incorporation VPS are event-kinds is that they can appear in *nominalised* subject positions in Mandarin (Luo, 2022). This is also true for Cantonese, and I introduce novel examples below.

(72) a. **duk su**   wui ling   lei   cong.ming
         read book will cause 2.SG smart
         Studying will make you smart.

      b. ??**duk yut bun su**   wui ling   lei   cong.ming
         ??**read one Cl   book** will cause 2.SG smart
         Intended: Reading one book will make you smart.

      c. **yut go ho   lo.si**   wui ling   lei   cong.ming
         one Cl good teacher will cause 2.SG smart
         A good teacher will make you smart.

In (72a), the pseudo-incorporation *Separable Compound* appears in subject position of and is acceptable, like other nominal subjects (72c). In contrast, when the VP contains a fully-projected noun it is less acceptable (72b). Luo (2022) argues that the reason why these VPs can pattern in canonically *nominal* positions is at least partly due to their event-kind semantics, like nominal *kinds*. The key observation here is that there is a semantic contrast between (72a), where the pseudo-incorporation VP is acceptable whereas the canonical VP in (72b) is not acceptable. The event-kind

analysis captures the intuition that the two types of constructions contrast in the semantic environments in which they can acceptably appear.

Under a property-incorporating analysis, this semantic contrast would be more surprising given that the property-incorporating events would simply contrast canonical events by incorporating a property as an event modifier. Therefore, the semantic type of the event should still be a property, and it would be difficult to explain the distributional contrast. The event-kind proposal predicts that the incorporating VPs have a different distribution because they compose to yield a different semantic type.

Given that this contrast also appears in Cantonese, Luo (2022)'s approach to the incorporation analysis appears more fitting for the present class of bare nouns and their semantically incorporating sister verbs.

The final argument for the kind-incorporation, comes from how the Cantonese (and Mandarin) bare nouns do not match the assumptions about property-semantics as described in Dayal (2011)'s analysis. Dayal (2011) revises semantic incorporation predictions from van Geenhoven (1998) to account for Hindi PNI. A key amendment in Dayal (2011)'s proposal is that it shows that property-incorporation analyses should be compatible with the incorporation of #Ps, which have the properties of allowing a singular/plural interpretation, and can refer. This captures the empirical generalisation that Hindi incorporated nominals can be interpreted for number depending on aspectual specification, and can be referenced by singular anaphora.

The Cantonese bare nouns are consistently number neutral regardless of aspectual interpretation. In Hindi, there is a clear shift in the interpretation of the nominal depending on whether the sentence is telic or atelic Dayal (2011). I replicate Dayal (2011)'s telicity contrast below, with novel Cantonese *activity* (atelic) versus *accomplishment* (telic) constructions. The telicity test in Cantonese is made of two parts: i) the temporal adverbial in which the event is anchored to, and ii) the aspectual/resultative particle which signals the telicity of the event (Matthews & Yip, 2011).

(73)   a. A.Hong kum.yut duk-yun su
          A.Hong yesterday read-END book
          Ah Hong finished studying yesterday.
       b. A.Hong kum.yut duk-zho su
          A.Hong yesterday read-PERF su
          Ah Hong studied yesterday.

(73a) denotes a telic *accomplishment*, whereas (73b) denotes an atelic *activity*. Under both scenarios, the semantically incorporated noun *book* is still number neutral (i.e. in neither examples can it mean that Ah Hong is studying/reading one or some books). Therefore, the Cantonese data does not match the number interpretation predictions of Dayal (2011)'s analysis of properties, which should produce some singular or plural interpretations in limited circumstances.

Dayal (2011)'s property-incorporation semantic analysis also predicts that (some) incorporated nominals can refer, as certain anaphora can co-reference with Hindi

incorporated nominals. Other analyses that use a property-incorporation analysis also have limited examples of proper name incorporations, which by nature refer (e.g. Gehrke and Lekakou, 2013; Hall, 2019). However, as shown earlier in this chapter (in examples 64a, 64b, 64c), the bare nouns in Cantonese obligatorily cannot co-refer with anaphora. Therefore, a property-incorporation analysis which permits some degree of variability with respect to referring capacity and number interpretation properties may not be the best fit for the current data. Instead, the kind-incorporation does predict these properties (Luo, 2022).

To conclude this section, I have shown from a set of novel semantic tests that the Cantonese bare nouns are kind-denoting. I argue that the best fit analysis for the Cantonese bare nouns is a kind-incorporation, where the bare noun and incorporating verb compose to derive an event-kind interpretation, as in Luo (2022). While I preserve the semantic empirical insights from Luo (2022) and ultimately argue for a semantic incorporation analysis, the current proposal provides a competing explanation for the *Separable Compound* pheonmena by arguing that the semantic incorporation is fundamentally induced by a a truncated nominal structure. Therefore, this proposal departs from the intuition that this type of semantic incorporation is mostly independent from syntax, but rather, is directly conditioned by syntactic structure.

4.4 The Connection Between Pseudo-Noun Incorporation Semantics and Truncated (*Bare*) Complement Structures

I have argued for this particular class of bare nouns to be pseudo-incorporated, in order to account for their semantic properties that cannot be simply explained by a structural theory. However, as I have shown in the diagnostics section, the semantic properties of these bare nouns can be straightforwardly tied to the absence of particular functional projections, namely #P and DivP, which I have extensively argued are absent for the bare nouns in Chapter 3.

Beyond the semantic properties of the bare nouns at present, cross-linguistic examples of pseudo-incorporated nominals appears to share the same sorts of structural truncation properties. In fact, some degree of structural truncation (as evidenced by incompatibility with modifiers, for example) is a primary diagnostic of a variety of pseudo-incorporation cross-linguistically. Now using Cantonese as a case study, and in combination with the structural diagnostics in chapter 3, I argue that this particular class of pseudo-incorporated bare nouns are systematically induced by a truncated nominal syntax. Therefore, I am more broadly arguing that the semantic properties of this type of pseudo-incorporation phenomena are directly related to the interpretation of a truncated nominal structue.

4.5 Chapter Summary

In this chapter I show that the semantic properties of this class of Cantonese bare nouns show that they are pseudo-incorporated by their sister verb. I argue that they

differ semantically from fully-projected, canonical nominal complements as they are interpreted as kinds rather than individuals. As such, they do not saturate the event-predicate, but instead compose with an incorporating verb which ultimately leads to the VP yielding an event-kind interpretation.

In combination with the structural diagnostics from chapter 3, I show that the semantic properties of the Cantonese bare nouns can be systematically traced back to the absence of #P and DivP. Therefore, by using Cantonese as a case study for a particular class of cross-linguistically robust pseudo-noun incorporation phenomena, I argue that this type of pseudo-incoporation is induced by a structurally truncated nominal. Therefore, the semantic outcome of a pseudo-noun incorporation is a result of syntax. In the next chapter, I flesh out the broader proposal which explains why these truncated nouns systematically trigger interpretive interface outcomes. I argue that the answer is syntactic restructuring, which encompasses robust syntactic phenomena across various domains.

5 Proposal

In this chapter, I argue for a structural proposal in two parts. In the first section, I propose a concrete structure for this particular class of bare nouns in Cantonese which are systematically pseudo-incorporated. I argue that the proposed structure accounts for their structural and semantic properties as diagnosed in chapter 3 & 4. This novel structural account proposes that the bare nouns do not project #P and DivP in contrast to fully-projected nominals (which project #P and DivP). I argue that the truncated nominal structure of these bare nouns is responsible for inducing the pseudo-incorporation semantic outcomes, based on the systematic correlations between the absent functional projections and the semantic diagnostics which are associated with pseudo-incorporation.

Therefore, the first section of the proposal offers a novel and explicit, formal structural characterisation for the structural and semantic properties associated with the bare noun complements of a subset of *Separable Compounds* and *Light Verb Constructions* (LVCs) in Chinese languages. By extension then, the proposal provides a formal explanation for many of the structural and semantic properties associated with the *Separable Compounds* and LVCs. In principle, some or all of the conclusions made here generalises to other Chinese languages with *Separable Compound* and LVC structures.

In the second section of this chapter, I argue for a broader syntactic proposal which explains the structure-to-semantics connection of the Cantonese pseudo-noun incorporation phenomena in the wider context of syntactic theory. In other words, I answer the question of *why does the structure of this class of truncated Cantonese nominals create interpretive interface outcomes?* I argue that the answer is a particular version of a theory of syntactic *restructuring*, which has been previously used to explain truncated embedded clause phenomena. The current proposal argues for syntactic restructuring in the nominal domain. I show that both truncated complement clauses and truncated nominal complements have empirical parallelisms. Then, I expand on the advantages of this theoretical approach.

Therefore, the second section of this proposal offers a novel explanation for the current phenomena which speaks to certain core properties of language syntax. In principle, it is generaliseable to other cross-linguistic pseudo-noun incorporation phenomena. The current argument connects structural and interface parallelisms across domains (clausal and nominal), hence contributing more abstract generalisations to our understanding of the underlying mechanisms of syntax. Given that the phenomena under discussion predicts that verbs can combine with a variety of syntactic categories as complements, the restructuring proposal makes additional predictions about principally how syntax combines. The consequences and broader predicts from this proposal are elaborated on in the final chapter.

5.1 Structure of the Pseudo-Incorporated Cantonese Bare Noun

Read book in (74), is an example of a VP which pseudo-incorporates its nominal complement. *Read book* in (74) is also known as an example of a Verb-Object *Separable Compound* in the Chinese linguistic literature.

