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Cantonese Coverbs: A Syntactic Reanalysis

1. Introduction

Cantonese, like other Chinese languages, is known for employing serial verb constructions (SVCs) extensively (Li & Thompson 1981). Among some of the SVCs common to Cantonese, one in particular can be described to be semantically as well as syntactically similar to verb + prepositional phrases, where the head of these "prepositional phrases" has been called a "coverb" (notably by Matthews & Yip 1994, Francis & Matthews 2006a, and Francis & Matthews 2006b[1], after conventional terminology in Chinese linguistics). Sentences with these coverbs have the following surface structure in (1), where V2 is the main verb and V1 is the coverb as illustrated in (2):

(1)   (S) [V1 O1] $_{VP1 / coverb\ phrase}$ [V2 (O2)] $_{VP2 / main\ verb\ phrase}$

(2)   ngo [jung^{V1} baa dou^{O1}]   [cit-zo^{V2} go-go   daangou^{O2}] [2]
      1sg use   CL knife   cut-PERF that-CL cake
      'I cut that cake with a knife.'

Unlike prepositional phrases in English and many other languages, the coverb phrase is obligatorily situated to the left of the main verb and never to its right. But Cantonese coverbs, similar to prepositions in other languages, indicate relations between the main verb event and an extra participant (i.e., O1 in (1)), including instrument (as illustrated in (2)), location, direction, and beneficiary, among others (F&M 2006a). Some common Cantonese coverbs include the following in (3)[3], with two additional sentence illustrations in (4):

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[1] Matthews & Yip and Francis & Matthews are hereafter referred to as M&Y and F&M, respectively.

[2] All Cantonese data is transcribed in the Jyutping system. The following abbreviations are used in this paper:
1,2,3 = person, ACC = accusative, ADVZR = adverbializer, BEN = benefactive, CL= classifier, COMPL = completive, DAT = dative, DUR = durative, EXP = experiential, FM = focus marker, FP = final particle, NEG = negation, NOM = nominative, PASS = passive, PERF = perfective, pl/PL = plural, POSS = possessive, PROG = progressive, REL = relativizer, sg = singular.

[3] Assembled from Francis & Matthews (2006a: 752) and Matthews & Yip (1994: 60-62). The final numerals in the coverbs indicate tone; they are included here for clear identification, but will be excluded in the rest of the paper.

(3) a. *bong1*   'help, for'   i. *jung6*   'with' (instrumental)
     b. *deoi3*   'treat, toward'   j. *piu4*   'with, accompany'
     c. *doi6*   'replace, in place of'   k. *tai6*   'substitute, in place of'
     d. *gan1*   'with, following'   l. *tung4*   'with' (comitative)
     e. *ging1*   'pass, via'   m. *wai*   'for the sake of'
     f. *hai2*   '(be) at/in/on'   n. *wan2*   'use, seek'
     g. *hoeng3*   'toward'   o. *ziu3*   'according to'
     h. *jau4*   'from'

(4) a. ngo <u>bong keoi</u> zou-zo   gungfo
        1sg *help* 3sg do-PERF homework
        'I did homework <u>for her</u>.'

     b. nei <u>deoi   keoi</u> zou-zo di matje aa?
        2sg *toward* 3sg do-PERF CL what   FP
        'What did you do <u>to him</u>?'

The similarity of the Cantonese coverb phrase to the English prepositional phrase (and that of many other languages) has called into question the categorical status of coverbs.[4] As F&M (2006a: 753) note, a similar construction in Mandarin has prompted researchers (such as Huang 1982, McCawley 1992, Li 1990, Zhang 1990) to categorize these coverbs as prepositions because the coverb object resembles prepositional objects in its inability to be extracted. In Cantonese, the coverb object cannot be extracted for relativization (5), topicalization (6), or passivization (7):

(5) *[ngo bong ___$_i$ zou-zo je]$_{RC}$ go-go   jan$_i$ (relativization)
        1sg *for*   ___ do-PERF things that-CL person
     Intended: 'The person that I did things for'   (cf. (4) in F&M 2006a)

(6) *keoi$_i$, [ngo bong ___$_i$ zou-zo ni-di   je]   (topicalization)   (cf. (5))
        3sg   1sg for   ___ do-PERF this-CL.PL thing
     Intended: 'Him, I did these things for.'

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[4] The question of whether prepositions actually exist at all in Cantonese has been alluded to in M&Y (1994). Even the most preposition-like group of morphemes—which M&Y call *directional verbs* (p.145-149)—are clearly grammaticalized from verbs, and all seven but one of them can still be used as the sole verb of a single-predicate clause. These "directional verbs" are post-verbal, and essentially indicate the resulting location of the object due to the action of the main verb. They are excluded from this study since these are not preverbal like the coverbs.

(7)   *keoi*_i bei   ngo bong ____i zou-zo ni-di   je   (passivization)   (cf. (5))
          3sg PASS 1sg *for* ___ do-PERF this-CL thing
          Intended: 'He was done these things for by me.'

F&M (2006a) argue, however, that Cantonese coverbs have a number of verb-like properties that make the preopositional analysis for Cantonese coverbs problematic. In particular, they note that many Cantonese coverbs can function as main verbs in a single-predicate clause (8), occur with verbal markers (9a-c), and be modified by negation as well as participate in V-not-V question formation (10a,b):

(8)   ngo **bong-zo** keoi   (cf. coverb reading in (4))
          1sg help-PERF 3sg
          'I helped her'

(9)   a. ngo tung-**gwo** keoidei king_gai   (aspectual)   (cf. F&M 2006a: 753-4)
             1sg with-**EXP** 3pl   chat
             'I've chatted with them.'

         b. ngo tung-**dak** keoidei king_gai   (modal)
             1sg with-**can** 3pl   chat
             'I can chat with them.'

         c. ngo tung-**saai** keoidei king_gai   (quantificational)
             1sg with-**all** 3pl   chat
             'I chat with all of them.'

(10)   a. nei **m**   tung ngodei sik faan   (negation)   ((19) in F&M 2006a: 761)
             2sg not with 1pl   eat rice
             'You're not eating with us.'

         b. nei **tung-m-tung** ngodei sik faan aa?   (V-not-V question)
             2sg with-not-with 1pl   eat rice FP
             'Will you be eating with us?'

These characteristics, they argue, make these coverbs at best a subclass of verbs with grammaticalized functions. They proceed to propose that coverb phrases are VPs left-adjoined to

the main verb phrase, which accounts for the inextractability of coverb objects due to the adjunct island constraint (Huang 1998).

In this paper, I argue that the verb-like properties F&M observe are actually properties of a control verb function. That is, in SVCs where these purported coverbs behave like canonical verbs (verbal marking, V-not-V question formation, etc.), they are in fact control verbs requiring a clausal complement. In other words, the coverb and control verb constructions have the same surface order of [S V1 O1 V2 (O2)], but in the coverb structure V2 is the main verb with V1 being the coverb and [V1 O1] being an adjunct, whereas in the control construction V1 is the main verb with [V2 O2] being part of its clausal complement. The two structures are illustrated in (11) and (12) respectively:

(11) Coverb structure
      (V1 = coverb, V2 = main verb)
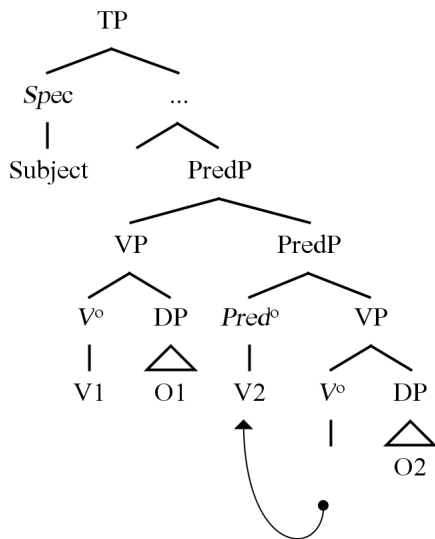
(12) Control structure
      (V1 = maxtrix verb, V2 = embedded verb)
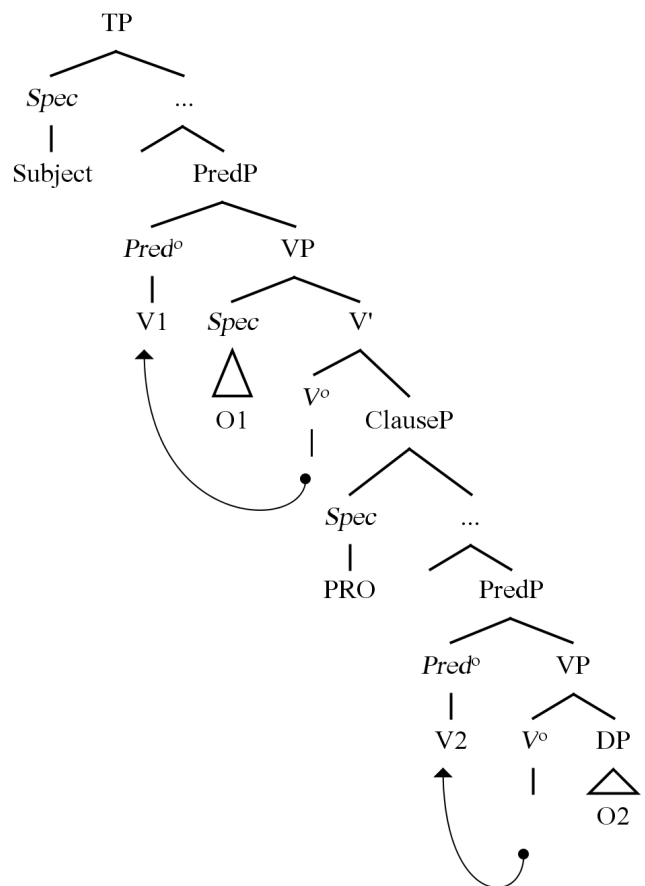
Under this account, coverbs do not actually have the verb-like qualities that F&M describe, and therefore are more like prepositions than F&M suggest.