(74) ngo   duk   su
     1.SG read book
     I study
     V BareNounObject

In chapter 3, I showed that the nominal complement of VP constructions like *read book* are structurally truncated, and do not project #P or DivP. In chapter 4, I argued that i) the bare nouns are semantically pseudo-incorporated causes the VP to yield an event-kind interpretation (e.g. *to study*), and ii) their pseudo-incorporation properties are directly correlated with their truncated structure. I argue that this particular correlation is due to the fact that the pseudo-incorporation is a direct interface outcome of a truncated nominal syntax.

I propose that (75) is the structural representation for this class of bare noun complements, such as *book* in (75). (75) also models how this class of bare nouns are obligatorily complements of verbs. I assume that the category-free roots merge with a nominal and verbal categorising head to form a *n*oun and a *v*erb respectively (Embick, 2015). The bare noun obligatorily projects at least a categorising head *n*, which has syntactic properties and allows the nominal to syntactically combine and interact with higher structure[17].

(75)
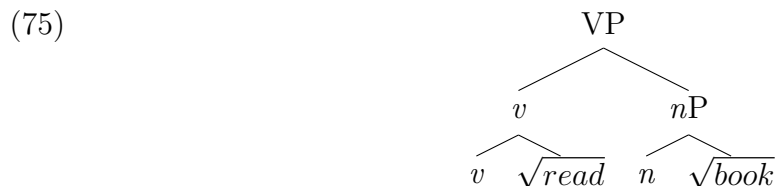
Based on the structural contrasts in chapter 3, I argue that the bare noun in example (74) structurally contrasts the canonical objects in (76). I assume the nominal functional projections of #P (numeral phrase) and a ClP (Classifier Phrase) as DivP (division phrase) from Borer (2005) above a categorising head (*n*P)[18]. I argue that
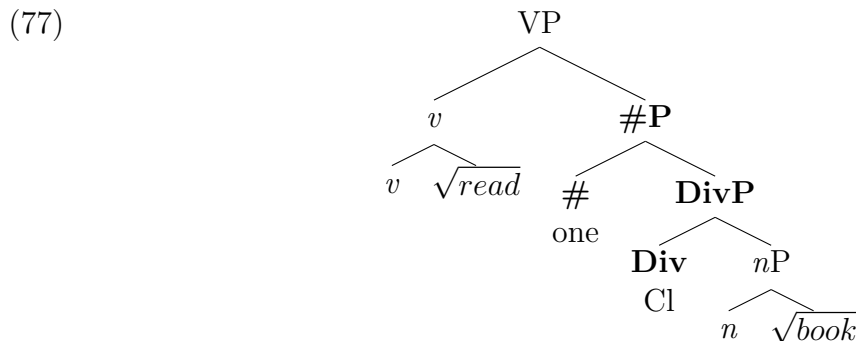
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[17]Luo (2022) argues that the bare noun complements of *Separable Compounds* in Mandarin only project a root. I do not adopt this approach as I assume that roots do not have the syntactic properties (features) to combine or structurally interact with higher elements in the structure (Embick, 2015). An additional empirical reason for a categorising head: the nominals *can* infrequently be modified by select adjectives, as shown in chapter 3 and 4.

[18]By assuming DivP (as in Borer, 2005), I am preserving the intuition that classifiers in Cantonese perform the function of dividing some quanitity from a *quantitiless* nominal primitive. I do not assume that the lack of division inherently suggests a mass interpretation. As I will show, both mass and count nouns receive a kind interpretation in the bare, restructured form. Therefore, the

both of the nominal objects in (76) project #P and DivP, despite the fact that the
nominal in (76b) does not have an overt numeral or classifier.

(76) a. ngo   duk yut bun su   b. ngo   duk siu.sut
          1.SG read one Cl   book   1.SG read novel
          I read a book   *I read a novel*
          V CanonicalObject   **V CanonicalObject**

Both (76a) and (76b) have the same structural size. (76a) is straightforwardly
represented in (77). The numeral *one* and the classifier *Cl* correspond to the functional
heads of #P and DivP in (77) respectively.

(77)

```
                          VP
                    ┌──────┴──────┐
                    v            #P
                 ┌──┴──┐      ┌───┴────┐
                 v   √read    #       DivP
                            one    ┌───┴───┐
                                  Div      nP
                                  Cl    ┌───┴────┐
                                        n    √book
```

The structure of (76b) is represented in (78). (76b) also projects #P and DivP,
but the functional heads #P and DivP are not morphologically realised (they are
morphologically null)[19]. The nominal *novel* must structurally contrast *book* because
they structurally behave like the nominals with over numerals and classifiers. The
structural contrast was explicated in chapter 3. For example, the nominal *novel* is
compatible with an overt numeral and classifier and retain its interpretation, can be
coordinated with other nominals and retain its interpretation, and can be modified
by adjectives and relative clauses because they structurally pattern as fully-projected
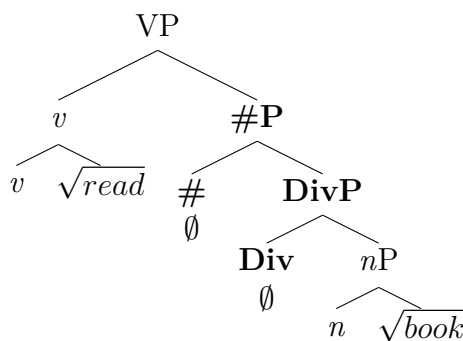nominals.

In chapter 4, I argued that based on the semantic properties of the bare nouns
that they are pseudo-incorporated and denote semantic kinds. The bare nouns con-
trast canonical nominals which are structurally larger and denote individuals. I ar-
gue that this class of Cantonese nominals, as in *book* in (74), must be structurally

---

structural distinction between a mass and kind noun must be distinguished in some other fashion.
I leave this to further research.

[19]Currently, I do not have a proposal for how the fully-projected nominals without an overt numeral
or classifier functionally contrast the fully-projected nominals with overt numerals and classifiers.
It is not clear what the precise functional difference of the head is that gives rise to overt or null
morphology. Underlyingly, they should have different features/feature values, given that they do
not have precisely the same interpretation (this is beyond the scope of the current proposal). If
there are contrasts at both interfaces, there should be an underlying structural contrast of what is
functionally represented in the head.

truncated in order to be semantically incorporated. This model predicts that the pseudo-incorporation of the VP *read book* is directly tied to the truncated nominal structure of *book* (75) which does not project #P and DivP. Therefore, the fact that the structures in (76a) and (76b) cannot be semantically incorporated is predicted, given that they are fully-projected, projecting #P and DivP (77, 78). I argue that the structural truncation of a particular class of nominals in Cantonese has a direct and systematic consequence on interpretational outcomes at the semantic interface. This type of pseudo-noun incorporation is a consequence of nominal complement structural truncation. I elaborate on this connection in my broader proposal to immediately follow.

(78)

```
                        VP
                   ┌─────┴─────┐
                   v          #P
               ┌───┴───┐   ┌───┴───┐
               v    √read  #      DivP
                           ∅    ┌───┴───┐
                               Div      nP
                                ∅     ┌──┴──┐
                                      n   √book
```

5.1.1 Accounting for the properties of Separable Compounds and Light Verb Constructions

Recall that Verb-Object *Separable Compounds* (and LVCs) have been previously defined by the following properties in (79). However, in order to be classified as a *Separable Compound* (and LVC), the constituents need not meet all of the criteria in (79).

(79)   Structural Properties of Verb-Object *Separable Compounds* (Adapted from Li and Thompson, 1981)

  1. One or both of the constituents being bound morphemes

  2. Non-transparently compositional semantic meaning of the entire unit

  3. Inseparability or limited separability of the constituents (to be formalised in the following section *Syntactic Properties*)

  4. *Implied: The construction comprises a verb and a syntactic nominal object.*

At least for a subset of Verb-Object *Separable Compounds* and LVCs, the narrow structural proposal (explicated above) should be able to systematically explain the properties outlined in (79). As such, I conclude that the truncated nominal structure systematically accounts for the various properties of *Separable Compounds* and LVCs.

The first criterion is that at least one of the parts of the Verb-Object *Separable Compounds* are bound morphemes. The current analysis predicts locality restrictions specific to the truncated nouns and their verb sisters. In chapter 3, I showed that the nominal complements cannot be topicalised away from theirb verb sister, and also are incompatible with various nominal interveners (nominal modifiers, numerals, and classifiers). Syntactically, the truncated nominals have locality restrictions which prevents them from being non-local to their verb sister, in a manner that is unique from canonical, fully-projected nominal complements. In my analysis, the structural inseparability property is a product of the truncated syntactic structure of the nominal complements. Assuming a Y-Model of grammar, morphology should interpret and obey the previously established locality constraints in syntax. I argue that the inseparability of of the verbal and nominal morphology of *Separable Compounds* and *LVCs* reflects the underlying syntactic locality constraints, and is predicted based on the underlying truncated syntax of the nominals.

Next, the *Separable Compounds* and *LVCs* are predicted to have some sort of non-transparent compositional or *idiomatic-like* semantic meaning which contrasts canonical VPs. In chapter 4, I showed that the semantic interpretive properties of the bare nouns are a result of pseudo-noun incorporation. Additionally, I showed that the pseudo-noun incorporation properties of the Cantonese bare nouns can be straightforwardly correlated to the absence of #P and DivP. As such, the current account both provides a formal analysis for the semantic properties of the bare nouns and the VPs than contain them. At the same time, the current proposal shows that the semantic properties of the bare nouns are ultimately a result of their truncated syntactic structure. Therefore, the truncated property of the bare noun complements in this subset of Verb-Object *Separable Compounds* and *Light Verb Constructions* accounts for their non-transparent compositional semantic interpretation.