The remaining parts of the paper will be organized as follows: Section 2 addresses the adjunct analysis of the coverb phrase, first going over F&M's (2006a) arguments before considering Ernst's (2002) PredP adjunct analysis with new supporting data, and briefly arguing against Pylkkanen's (2002) applicative analysis as a competing hypothesis. Section 3 examines the data where coverbs are purported to exhibit verb-like properties, and argues that in these cases they must be reanalyzed as control verbs with a different syntactic structure. Finally, Section 4 concludes with a summary of the findings in this paper and briefly discusses future research.

2. Syntactic Status of the Coverb Phrase

Before examining the purported verb-like properties of coverbs, a basic theory of the syntax of coverb phrases needs to be established. In this section, I first present F&M's (2006a) VP-adjunct proposal and their conclusions regarding Cantonese coverbs, then propose an adjustment to F&M's analysis with insights from Ernst's (2002) work on the syntax of adjuncts. New data will be presented in favor of Ernst's PredP-adjunct analysis, before presenting and arguing against a possible alternative analysis employing Pylkkanen's (2002) applicative structure.
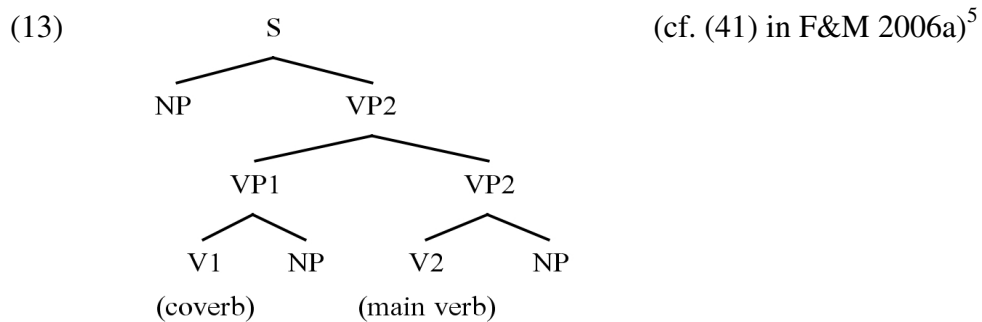
2.1. Francis & Matthews' (2006a) VP-Adjunct Analysis

The main-verb qualities of coverbs that F&M (2006a) have pointed out, as illustrated in (8-10), along with the inextractability of the coverb object as illustrated in (5-7), have led F&M to question the analysis of coverbs as prepositions—which has been proposed for Mandarin by some researchers.

F&M (2006a) conducted a sentence-judgment experiment with 37 participants to test the acceptability of object extraction with six coverbs (*doi, gan, hai, pui, tung, wan*) in V1 position, as well as the acceptability of the coverbs bearing aspectual (but not modal or quantificational) marking. Their findings confirm that all the coverbs they tested are deemed acceptable with aspectual marking in V1 position, and that extraction was least acceptable in two-verb clauses, in

comparison to one-verb clauses with extraction and two-verb clauses without extraction, the latter of which all had an average score of 2.20 to 3.53 on a scale of 1 to 4 where 1 is 'good' and 4 is 'bad.'