Finally, *Separable Compounds* and *Light Verb Constructions* have limited separability properties or are inseparable. In chapter 3, I showed that this particular class of bare nouns have limited inseparability properties from their sister verb. For example, while they are incompatible with nominal modifiers, numerals, and classifiers, they are compatible with verbal interveners like aspectual marking or verbal classifiers. The bare nouns also cannot be topicalised from their verb sister. I argued that their compatibility with verbal interveners but not nominal interveners are a result of a truncated nominal structure plus a fully-projecting verb structure. As such, the current proposal straightforwardly accounts for the inseparability properties of this class of *Separable Compounds* and *Light Verb Constructions*, in showing that their inseparability properties are directly a result of a truncated nominal syntax.

Based on the arguments outlined, I propose that the current truncated nominal analysis offers an alternative explanation to the properties of a subset of *Separable Compounds* and *Light Verb Constructions*, based on a truncated nominal complement syntax.

5.2 Restructuring in the Nominal Domain

In this section, I outline my broader proposal to account for the nominal phenomena in Cantonese. Specifically, I am answering the question of *why does the structure of this class of truncated Cantonese nominals create interpretive interface outcomes?* I argue that this connection between the truncated nominals and systematic interpretive effects is because the nominals are *restructured*, like clausal restructuring phenomena as represented in Wurmbrand and Lohninger (2019). I argue that this broader abstract propsal explains syntax-to-semantics connection in the wider context of our assumptions about natural language syntax.

The key observation for the wider proposal is that structural truncation (of complements) is not restricted to the nominal domain. Subordinate clauses also appear truncated to different sizes, as shown in the restructuring literature (Wurmbrand & Lohninger, 2019). As I will show, there are various empirical parallelisms between the Cantonese bare nominals and restructured complement clauses. The core parallelism being that both nominal and clausal complements induce systematic interpretive effects when they are structurally truncated. From these empirical generalisations, I conclude from these abstract empirical parallelisms that nominal restructuring is the correct theoretical categorisation of the pseudo-incorporated Cantonese bare noun phenomena.

5.2.1 The Current Approach to Restructuring

The term restructuring originally comes from the intuition that when truncated (infinitival) complement clauses combine with the matrix verb, the verb and the infinitival clause are restructured such that it is interpreted as a complex verb (Rizzi, 1976, 1982). Rizzi (1976) observes that a class of unique syntactic properties (e.g. clitic climbing, co-occurence restrictions on clausal elements) arise when certain verbs in Italian combine with infinitival clause complements. These properties suggest that the constructions behave monoclausally in many respects, despite containing an embedded complement clause (Rizzi, 1976, 1982; Wurmbrand & Lohninger, 2019). Rizzi (1976, 1982) argues that certain exceptional verbs are reanalysed (restructured) together with the infinitival complement as a complex verb, rather than interpreted as a verb with a complement clause, which ultimately gives rise to their monoclausality properties.

Some other properties in which restructured clauses may contrast their non-restructured counterparts are as follows: an obligatorily shared tense with the matrix clause, an inability to introduce a subject unique from the matrix clause, increased acceptability of movement out of the restructured clause (e.g. A-movement, scrambling, verb raising), cross-clausal NPI licensing, among others (Wurmbrand & Lohninger, 2019).

Since the observation of restructuring phenomena in Rizzi (1976), many other terms and analyses have been used to describe a class of syntactic properties that

arise when verbs combine with truncated clausal complements: coherence (Bech, 1955) clause union (Aissen & Perlmutter, 1976, 1983), structure pruning (Evers, 1975), reanalysis (Haegeman & Van Riemsdijk, 1986; Manzini, 1983), complex predicate formation (Butt, 1995), structure removal (Müller, 2020), exfoliation (Pesetsky, 2019)[20].

One approach to restructuring is to argue that restructuring is primarily a result of certain verbs merging with clausal complements of different structural sizes (which are therefore different categories). For example, the examples in (80) can be analysed as restructuring phenomena, where the same verb *forgot* can merge with either a CP complement (as in 80a) or a TP complement (as in 80b). Characterising restructuring as a result of certain verbs merging with differently sized complement clauses is the perspective that is the analytical approach of Wurmbrand and Lohninger (2019). I build on their set of assumptions about restructuring in the current proposal moving forward, and make a novel generalisation for the phenomena of *restructuring*, which I argue extends to nominal complement phenomena. I argue that *restructuring* is about truncated complement structures in general, not restricted to the clausal domain.

(80) a. She **forgot** $_{CP}$[that he watered the plants].
        (*factive*: e.g. The plant is alive.)

      b. She **forgot** $_{TP}$[to water the plants].
        (*implicative*: e.g. The plant is dead/*factive*: e.g. The plant is alive.)

Wurmbrand et al. (2022)

In Wurmbrand and Lohninger (2019)'s analysis of restructuring phenomena, they argue that restructuring does not result in a universal binary division between monoclausal constructions (with restructured clausal complements) and bi-clausal constructions (with fully projected clausal complements). Instead, Wurmbrand and Lohninger (2019) propose that restructuring of complement clauses occurs to varying degrees, which results in varying degrees of structural dependency, integration, and transparency between the matrix and clausal complements. They argue that clausal complement structures universally grow to various sizes, and these structural sizes roughly correspond to an implicational semantic containment scale known as the Implicational Complementation Hierarchy (ICH) (81). They argue that the Implicational Complementation Hierarchy is a universally obeyed hierarchy that models how clausal structure building is restricted to various sizes.


(81)
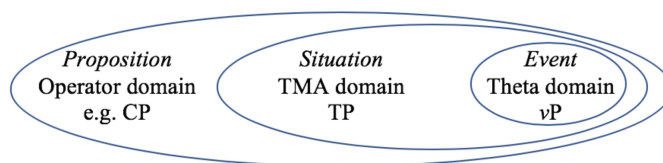
Wurmbrand and Lohninger (2019)

The Implicational Complementation Hierarchy (81) predicts that a clausal structure at roughly the size of a *v*P corresponds to *Event* semantics, a TP roughly corresponds to *Situation* semantics, and a CP roughly corresponds to a *Proposition* semantics. The Implicational Complementation Hierarchy (81) crucially predicts a containment relationship in the semantic conceptual primitives of *Proposition » Situation » Event*. A *Proposition* obligatorily contains a *Situation*, and a *Situation* obligatorily contains an Event. Therefore, whatever is on the left of the hierarchy is obligatorily more complex than what is to the right. These semantic containment relationships reflect how the clausal syntax builds, such that CPs contain TPs, and TPs contain *v*Ps. A key assumption in this proposal is that the size of the clausal complement is what critically controls the degree of restructuring properties experienced by the whole construction. A structurally smaller infinitival complement leads to more structural dependency (e.g. intevener bans) and interactions (e.g. clitic climbing) between a matrix clause and an infinitival complement clause.

(82)
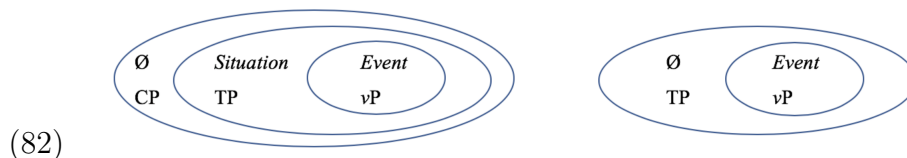
Wurmbrand and Lohninger (2019)

The model in (82) predicts that for example, a *Situation* interpretation is possible, even if the structure larger than one that just introduces TMA properties. For example, projecting a CP can still yield a *Situation* interpretation, so long as that CP projection is vacuous and does not contain operator domain properties. If the CP is not vacuous, then the presence of operator domain properties triggers a *Proposition* interpretation, and the construction is defined by the *Proposition* level of complexity as per the ICH (81).

Wurmbrand and Lohninger (2019)'s account of restructuring makes broader predictions about how the syntax fundamentally combines. They assume a *free merge* syntax as in Chomsky et al. (2019). The clausal complements freely merge with the matrix verb, therefore the syntactic elements merge without c-selection principles. They argue that syntax is autonomous in what it *free merges*, however the compatibility of verbs and complements are determined by their output a the interfaces. In order to account for interpretational variations of matrix verbs in different restructuring contexts, they employ a *synthesis* approach to semantics, where the verb and its complement impose (semantic) properties on each other. Therefore, the proposal has implications on our theories of syntax and its interactions with the interfaces.

Wurmbrand and Lohninger (2019)'s proposal has various empirical advantages over prior proposals of restructuring. The core contribution of Wurmbrand and

Lohninger (2019)'s proposal is able to reflect that cross-linguistically, a continuum of clausal complement sizes and complexities restructure with verbs. Their *degrees of restructuring* approach contrasts previous proposals that argue for restructuring as a binary phenomenon, where a unique class of functional verbs restructure with infinitival complements, and lexical verbs do not (e.g. Rizzi:1976,Rizzi:1982,Cinque:2001). In fact, Wurmbrand and Lohninger (2019) is able to show that a binary view of restructuring is not tenable.

Wurmbrand and Lohninger (2019)'s theory is powerful in being able to account for inter and intralinguistic diversity of structural sizes. For example, they show that Buryat has a three-way split in the possibile sizes of complement clause structures. Buryat has converb constructions, clausal nominalizations, and full CPs (listed from least to most structurally large and complex) (Wurmbrand & Lohninger, 2019). Therefore, at minimum, a universal restructuring theory must account for three levels of complement clause complexity, and Buryat restructuring phenomena cannot be distinguished binarily.