F&M argue that these results, particularly those with respect to aspectual marking, support the proposal that coverbs should be categorized as a subclass of verbs. As for the low acceptability of coverb object extraction, they propose that coverb phrases are adjunct VPs to the main verb phrase (13), and are therefore subject to the adjunct island constraint (Huang 1998) with its basis in Huang's (1992) Condition on Extraction Domain (14):

(13)   S   (cf. (41) in F&M 2006a)[5]
              /   \
            NP   VP2
                      /   \
                   VP1   VP2
                  /   \   /   \
                V1   NP   V2   NP
             (coverb)   (main verb)

(14) A phrase A may be extracted out of a domain B only if B is properly governed
       (Huang 1982: 505)

F&M note, however, that these are not in of themselves sufficient to account for the inextractability of the coverb object. Without reproducing too many of F&M's arguments and supporting data verbatim (pp. 783-786), I will summarize their key points in following paragraphs.

Unlike English or Mandarin, Cantonese allows object extraction out of subordinate clauses functioning as adjuncts (see F&M 2006a: 783); (15) below serves as an illustration, with the subordinate clause in brackets:

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[5] This structure has been proposed by Law (1996) for Mandarin, who also appealed to Huang's (1982) Condition on Extraction Domain to explain why coverb objects are not extractable.

(15)   go-go jan$_i$,   ngo [gin-jyun ___$_i$ zihau] hou satmong   ((39) in F&M 2006a: 783)
         that-CL person 1sg see-COMPL   after   very disappointed
         'That person, I was disappointed after meeting (him).'   (Topicalization)

          cf. ngo [gin-jyun   go-go   jan   zihau] hou satmong
              1sg see-COMPL that-CL person after   very disappointed
              'I was disappointed after meeting that person.'

Second, the CED (Condition on Extraction Domain) stipulates that extraction from a phrase or clause is possible only if it is properly governed. The problem of the CED, F&M reason, is that in principle it would rule out the extractability of the direct object as well because matrix VPs are supposedly not properly governed by a lexical head either. A solution to this is offered in Chomsky (1986) by way of cyclic movement, such that the direct object moves to the edge of VP before moving further up, resolving the problem of crossing more than one barrier at a time. F&M argue, however, that there should be no reason why the object in the adjunct VP shouldn't also be able to move to the edge of its VP before further moving out and up. Similarly, F&M found the more modern Minimalist approach by Stepanov (2001a,b) to be an unsuccessful account—a postcyclic merger account in which because there are no unchecked uninterpretable features in adjuncts (as a defining characteristic compared to other phrases), adjuncts are thus merged with the sentence last, after all other merge operations have taken place, making extra movement (i.e., extraction out of an adjunct VP) impossible. F&M find this unsatisfying for Cantonese because there is no subject-verb agreement in the language and thus it is unclear what kind of uninterpretable features if any would even be involved. Following from that uncertainty, it also becomes unclear why and how VP1 and VP2 would actually differ in terms of feature-checking (F&M 2006a: 786), especially since they belong to the same category.

        F&M instead propose a language-specific constraint in (16), appealing to Hawkin's (1999) Avoid Competing Subcategorizers principle, which is essentially a processing constraint that in this case is relevant to the interpretation of gaps created by extraction. In this case, verbs are the subcategorizers (of their objects), and in a clause with multiple verbs and one extracted object, competition between which of these verbs should be interpreted as the original subcategorizer of the extracted object is at stake.

(16) **Cantonese Coverb Extraction Constraint (CCEC):**   ((42) in F&M 2006a: 787)
           A filler cannot be co-indexed with a gap that is contained within a VP functioning
           as an adjunct to another VP within the same clause.

The gist of the argument is that in languages like Cantonese which have many SVCs, the lack of
any constraint on filler-to-gap (extracted object to extracted site) co-indexing interpretation could
render a processing difficulty, and hence undesired cost, in deciding which co-indexation is
intended. Since main verbs occur most frequently and verbs in other positions such as adjuncts
are essentially optional in basic sentence formation, preference is given to reserving extraction as
an operation for the main verb phrase. The advantage of the CCEC, in sum, is that is "applies to
adjunct VPs such as coverb phrases but not to subordinating clauses functioning as adjuncts
(which do allow extraction in Cantonese)" (p.791).

        With the CCEC in (16), F&M are able to both maintain the analysis of coverbs as
essentially verbal in nature and explain why coverb object extraction is impossible across the
board in a structure such as (13).

        While I agree with the adjunct analysis in general, F&M's model does not explain why
the coverb is able to behave like verbs as they claim, which is a puzzle given that the coverb is
inside an adjunct and not base-generated in the extended main verb projection. This issue will be
addressed later, after the syntactic structure of the coverb phrase is clarified.

2.2. Ernst's (2002) PredP-Adjunct Analysis

        Thomas Ernst's (2002) volume on the syntax of adjuncts looks at adverbial phrases of
various kinds across different languages and presents a unified account of the structural positions
of adverbial adjuncts from the VP projection to the sentential level and their congruity with
semantic interpretation. He proposes the following to be part of the basic universal extended V
projection:

(17)   (cf. (6.127) in Ernst 2006a: 299)

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      TP
     /  \
       AuxP
      /   \
       VoiceP
      /    \
        PredP
       /   \
          VP
         /  \
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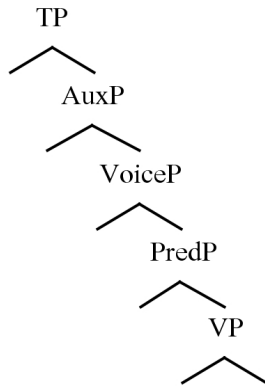
Ernst devotes one chapter of the book to event-internal adjuncts, and especially relevant to this discussion in this paper, a subsection on participant prepositional phrases (PPPs). Examining data primarily from English and Mandarin, Ernst proposes that PPPs left-adjoin to PredP.

He includes within PPPs instrumental, comitative, benefactive, and eventive locative phrases. "They are event-internal in the same sense that adverbs with manner readings are: in modifying a verb V, they pick out a subset of events of V-ing that is defined by the additional property denoted by the PPP" (Ernst 2002: 264). These descriptions apply perfectly to Cantonese coverb phrases, thus if we interpret (18) in terms of Ernst's description, out of the set of all possible events of cake-cutting involving Banzai, *jung baa dou* 'use a knife' creates a subset in which only those done with a knife are included:

(18)   Banzai [jung^{V1} baa dou^{O1}]   [cit-zo^{V2} go-go   daangou^{O2}]   (cf. (2))
        Banzai use   CL   knife   cut-PERF that-CL cake
        'B cut that cake with a knife.'

The key point is that PPPs do not introduce a new event variable to the semantic representation; they do not introduce a separate event external to that expressed by the main verb.

Ernst argues that in Chinese, left-adjoined event-internal adjuncts must be PredP adjuncts, while right-adjoined event-internal adjuncts must be VP adjuncts. The specific argument hinges on PPPs being "semiarguments"[6] and thus if they were in VP, they must be in Spec position

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[6] Following Ernst's previous work where PPPs in Chinese are observed to have certain properties of arguments, namely in that they (a) are occasionally selected by verbs as arguments, (b) may engage in applicative

rather than adjoined because they need to be given a theta role. The problem with this, however, is that it would mean that either (i) no other argument of V can be in that position as a result or (ii) the PPP may have to take an incompatible theta role. Both of these cases would result in an ill-formed semantic representation (Ernst 2002: 297). In other words, because VP is the domain of selected arguments, PPPs as non-selected (semi)arguments cannot be inside the VP projection. The leftward adjunction of all Cantonese coverb phrases would thus mean that they are all PredP adjuncts instead of VP adjuncts.[7] Since Ernst also interprets manner adverbials to be event-internal modifiers, we also expect them to adjoin to PredP in Cantonese due to their preverbal position. And since both coverb phrases and manner adverbials are PredP adjuncts, one would expect them to order freely with respect to each other, as argued for Mandarin in Ernst (2002: 295). This is borne out in (19), where the adverb *maan-maan gam* 'slowly' can occur in either side of the coverb phrase:

(19)   a. keoi [maan-maan gam]   [tung ngodei] sik faan
            3sg slow-slow   ADVZR with 1pl   eat rice
            'She's slowly eating with us.'

        b. keoi [tung ngodei] [maan-maan gam]   sik faan
            3sg   with 1pl   slow-slow   ADVZR eat rice
            'She's slowly eating with us.'