Other reasons in which they are able to show that a rigid binary approach to restructuring is not tenable, is that the primary properties of restructuring (e.g. clitic climbing) are optional (Wurmbrand, 2004), and that restructuring cannot be associated with a limited class of functional verbs (as defined by Cinque, 2001). Both of these facts show that a theory in which a class of verbs (e.g. functional verbs) behave ridigly and exceptionally in their capacity to restructure is not tenable.

Another main contribution is that Wurmbrand and Lohninger (2019)'s proposal reflects how restructuring phenomena are correlated with particular semantic primitives (i.e. *Event, Situation* or *Proposition* on the ICH) which is subject to cross-linguistic variation. For instance, Italian allows clitic climbing out of semantic *Events* (83) but not *Situations* (84). Czech allows clitic climbing out of infinitival clauses of *Events* and *Situations* (as in 85). Brazilian Portuguese clitic climbing is not permitted or strongly dispreferred from any clausal complement (86) (B.B.D.O. Lopes, p.c., June 11, 2024). Therefore, a binary view of restructuring which is rigidly associated with the presence or absence of one particular syntactic size (category) does not generalise across languages.

(83) Piero **ti**   verrà   a parlare di   parapsicologia
      Piero CL.to.you will.come to speak   about parapsychology
      Piero will come to speak to you about parapsychology.

(84) *Piero **ti**   deciderà   di parlare di   parapsicologia
      Piero   CL.to.you will.decide to speak   about parapsychology
      Intended: Piero will decide to speak to you about parapsychology.

         Italian from Rizzi (1982) (reiterated in Wurmbrand and Lohninger, 2019)

(85) Místo   toho se **ho**   rozhodl na moment ignorovat
      instead of.it SE him.ACC decided for moment ignore.INF
      He decided instead to ignore him for a moment.

Czech from Lenertová (2004) (reiterated in Wurmbrand and Lohninger, 2019)

(86) João {*me} tentou {me} ver
      João {*me} tried   {me} see.INF
      Intended: João tried to see mee.

Brazilian Portuguese from Cyrino (2010) (reiterated in Wurmbrand and Lohninger, 2019)

Finally, their model accounts for the observation that the merging of different complement sizes is correlated with systematically different interpretation of the verb. For example, English *forget* receives a factive meaning when combining with a finite complement (80a), but *forget* has an implicative interpretation when combining with an infinitival complement (80b). It is impossible to get a factive interpretation with the non-finite complement (80b). Wurmbrand and Lohninger (2019) propose that the semantics of clausal complements *synthesize*, meaning that that the structures merge freely so long as they are semantically compatible with the matrix verbs. The intention of their *synthesis* model is to account for the matrix verbs with the same morphosyntactic form having somewhat different interpretations based on size of clausal complements they combine with.

Therefore, in contrast to previous restructuring accounts, Wurmbrand and Lohninger (2019)'s proposal is able to capture all of the following core empirical facts: i) the continuum of structural sizes in restructuring phenomena, ii) the cross-linguistic variation in restructuring phenomena, iii) variation in the types of verbs that restructure, and iv) the correlation between restructuring phenomena, structural size, and semantic interpretation of the restructured verb+complement. A *free merge* syntax predicts the high degree of variation in the syntactic categories of the (clausal) complements that can merge with verbs, while the *synthesising* semantics accounts for the interpretational variation of the matrix verb depending on their complement size. Because their theory is contingent on a *free merge* syntax, which fundamentally dictates how syntax combines, their restructuring theory actually predicts more that this phenomena should not be only restricted to a particular domain. I build on the core assumptions about restructuring outlined presently, and argue that restructuring is the correct explanation for the current Cantonese bare noun phenomena. I will elaborate on these consequences of this prediction in the section 5.2.3.

Ultimately, what I argue for is a novel theory of *nominal restructuring*, which shows that structural truncation and its interpretive interface consequences represent more generalised properties of natural language syntax, that are not restricted to a particular domain. I argue for a nominal version of the Implicational Complementation Hierarchy of which the semantic incorporation obeys. I argue that the current proposal corroborates the theory of *free merge* that Wurmbrand and Lohninger (2019) adopt in their proposal for clausal restructuring. This broader analysis is able to explain why the nominal structures in Cantonese appear at various structural sizes with

systematic consequences at the semantic interface. The reason for this set of structure-to-semantics correlations in ther Cantonese nominals is because it is restructuring, which is a direct result of a *free merge* syntax.

5.2.2 *Empirical Parallelisms Between Clausal Restructuring and Bare Nouns*

The first empirical parallelism between clausal restructuring phenomena and the bare noun phenomena at present, is that verbs merge with both fully-projected and structurally truncated complements. One of the core generalisations of restructuring (from the perspective of Wurmbrand and Lohninger, 2019) is that a series of structural and semantic outcomes are tied to the presence of a truncated complement structure. Recall that the same verbs in Cantonese merge with both full-projected nominals (#Ps), and bare nouns (*n*Ps). In clausal restructuring, verbs can merge with different size clausal complements, like fully-projected clauses (CPs), or various sizes of infinitivals (e.g. TPs or VPs). I have shown that the bare nominals are associated with a systematic set of structural and semantic outcomes as a result of their truncation. Therefore, in both clausal and nominal phenomena, truncated complement structures induce a particular set of structural and semantic outcomes systematically.

Second, restructured infinitival clauses and bare nouns are also more structurally inseparable from their verb sister. For example, the truncated complements cannot be acceptably moved away from their verb sister. In chapter 3, I show that the Cantonese bare nouns cannot be topicalised, but the fully-projected structures are either marginally or fully acceptably topicalisable. Below, (88b) shows that the truncated TP complement cannot be topicalised, whereas the CP can be topicalised (87b). The restructured TP clause is more structurally inseparable from the matrix verb and cannot be separated from the matrix verb, unlike the fully projected CP. The examples in (87) and (88) show that the truncated TP clauses, much like the truncated nouns, have similar locality restrictions which bans them from topicalising away from their sister verb, in contrast to fully-projected complement structures.

(87) a. She didn't **believe** [$_{CP}$ that he watered the plants].

   b. [$_{CP}$ that he watered the plants], she didn't believe.

(88) a. She didn't **forget** [$_{TP}$ to water the plants].

   b. *[$_{TP}$ to water the plants], she didn't forget.

Third, in both clausal and nominal phenomena, the merging of a truncated complement systematically triggers an interpretation of the sister verb which is distinct from when merging a fully-projected complement. Both truncated clausal and nominal phenomena induce interpretive effects on its sister verb. In both domains, a change in the interpretation of the verb is correlated with the truncated structural

size of the complement. For example, in the Cantonese phenomena, *read* in the context of combining with the bare noun *n*P *book* has the interpretation of *studying*. When combining with fully-projected nominals (i.e. #Ps like *one Cl book*), the verb *read* has the interpretation of *reading*. In English restructuring phenomena, the verb *forgot* has an implicative interpretation when combining with a TP, but a factive interpretation when combining with a fully-projected CP complement clause. Although the nominals require a semantic incorporation account, while the clausal restructuring requires a semantic *synthesis* account, both notional terms reflect the shared observation that the semantic interpretation of the verbs are influenced by the structural size of the complement.

Fourth, in both clausal restructuring and the bare noun phenomena, the intepretive properties of the complement are directly correlated with the presence/absence of particular functional projections. For example, Wurmbrand and Lohninger (2019)'s theory argues that when a complement clause has some properties of the Tense-Modal-Aspect domain (e.g. a TP), it has the semantics of a *Situation*. When a complement clause is a CP containing properties of the Operator domain, it has *Proposition* semantics. Therefore, the structural size of the clause determines what semantic primitive the clause is interpreted as. In the current data, the truncated nouns which are *n*Ps are interpreted as semantic *Kinds* (as in Luo, 2022's definition of kind-denoting nominals). When the bare nouns are #Ps, they are interpreted as *Individuals*. Therefore, the nominal phenomena parallel the clausal restructuring phenomena, in that their structural size determines the semantic primitive and complexity that the complement is interpreted as. I assume that Individuals are more structurall and semantically complex than Kinds and contain Kinds (following the intuitions of Zamparelli, 2000).

Fifth, a class of structural and semantic phenomena are associated with a particular semantic primitive (a particular degree of semantic complexity). In Wurmbrand and Lohninger (2019)'s proposal, these associations are formalised by the Implicational Complementation Hierarchy (ICH). Recall that for a restructuring phenomena in a given language, clitic climbing is restricted to a particular semantic containment level on the ICH, and the associated containment level is specific to that language. For example, Italian only allows clitic climbing out of *Events* but nothing larger, Czech allows clitic climbing out of *Situations* but nothing larger, and Brazilian Portuguese bans or strongly disprefers clitic climbing in general from any semantic complexity of complement clause. In my proposal, I argue that the nominal domain also obtains an ICH. In doing so, I show that the pseudo-noun incorporation of these Cantonese bare nouns is associated with the containment level of Kinds, but not Individuals. Therefore, my proposal which argues for a nominal version of the ICH provides supporting evidence for the nominal phenomena as restructuring, since it shows that both domains parallel in how particular structure-semantics phenomena are associated with a level of semantic complexity within a semantic containment hierarchy.

Finally, in the section following the proposal (i.e. *Consequences & Discussion*),

I strengthen the current nominal restructuring account with evidence of bare nouns which (I argue) have the same type pseudo-incorporation properties from typologically very different languages. I tentatively argue that the bare nouns in these languages are also examples of nominal restructuring, and I show how the cross-linguistic data fits into a tentatively modified version of the Nominal ICH.