Additionally, we also expect coverb phrases to be able to co-occur and order freely between themselves, as illustrated in (20):

(20)   a. ngo [tai keoi] [jung dou] cit-zo   go daangou
            1sg for 3sg   with knife cut-PERF CL cake
            'I cut the cake with a knife for him.'

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constructions, and (c) do not block A-not-A question formation (Ernst 2002: 297). See Ernst (1994, 1996) for details of these observations.

[7] Ernst does not explain how the theta-role problem for PPPs in VP would or would not also be a problem for PPPs in PredP adjunct position. The "semiargument" status of PPPs is also not fleshed out. This is admittedly a weak point in Ernst's argument. Nonetheless, for the purpose of this paper, the PredP adjunction proposal is compatible with the Cantonese data, especially with respect to PPPs in relation to other adjuncts.

b. ngo [jung dou] [tai keoi] cit-zo   go daangou
    1sg with knife for 3sg   cut-PERF CL cake
    'I cut the cake for him with a knife.'

Taking Ernst's hypothesis to be a superior model of coverb phrase structure—given the adjunct ordering facts—the VP-adjunct structure in (13) can be updated to the following in (21), with a PredP projection above VP2:

(21)   (cf. (13) in this paper and (3.62) in Ernst 2002: 109)
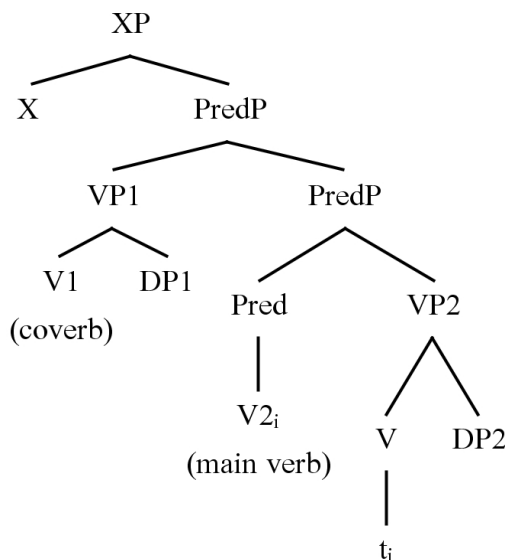
The top projection XP in (21) represents higher projections which may include Voice, Neg, Aux, etc; while more adjuncts can be adjoined to PredP as long as they are semantically compatible with the rest of the clause. Temporal adjuncts must be adjoined to a projection above PredP, as I will show in the next section. Ernst places the base-generated subject in Spec,PredP position but states that he is not committed to this placement, since overt subjects always move to Spec,TP and do not interact with the adjuncts examined here. This nonetheless raises the question of whether the (PredP) adjuncts are adjoined above/after the subject or below/before it, and whether the two orders would generate different semantic interpretations. Although Ernst doesn't address this, and the problem is beyond the scope of this paper to address at any length, I suggest the subject to be base-generated in Spec,VoiceP instead, which in any case is a more likely analogue to Spec,vP, where external arguments are typically posited to be base-generated in mainstream

theory. The Spec,VoiceP position also allows us to avoid the problem of determining its relative ordering with regards to PredP adjuncts.

   The main advantage of Ernst's PredP-adjunct proposal is that it provides a predictable structural system for two different positions of event-internal adjunction (preverbal adjuncts are adjoined at PredP, while postverbal adjuncts at VP). F&M's Cantonese Coverb Extraction Constraint (16) can still be easily adapted to the structure in (21), where PredP is the single-event domain within which only the direct object of the main verb—and no other (co)verb object wherever its phrasal unit is adjoined—can be extracted.

2.3. Supporting Evidence for the Low Adjunct Analysis

   There are two diagnostics we can use to determine the low position of the coverb phrase. First, as briefly alluded to above, temporal adjuncts always precede coverb phrases (22a), and are highly dispreferred if placed after a coverb phrase (22b), suggesting that the coverb phrase is closer to VP than the temporal adjunct:

(22) a. keoi [kamjat] [tung ngodei] sik-zo faan
     3sg yesterday with 1pl eat-PERF rice
     'She ate with us yesterday.'

    b. ??? keoi [tung ngodei] [kamjat] sik-zo faan
      3sg with 1pl yesterday eat-PERF rice
      'She ate with us yesterday.'