Overall, I observe that the overarching, core parallelism between Wurmbrand and Lohninger (2019)'s restructuring analysis and the current nominal phenomena is in the significance of structural size of complements across domains as a key determiner of structural and semantic outcomes. Therefore, I argue that a novel restructuring account for the bare nominals, which views syntactic restructuring as essentially the result of varying structural sizes of complements, correctly predicts the broader syntactic and semantic outcomes for this class of bare nouns.

5.2.3 *Theoretical Motivations for Nominal Restructuring*

There are several theoretical arguments for a restructuring account of the nominal phenomena. Wurmbrand and Lohninger (2019)'s proposal assumes that syntax merges freely. This assumption empirically captures the variation in structural category combinations of restructuring phenomena across languages. It is also compatible with a theory where a semantic Implicational Complementation Hierarchy exists and is closely related to structure building. In assuming *free merge*, the proposal makes broader predictions about how syntax combines (particularly with respect to head-complement relationships). Therefore, if the core idea of the Implicational Complementation Hierarchy is on the right track, in principle, it predicts that restructuring (a class of phenomena that arises as a result of *free merge*) could appear in other domains of syntactic complementation besides clausal restructuring. The novel generalisation that verbs+nominal complements also restructure, follows by extension of Wurmbrand and Lohninger (2019) 's proposal. In turn, the fact that the current account of nominals aligns with this version of restructuring further suggests that the current phenomena is, in fact, restructuring.

The restructuring proposal also makes an explicit connection between structural size and semantic outcomes. As such, a restructuring model with an Implicational Complementation Hierarchy predicts interpretive contrasts which are directly a result of different nominal complement sizes. Therefore, the restructuring proposal is able to explicitly link the pseudo-noun incorporation phenomena to structural size, which reflects the empirical correlations shown in chapter 3 and 4.
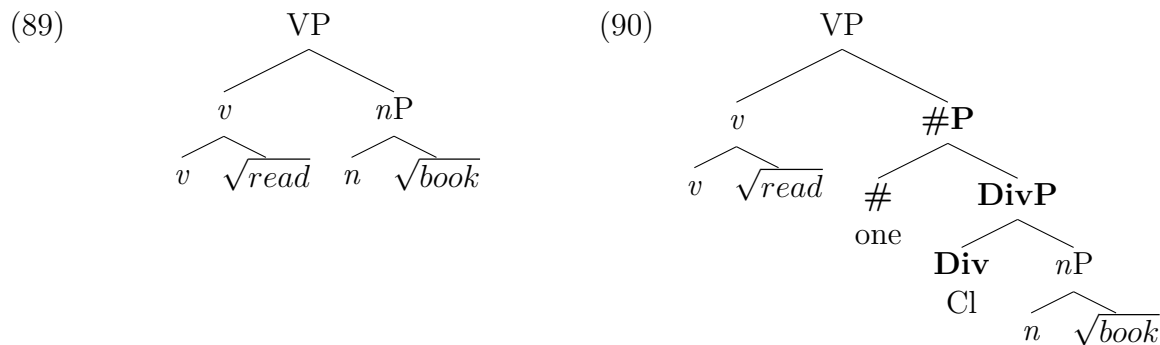
Additionally, the current broader account generalises an existing syntactic proposal to the nominal domain, in order to explain the properties of the bare nouns. The fact that an existing syntactic proposal can explain bare noun phenomena corroborates the intuition in the narrower component of the proposal, where I argue that the pseudo-noun incorporation phenomena is ultimately a result of syntax. The restructuring account is inherently arguing for a structurally based proposal, and the successful application of this appraoch in it of itself is evidence that the nominal

phenomena requires a structural explanation.

For the empirical and theoretical motivations outlined, I reformulate Wurmbrand and Lohninger (2019)'s approach to restructuring for the current data, and argue that restructuring is the correct analysis for the truncated Cantonese nouns that are pseudo-incorporated. Therefore, I argue for restructuring in the nominal domain.

5.2.4 Nominal Restructuring Proposal

I argue that the class of truncated nouns in Cantonese restructure with their sister verb (89). In contrast, the fully-projected nominals do not restructure (90)

(89)

```
            VP
           /  \
          v    nP
         / \   / \
        v  √read  n  √book
```

(90)

```
            VP
           /  \
          v    #P
         / \   /  \
        v  √read  #   DivP
                 one  /   \
                    Div    nP
                    Cl    /  \
                         n   √book
```

Restructuring Nominal   **Non-restructuring Nominal**

I argue that the possibility of pseudo-noun incorporation is sensitive to particular structural size of the nominal, and only the truncated nominals can be incorporated. This is because the truncated nominals (as in 89) are *Kind*-denoting (assuming Luo (2022)'s semantic incorporation analysis), which makes them potential candidates for incorporation. In contrast, the fully-projected nominals are not candidates for incorporation because they denote *Individuals*. Individuation, which is property only introduced at the structural size of #P (which obligatorily occurs with DivP and vice versa), is the necessary structural size that makes the Cantonese nominals *Individuals*. The necessary functional element that individuates the nominals is DivP, which is contained within #P. I follow Borer (2005) in assuming that higher functional projections on the nominal spine (DivP) individuate a nominal *mass* or generic nominal[21].

I argue that a Cantonese *Individual*-denoting nominal is more structurally and semantically complex than a *Kind*-denoting one. The first reason is that a semantic *Individual* denotation for the Cantonese nominals is associated with a larger structure (#P) which contains the smaller structure (nP) that is correlated with *Kinds*. Because

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[21]Borer (2005) argues extensively to show that nominals cross-linguistically begin as generic, non-individuated elements that are functionally individuated by higher functional projection DivP (Division Projection). In Cantonese, the classifier (DivP) performs the function of individuating some quantity out of a generic nominal (nP) (Borer, 2005). Without any functional structure other than an nP, the nominal is interpreted as a non-individuated kind (Luo, 2022).

of this structural containment relationship I assume that *Individual*-denoting nominals are more structurally complex than *Kind*-denoting ones. I follow this intuition outlined in Zamparelli (2000): I assume that the structurally smallest nominals enter the derivation as *Kind*-denoting forms, and that *Individual*-denoting structures are derived from *Kind*-denoting structures. The second reason is that I assume semantic containment relationships like Wurmbrand and Lohninger (2019)'s formalised Implicational Complementation Hierarchy (ICH), and therefore posit that the relationship between the semantic types of *Individuals* and *Kinds* are that of a containment relationship (i.e. *Individual » Kind*).

I propose a novel version of the ICH for nominals, which dictates that the Cantonese nominals grow in a containment fashion adhering to containment semantics of the proposed semantic primitives of *Individual » Kind* (91). I assume that *Individuals* are more semantically complex than *Kinds*. The structures which have the property of being individuated obligatorily contain non-individuated nominal structure.

(91)   Cantonese Nominal ICH
    a. *Individual – Individuated (e.g. #P) » Kind – Non-individuated (e.g. nP)*

The Nominal ICH reflects that the structural size of nominal complements determines the capacity for a class of structural outcomes (like banning structural interveners) and semantic outcomes (like pseudo-noun incorporation) in a manner which parallels the structural and semantic outcomes of restructuring infinitival complements which also vary in size. The verbs that combine with the truncated nominals and clauses also parallel in their malleable semantics depending on the structural size of the complement they combine with.

In Wurmbrand and Lohninger (2019), it is the particular structural property that distinguishes between the levels of the semantic hierarchy, not necessarily the precise category. For example, the presence of TMA domain properties distinguishes *Situations* from *Events*. Therefore, any infinitival clause that contains some TMA domain properties can no longer be interpreted as an *Event*. I argue that the relevant property that distinguishes between *Individuals* and *Kinds* is individuation. This is based on the observation that the truncated nouns (like Mandarin) are interpreted semantically as some form of *Kind* (Luo, 2022; Zamparelli, 2000) or generic, number neutral reading (Borer, 2005; Luo, 2022). In contrast, nominals which project at least a #P structure have properties of being an individual in the discourse[22], which refer,

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[22]The individuation function itself is tied to DivP, which is obligatorily present alongside #P, and projects just below #P (Borer, 2005). The relevant evidence for the current discussion comes from Cantonese nominals, all of which can systematically omit a numeral – a morphologically Cl-N structure. Despite the absence of an overt numeral, the structure is still counted (Borer, 2005). For example *Cl book* obligatorily has the interpretation of *a book*. Even for mass nouns, the absence of a numeral signals an interpretation where the mass that is individuated by the classifier is counted as one mass. For example, *CL wine* would mean one cup/glass/x-individuation of wine. Given that the absence of an overt numeral still results in counting, I assume that nominals with only an overt classifier still project #P, and are therefore fully-projected.

and I treat them as semantic *Individuals* (Heim & Kratzer, 1998).

The final part of this proposal is that I assume a *free merge* syntax following Wurmbrand and Lohninger (2019)'s restructuring analysis. This part of the proposal contrasts a c-selection analysis, where functional heads are predicted to select for only one syntactic category. In this proposal, I assume that the same verb can select for various structural sizes of complements. *Free merge* straightforwardly predicts the variation in the types of structures that can merge as complements of the verbs. I assume, like Wurmbrand and Lohninger (2019), that the syntax is autonomous in what it *free merges*, however the compatibility of verbs and complements are determined by their output a the interfaces, by constraints like the ICH.

A *free merge* syntax and a Nominal ICH provides a systematic structural explanation for the present nominal data. *Free merge* accounts for the basic explanation of why we get truncated nominals in the first place. *Free merge* assumes that functional heads can merge with a variety of syntactic categories. Therefore, *free merge* predicts that verbs will merge with nominal complements of various sizes (which correspond to different categories).

The Nominal ICH accounts for many of the resulting interpretative properties of the bare nominals and their verb sisters that are correlated with their truncated structural size. Under the ICH restructuring model, the explanation for the structural size correlations to the interpretive effects is that the bare nominals only grow to the size of an nP which corresponds to a *Kind* on the Nominal ICH. nPs correspond to *Kinds* given that they lack the necessary functional projections to be individuated.

Additionally, the Nominal ICH is able to systematically capture why a class of Cantonese nPs are pseudo-incorporated but #Ps cannot be. It predicts that pseudo-noun incorporation phenomena are sensitive to the ICH, and only *Kinds* but nothing semantically more complex can be incorporated. Therefore, this Nominal ICH predicts the connection between structural size and pseudo-noun incorporation interpretive effects.

The ICH reflects the locality constraint contrasts of the bare noun versus the fully-projected nominals, where bare noun *Kinds* cannot be topicalised away from their sister verb, but *Individuals* can.

The *free merge* and ICH model of restructuring importantly makes an explicit connection between structural size and semantics. An explanation which is built upon an explicit connection between syntax and the semantics interface is necessary for the current account, based on the empirical profile of the data. In the narrower structural characterisation of the proposal, I showed how the semantic outcomes of the Cantonese bare nouns are tied to the truncated structure. The current restructuring theory predicts that the nominal structures grow in accordance to the ICH containment semantics correlations, and that the ICH constrains the growth of the nominal structures. Therefore, the restructuring proposal provides an explanation for the occurence of differently sized nominal structures – they must correspond to the semantic primitives on the ICH.

Finally, the *free merge* and ICH restructuring model explains the aforementioned parallelisms between the bare nominals and clausal restructuring: i) the merging of truncated structural complements, ii) separability constraints on verbs and truncated complements, iii) structural size of complements systematically determining verb semantics, iv) structural size of complements determining complement semantics, and v) a class of structural-semantic phenomena that is sensitive to complement structural size and the corresponding semantic types.

5.3 Proposal Summary

In this proposal, I argued for a novel, formal structural characterisation for a class of Cantonese bare noun complements. These bare nouns are structurally truncated, only projecting *n*P which contrasts fully-projected nominals which project up to #P. I argued for a semantic analysis of the bare nouns in which they are systematically pseudo-noun incorporated as semantic *Kinds*, adopting Luo (2022)'s bare noun incorporation analysis. I argued that the bare nouns' semantic incorporation a direct consequence of their truncated structural size. I showed that the pseudo-incorporation properties can be directly correlated to their lack of DivP and #P functional projections. Therefore, the semantic incorporation outcomes of these Cantonese bare nouns are directly induced by structural truncation.

In order to explain the occurence of systematic nominal structural truncation, I argued for a novel nominal restructuring characterisation of these bare nouns, approaching restructuring phenomena as a consequence of truncated complement structures which freely combine with verbs under a *free merge* syntax. I showed that the truncated nominal phenomena parallels clausal restructuring, where in both domains, truncated complement structures induce a class of structural and semantic effects. Following Wurmbrand and Lohninger (2019)'s approach to analysing restructuring, I argued for a *free merge* syntax and a nominal version of their Implicational Complementation Hierarchy. I argue that like clausal complements, the Cantonese nominal complements also grow in accordance to a containment semantics hierarchy, where certain structural sizes are correlated with semantic primitives like *Individuals* and *Kinds*. I showed that the *free merge* and ICH restructuring model is able to capture how a class of *Kind*-denoting, truncated *n*P complements are systematically pseudo-noun incorporated, but *Individual*-denoting, fully-projected #P nominals cannot be incorporated. Therefore, a nominal restructuring analysis correctly explains the occurence and effects of Cantonese truncated nominal complements.

5.4 Theoretical Contributions of the Current Account

The core theoretical contribution of this proposal is that it provides a novel, formal structural analysis for a class of bare nouns in Cantonese. These bare noun complements are part of VPs which have been described in the Chinese Linguistic literature as Verb-Object *Separable Compounds* and *Light Verb Constructions* (LVCs). As such,

the current analysis provides a formal structural characterisation for a subset of *Separable Compounds* and LVCs. Additionally, I argue that the structural and semantic properties that separate the bare noun VPs from the canonical VPs is primarily a result of a truncated noun complement structure. Therefore, the current proposal injects a novel explanation into the discourse of *Separable Compound* and *LVC* analyses, which suggests that many of the *Separable Compound* and *LVC* properties can be tied to a truncated nominal complement.

The structural and semantic arguments (from primarily chapter 3 and 4) show that the semantic incorporation phenomena of these bare nouns is inherently caused by a truncated nominal syntax. Therefore, the current proposal provides a structurally motivated, alternative explanation to a class of pseudo-noun incorporation phenomena which has been previously analysed as almost entirely semantic. While preserving the semantic empirical insights from Luo (2022)'s bare noun incorporation analysis, I alternatively argue that the semantics is not a result of an independently operating semantic incorporation, but a semantic incorporation outcome which is contingent on a truncated nominal structure. Therefore, the current proposal provides a supplementary empirical facts and an alternative analysis to Luo (2022)'s theory of bare noun incorporation in Chinese Verb-Object *Separable Compounds*.

The novel restructuring approach to explaining the nominal data also contributes a novel way to conceptualise restructuring phenomena in general. I showed that truncated clauses in the nominal and clausal domain pattern similarly in their broader abstract structural and semantic properties, and in fact an ICH analysis is tenable for the nominal structures. Therefore, another contribution of this proposal is a novel perspective of syntactic restructuring that goes beyond clausal analyses.

Because the current analytical contribution is inherently built upon various theoretical assumptions in Wurmbrand and Lohninger (2019)'s restructuring proposal, the current proposal provides evidence to argue for the broader predictions made by Wurmbrand and Lohninger (2019), such as a *free merge* syntax. Therefore, the present analysis contributes to existing predictions about how syntactic structure principally builds and how syntax interacts with the semantics interface. The current analysis also provides evidence which supports that Wurmbrand and Lohninger (2019)'s theory of restructuring is on the right track in some capacity.

6   Theoretical Consequences & Cross-linguistic Applications

6.1   A Tentative Cross-linguistic Account

Because the current proposal builds on the assumption that the nominal phenomena is syntactic restructuring, the nominal phenomena is predicted to generalise robustly across languages. Wurmbrand and Lohninger (2019) argues that their Implicational Complementation Hierarchy is, in principle, a universal constraint. Therefore a correct formulation of the Nominal ICH should generalise cross-linguistically. Additionally, a restructuring proposal, which parallels the more general predictions from Wurmbrand and Lohninger (2019), should predict that complements of different structural sizes (which correspond to different levels of semantic complexity) can be pseudo-noun incorporated cross-linguistically. I argue that both of these predictions are borne out. Below, I tentatively introduce cross-linguistic data from languages typologically very different to Cantonese whose nominal objects are also pseudo-noun incorporated (PNI).

There is suggestive evidence from the cross-linguistically vast literature on pseudo-noun incorporation to suggest that this class of bare noun phenomena is not unique to Cantonese. Tentatively, I predict that restructuring of verbs and nominal complements are quite robust. I focus on object pseudo-noun incorporation data in Niuean and Hindi, because they are two typologically very different languages than Cantonese, while sharing the same type of pseudo-noun incorporation phenomena that incorporated truncated nominals. Niuean pseudo-incorporated nouns project a truncated nP but never a DP (Massam, 2001), and Hindi pseudo-incorporated nouns project either nPs or #Ps but never a DP (Dayal, 2011). This class of pseudo-incorporation phenomena can be defined by an underlying structural size restriction, such that the incorporated nominals may not be fully projected DPs.

The bare noun data in both languages contribute to the argument for restructuring of verbs and nominal complements. I will begin with Niuean. The Niuean object PNI data is split between two types of PNI: general PNI and existential PNI. I first elaborate on general PNI[23].

The properties of general PNI parallel the Cantonese bare nouns. Massam (2001) argues extensively to show that in general Niuean PNI, the pseudo-incorporated nouns are nPs (NPs), because they are non-referential, incompatible with numerals, cannot take possessors, and cannot be modified. Therefore, in this tentative analysis I assume that the Niuean incorporated nouns are nPs. (92b) is an example of general PNI in Niuean, which contrasts the non-incorporation VP in (92a). In (92b), the verb *hunt* incorporates the nP noun *fish*.

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[23]Massam (2001) also provides an analysis for instrumental PNI, of which I do not address here.

(92) a. **Takafaga** tūmau nī   e   ia e   tau **ika**.
          hunt   always EMPH ERG he ABS PL **fish**
          He is always fishing.
          Canonical VP

     b. **Takafaga ika** tūmau nī   a   ia.
          hunt   fish always EMPH ABS he
          He is always fishing.
          Pseudo-Noun Incorporation VP

Niuean from Massam (2001)

In terms of the Niuean incorporated nominals' semantic properties, I argue that the data from Massam (2001) does not distinguish between a semantic *Kind* or *Property* analysis for general PNI, but the nominals are distinguished as non-individuals. The Niuean incorporated nominals (under general PNI) have semantic properties which patterns with existing *Kind* and *Property* analyses (i.e. narrow scope when co-occurring with negation or modal, non-referentiality, etc. – Massam, 2001). Like Cantonese, Niuean nouns which undergo general pseudo-incorporation cannot be individuated. I argue that they are not individuated, given that they have the core property of non-referentiality and cannot be counted (Massam, 2001). Given that Dayal (2011)'s property-incorporation analysis shows that properties may be individuated and referred to, in the current account I argue that the Niuean general incorporation nouns are *Kinds*, because they do not have the referentiality or number interpretations of the Hindi incorporated nominals in Dayal (2011)'s analysis. Therefore, the ICH is straightforwardly generaliseable to the Niuean general PNI examples, as shown in *Table 1*.

Language	Individual	Kind
Cantonese	*	✓
Niuean (General PNI)	*	✓

Table 1: *Cantonese PNI & Niuean General PNI on the Nominal ICH*

Niuean also has a type of existential PNI. The nominals in existential PNI contrast General PNI in these primary ways: i) they occurs with a closed class of verbs *fai* (have/be) or *muhu* (have plenty/be plentiful), ii) they can refer, iii) they can be modified by a sentence final relative clause and iv) as I argue, they are also countable[24].

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[24]I leave out the discussion on ABS case assignment contrasts in the current discussion, which has yet to be fleshed out. In this tentative proposal, my aim is to only focus on highlighting the key contrasts.

(93) **Fai** [**thing food**]$_i$ a   ia ia he fano, **ko**   [e   **fua   niu**]$_i$.
      have [**thing food**]$_i$ ABS she her at go,   **PRED** [**ABS fruit coconut**]$_i$
      She had food with her when she went: (namely) a coconut.

In (93), the incorporated noun *thing food* is referred to later in the discourse by *a coconut*. This example shows two important qualities of the incorporated noun: i) it has referentiality properties, and ii) that it can be counted, given that its co-referent (*a coconut*) is unambiguously singular. Massam (2001) originally explains the contrast between existential PNI and general PNI constructions by the properties of the closed class of verbs that existentially pseudo-noun incorporate. Contra Massam (2001) I argue that these existential PNI nominals actually projects #P and DivP. The functional projections #P and DivP are what allow the nominal objects in existential PNI constructions to refer and be interpreted as singular. Additionally, the fact that the existential PNI nominals are compatible with relative clauses but general PNI nominals are not, suggests that the existential PNI nominals are structurally more complex and ptoentially larger. However, because the incorporated nominals in existential PNI remain obligatorily indefinite and absent of case marking (properties which would be associated with the DP layer if present Massam, 2001), I do not argue that they are larger than a #P (i.e. they are not DPs). Therefore, the Nominal ICH in its incubation as proposed presently must be modified to account for the pseudo-incorporated #Ps.

As for the broad semantic type of the existential PNI nominals, I argue that they are obligatorily *Properties*, given that they can refer and be interpreted as singular, (this is compatible with Dayal, 2011's incorporation analysis). However, they do not have the properties of an *Individual*, as they obligatorily cannot be definite. As such, an updated PNI ICH table and ICH (94) is iterated in *Table 2* below.

Language	Individual	Property	Kind
Cantonese	*	*	✓
Niuean	*	✓(Existential)	✓(General)

Table 2: *Cantonese PNI & Niuean Existential & General PNI on the Nominal ICH*

I tentatively argue that in Niuean, incorporation of both *Individuals* and *Kinds* can be pseudo-incorporated. However existential PNI incorporates #P *Individual*-denoting nominals, and general PNI incorporates *n*P *Kind*-denoting nominals. This contrast can be captured along the proposed ICH, with the same functional projection associations as used in the Cantonese analysis. The Niuean data offers a potential account of a language that allows larger structures, #P *Individuals* to be incorporated, which is predicted under the ICH.

(94) Nominal ICH

  a. *Individual – ?Definite (e.g. DP) » Property – Individuated (e.g. #P) » Kind – Non-individuated (e.g. nP)*

The updated ICH in (94) follows from the intuition in Zamparelli (2000) that *Property*-denoting elements are derived from *Kind*-denoting elements, and that *Property*-denoting structures contain *Kind*-denoting structures. The updated ICH reflects the fact that #P *Properties* but not DP *Individuals* can be incorporated in Niuean. By preserving Dayal (2011) 's theory that *Property*-denoting nominals actually refer and are #Ps, I argue that *Properties* are distinguished from *Kinds* in that they are individuated. Therefore, the updated ICH is compatible with the Cantonese contrast by accounting the empirical observation that only non-individuated Cantonese bare nouns (*Kinds*) can be incorporated. I tentatively designate the structural property that distinguishes structures interpreted as *Individuals* from *Properties* as the capacity for a definite interpretation. This is based on the observation that, in Niuean, definite nominals obligatorily cannot be incorporated.

The pseudo-incorporation data from Hindi in Dayal (2011) also corroborates the overall current nominal restructuring proposal, and the #P component of the Niuean PNI account, given that Hindi incorporating verbs combine with #Ps Dayal (2011). Like Niuean and Cantonese, only truncated nominals (not DPs) can be pseudo-incorporated. Dayal (2011) argues that examples like (95b) contrast (95a), in that (95b) is a pseudo-noun incorporation, while (95a) is a canonical VP. In (95b), the animate nominal *child* is pseudo-noun incorporated. The incorporation gives rise to the singular/plural ambiguity in (95b).

(95) a. anu **bacce-ko**   sambhaaltii   hai
         Anu **child–ACC look-after–IMP** be-PRS
         Anu looks after the child.

     b. anu **bacca** sambhaaltii   hai
         Anu **child** **look-after–IMP** be-PRS
         Anu looks after (one or more) children.

Hindi, adapted from Dayal (2011)

Dayal (2011) shows that the incorporated nominals are in fact #Ps, given that i) they can refer, and ii) they can be specified for a singular interpretation depending on the aspectual specification (telicity) of the clause. When the construction is modified by a telic adverbial *for-x-time*, the incorporated nominal *book* has a singular interpretation (96b). This is not the case for constructions with an atelic *in-x-time* adverbial (96a).

(96) a. anu-ERG [tiin ghanTe **tak**] kitaab paRhii
         Anu-ERG [3   hours   **for**] book   read-PERF
         Anu read a book for three hours (Atelic).

     b. anu-ERG [tiin ghanTe **meN**] kitaab paRhii
         Anu-ERG [3   hours   **in**]   book   read-PERF
         Anu read a book in three hours (Telic).

As mentioned in previous chapters, Dayal (2011) argues for a property-incorporation analysis for the Hindi #Ps (they have narrow scope). Therefore, under the current ICH restructuring proposal, the Hindi incorporated nominals are compatible with the ICH, such that the #Ps correspond to *Properties* which are individuated (*Table 3*).

Language	Individual	Property	Kind
Cantonese	*	*	✓
Niuean	*	✓ (Existential)	✓ (General)
Hindi	*	✓	✓?

Table 3: *Cantonese, Niuean, & Hindi Object PNI on the Nominal ICH*

In principle, the ICH predicts that Hindi should permit the incorporation of *Kinds* as well. I tentatively suggest that this is may be true, given that Hindi bare nominals can denote *Kinds* like Cantonese and Mandarin bare nouns (Dayal, 2011). However, the Hindi bare nominals are ambiguous between a *Kind* interpretation and a definite interpretation in particular discursive contexts. In (97a), *dogs* unambiguously has a *Kind* interpretation. In contrast, *dogs* in (97b) is ambiguous between a *Kind* interpretation, and an interpretation where a definite *Individual* is habitually performing an activity.

(97) a. **kutte** yehaaN aam   haiN
          dogs   here   common be-PRS
          Dogs are common here.
      b. **kutte** bahut bhauNkte haiN
          dogs   lot   bark-IMP be-PRS
          The dogs/Dogs bark a lot.

Additionally, most semantic incorporation diagnostics do not disambiguate between a *Kind* and *Property*-incorporating analysis. It is also true, that the singular or referring interpretations are only possible under certain structural and discoursive environments (e.g. telic PNI examples). If the Hindi *Kind*-denoting bare nouns share the same morphological form as the incorporated ones, it is possible that the pseudo-noun incorporations are instances of *Kind*-incorporations in certain circumstances. However, further investigation is required to conclusively determine if *Kinds* can/cannot be incorporated.

In Hindi, PNI is not possible for definite nominals that are case-marked, which Dayal (2011) argues are DPs. Therefore, I argue that Hindi pseudo-incorporation is compatible with the updated Nominal ICH restructuring model, reiterated below in (98). Like Niuean, Hindi incorporated nominals obligatorily cannot denote *Individuals*. This disctinction is captured by the ICH, which stipulates a formal distinction for PNI phenomena in Hindi, which applies to *Properties* and less semantically complex elements, but nothing more complex (i.e. *Individuals*).

(98)   Nominal ICH

    a. *Individual – ?Definite (e.g. DP) » Property – Individuated (e.g. #P) » Kind – Non-individuated (e.g. nP)*

To conclude this section, I have shown further suggestive cross-linguistic evidence to corroborate the prediction that the bare noun phenomena in Cantonese is really syntactic restructuring in the nominal domain. The narrower prediction that a type of pseudo-noun incorporation is underpinned by a truncated nominal syntax is borne out. The evidence comes from the fact that Niuean and Hindi only incorporate truncated nominals (#Ps and *n*Ps, but not DPs). Therefore, the conclusion made in this proposal, about a type of pseudo-noun incorporation resulting from the structural truncation of nominals, is supported.

Two more predictions that stem from a restructuring account (i.e. cross-linguistic robustness, variation in structural size and semantic complexity in which a given phenomena applies), are supported by the object pseudo-noun incorporation phenomena in Niuean and Hindi, both of which apply exclusively to truncated nominal structures. In accounting for more cross-linguistic data, I refined the ICH to distinguish *Properties*. Notably, many PNI semantic analyses distinguish between *Properties* and *Individuals*, where *Individuals* are banned from incorporation (Dayal, 2011; Gehrke & Lekakou, 2013; Hall, 2019; van Geenhoven, 1998, 2002). The updated ICH still preserves the original empirical observation that only Cantonese *Kind*-denoting, non-individuated bare nominals can be incorporated. I provided suggestive evidence for both Hindi and Niuean to argue that in both languages, #P *Properties* and *n*P *Kinds* were suitable incorporation candidates, which can be captured on an updated version of the Nominal ICH. Given that the tentative analysis is based on pseudo-noun incorporation phenomena, both the Niuean and Hindi data provide empirical support for the same types of interpretive outcomes at the semantic interface which is compatible with an analysis of nominal restructuring.

6.2   A Different Class of Morphologically Bare Nouns (of which are Property-denoting)

One of the issues in the semantic analysis is that the core semantic judgements do not distinguish the bare nominals between a *Property*-denoting analysis (such as in Dayal, 2011) versus a *Kind*-denoting analysis (such as in Luo, 2022). The semantic analysis currently follows a *Kind*-denoting theory for the nominals in question, mainly due to their linguistic resemblance to the Mandarin data in Luo (2022), and the *Event-kind*-denoting nature of the VPs they are part of. Therefore, a potential research direction would be to explore new data (in Cantonese and cross-linguistically) or new diagnostics to distinguish between a *Kind* versus *Property* incorporation analysis for these bare nouns.

I tentatively provide further evidence for a *Kind*-denoting analysis for the bare nouns presently analysed in the thesis, on the grounds of a different class of nominal

complements in Cantonese which appear to be *Property*-denoting according to the predictions by Dayal (2011). Recall that I argue for a class of *structurally* bare (not fully-projecting the nominal domain) nominals in this thesis. I tentatively propose that there is a class of *morphologically* bare nominals which are *Property*-denoting, which are incorporated in a different capacity. The following observations suggest that their is more complexity and nuance to the nominal syntax and incorporation properties of Cantonese nominals.

There is a class of morphologically bare nouns (99a) that have mixed properties of nominals that fully-project *and* the structurally bare nouns analysed in the thesis. They appear to have semantic properties expected of *Property*-incorporated nominals, but also structurally patterning like #Ps.

(99) a. kui   duk **siu.sut**
          3.SG read **novel**
          They read a novel(/novels?)
      b. kui   duk su
          3.SG read book
          They study

One commonality between the morphologically bare and structurally bare nouns is that they do not appear with morphologically overt numerals and classifiers. The morphologically bare nouns also semantically pattern like the structurally bare nouns in one critical way. For example, the morphologically bare nouns have obligatorily narrow scope, like the structurally bare nouns. I show this in the novel tests below. In (100a), the interpretation that *every student reads one particular novel* where *novel* scopes over universally quantified subject *every student* is not possible. The morphologically bare noun also cannot scope over negation (100b). The fact that they have narrow scope suggests that these morphologically bare nouns do not denote individuals, but perhaps either *Properties* or *Kinds* (Dayal, 2011; Luo, 2022).

(100) a. mui   ko hok.san dou   duk **siu.sut**
           every Cl student DOU read **novel**
           Every student reads novels
           i) $\forall > \exists$✔ ; ii) $\exists > \forall$✗
       b. kui   mo   duk **siu.sut**
           3.SG NEG.PAST read **novel**
           They didn't read novels.
           i) $\neg > \exists$✔ ; ii) $\exists > \neg$✗

However unlike the structurally bare nouns the morphologically bare nouns refer. For example, *novel* in (101a) is a suitable discourse antecedet, while *refSbare* is not. This property of referring is compatible with Dayal (2011)'s analysis of *Property*-denoting incorporated nominals.

(101)   a. kui hai to.su.gun duk [siu.sut]$_i$, [bun siu.sut]$_i$ ho   ho   tai.
             3.SG at library   read novel$_i$,   **Cl** novel$_i$ COP good read
             They read a book/novel at the library, that book/novel was a good read.

        b. *kui hai to.su.gun duk su$_i$,   [bun su]$_i$ ho   ho   tai.
             3.SG at library   read book$_i$, [**Cl** book]$_i$ COP good read
             #: They studied at the library, the studying/studying that one book went well.

Also like Dayal (2011)'s incorporated *Property* nominals but unlike the structurally bare nouns, the morphologically bare nominals are interpreted as unambiguously singular when they are the nominal complement of a telic event (102a), but are ambiguous between singular and plural when part of an atelic evetn (102b)[25]. I show this in a novel test below. There is no such contrast for the structurally bare nominals. This telicity split mirrors the *Property*-denoting nominals in Dayal (2011)'s analysis of Hindi pseudo-incorporated nominals.

(102)   a. Kui sik-yun ping.guo
             3.SG eat-FIN apple
             *They finished eating **an apple***

        b. Kui sik-zho ping.guo
             3.SG eat-PERF apple
             *They ate **an apple/apples***

Structurally, these morphologically bare nouns are larger and more complex than the structurally bare nouns. As shown in chapter (3), nominals such as in (99a) can coordinate with other #Ps and retain their interpretation, which suggests that they are categorically equivalent to other #Ps.

The semantic tests also suggest that the morphologically bare nominals project up to #P. When the event is telic, these nominals are unambiguously singular. This is not possible for the structurally bare nominals. Assuming that the capacity for a singular interpretation is correlated with #Ps, following Dayal (2011)'s analysis, this suggests that the morphologically bare nominals are minimally #Ps.

Additionally, the morphologically bare nouns ca be referred to by anaphoric nominals with i) an overt classifier, and ii) a singular interpretation, which suggests that they project DivP and #P. This is under the assumptions that i) anaphoric elements must be compatible with the ϕ-features of its antecedent, and ii) the functional projections #P and DivP are correlated with the classifier and the singular interpretation. Recall that it is not possible for the structurally bare nouns to be discourse antecedent candidates. I tentatively suggest that this contrast could be explained by the morphologically bare nouns projecting DivP ad #P while the structurally bare nominals do not.

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[25]Notably, this telicity split only holds for count nonus.

However, these morphologically bare nouns contrast other fully-projected bare nouns in a critical way – they are not compatible with a definite interpretation. Given that the morphologically bare nominals do not have overt classifiers, it is not possible to test these nominals for a definite interpretation with overt classifiers. However, I can show that they are incompatible with demonstratives which are obligatorily definite (103).

(103) *ngo duk yi   siu.sut
       *1.SG read DEM novel
       Intended: I read this novel/these novels

Based on the structural and semantic properties of these morphologically bare nouns highlighted above, I tentatively propose that this class of nominals (outside of the structurally bare nominals analysed in the thesis) that are morphologically bare in that they do not appear with an overt numeral and classifier, but structurally they project up to #P. I proposed that the morphologically bare nominals are distinguished from other #Ps by a featural distinction in #P. Crudely and tentatively, I propose that they are distinguished by a [+/-#] feature, where the morphologically bare nouns are [-#], which gives rise to the possibility for ambiguity in the singular and plural interpretation. I assume that other #Ps are [+#], which allows them to further specify for [+/-PL], and I assume that [+/-PL] is a subspecification of [+#]. This predicts that the number *ambiguity* of the morphologically bare nouns is actually distinct from the number *neutrality* of the structurally bare nouns that do not project DivP and #P, and therefore cannot be specified for a [+/-#] feature. I leave a more careful interpretation of this matter to future research.

Nominal Type (Size)	Syntactic Category	Morphological Correlate	Semantic Type	Narrow Scope	Referentiality	# Neutrality	Semantic Incorporation
Structurally bare	*n*P	*# and Cl	*Kind*	✓	*	✓	✓ (Luo, 2022)
Morphologically bare	#P [-#]	*# and Cl	*Property*	✓	✓	* (telic)	✓ (Dayal, 2011)
Fully-projected	#P [+#]	(#) Cl	*Individual*	*	✓	*	*

Table 4: *Types (Sizes) of Cantonese Nominals & their Properties Proposed Presently*

6.3 Broader theoretical predictions

A broader theoretical prediction of this proposal is that it provides supporting evidence for a *free merge* syntax. As such, I follow Wurmbrand and Lohninger (2019) in arguing that the acceptability of complementation is modulated by requirements at the interfaces to determine their acceptability, such as the (nominal) Implicational Complementation Hierarchy. A *free merge* syntax strictly contrasts a c(ategory)-selectional syntax, where heads merge with complements based on predetermined c-selectional properties. Therefore, the current proposal suggests that structure building is not modulated buy the syntax itself. This proposal makes a prediction about how syntactic structures principally combine and are modulated.

From the perspective of restructuring literature, the current proposal injects a novel application of a restructuring analysis, which predicts that restructuring phenomena results from more rudimentary properties of the grammar architecture, and is not restricted to a particular category or domain of complements. The present analysis challenges the intuition that restructuring is restricted to clauses, and offers an interesting prediction about restructuring: restructuring phenomena could surface in a variety of other syntactic domains (including in the domain of specifiers and adjuncts), given that it arises for free from a *free merge* syntax.

If it is true that the current phenomena is restructuring in the nominal domain, in principle, the facts laid out presently about truncated nominals could further inform our understanding of restructuring theories in the clausal domain.

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