This positional difference between the two types of adjuncts can be further tested by looking at cleft constructions, our second diagnostic method. In Mandarin, clefts are constructed simply by adding the copula/focus marker before the constituent meant to be focused, in a clause with otherwise the same surface word order as a regular declarative clause (Huang 2010). This construction is identical in Cantonese. Below I illustrate three possible positions the focus marker can take in a clause in Cantonese (translated from Mandarin examples in Huang 2010: 14; the focus marker is in bold, while the focused constituent is underlined):

(23) a. **hai** <u>ngo</u> tingjat   soeng maai go bun syu
         FM <u>1sg</u> tomorrow want buy that CL book
         'It is I who wants to buy that book tomorrow.'

      b. ngo **hai** <u>tingjat</u>   soeng maai go bun syu
          1sg **FM** <u>tomorrow</u> want   buy that CL book
          'It is tomorrow that I want to buy that book.'

      c. ngo tingjat   **hai** <u>soeng maai go bun syu</u>
          1sg tomorrow **FM** <u>want   buy that CL book</u>
          'Tomorrow I do want to buy that book.'

The focus marker cannot be positioned anywhere lower than the (matrix) VP, however.
Sentences (24) and (25) show that the focus marker before [*maai go bun syu*] 'buy that book'
and before [*go bun syu*] 'that book' are deemed ungrammatical, since the focus marker in bother
cases are inside the matrix VP:

(24)   * ngo tingjat   [soeng **hai** <u>maai go bun syu</u>]_{matrix VP}
           1sg tomorrow want **FM** <u>buy   that CL book</u>
           Intended: 'It's buying that book that I want tomorrow.'

(25)   * ngo tingjat   [maai **hai** <u>go bun syu</u>]_{VP}
           1sg tomorrow buy **FM** <u>that CL book</u>
           Intended: 'It's that book that I'm buying tomorrow.'

We can now test the position of coverb phrases relative to the VP. Given a sentence such as
(22a), reproduced in (26), which contains both a time adverb and a coverb phrase, the focus
marker can appear anywhere except below the coverb phrase as shown in (27d):

(26)   keoi [kamjat] [tung ngodei] sik-zo   faan   (= (22a))
        3sg   yesterday with 1pl   eat-PERF rice
        'She ate with us yesterday.'

(27)   a. **hai** <u>keoi</u> [kamjat] [tung ngodei] sik-zo   faan   (cf. (26))
            FM <u>3sg</u> yesterday with 1pl   eat-PERF rice
            'It's her who ate with us yesterday.'

        b. keoi **hai** [<u>kamjat</u>] [tung ngodei] sik-zo   faan
            3sg **FM** <u>yesterday</u> with 1pl   eat-PERF rice
            'It's yesterday that she ate with us.'

c. keoi [kamjat] **hai** [tung ngodei] sik-zo   faan
   3sg   yesterday **FM** with 1pl   eat-PERF rice
   'It's eating with us that's what she did yesterday.'

d. *keoi [kamjat]   [tung ngodei] **hai** sik-zo   faan
    3sg   yesterday with 1pl   **hai** eat-PERF rice
    Intended: 'It's eating that she did with us yesterday.'

The data in (27)—and especially the ungrammaticality of (27d) as well as the questionable grammaticality of (22b) where the time adverb is lower than the coverb phrase—suggest that the coverb phrase is structurally tighter with the VP constituent than the time adverb is. On a syntactic tree, the different structural positions can be represented as in (28):

(28)
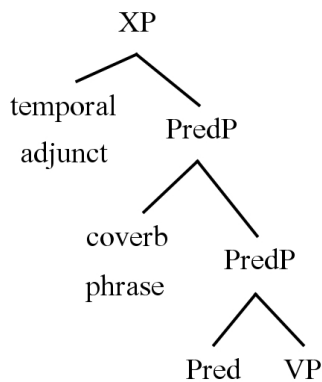
The exact position of the temporal adjunct appears to be variable[8], hence the unspecified XP projection. The crucial point is that it is always higher than PredP adjuncts. Recall that coverb

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[8] A time adverb can occur before the subject as well, as seen in (i). It also seems to order freely with the auxiliary *wui* 'will' (ii):

(i)   [kamjat]   keoi [maan-maan-gam] sik faan
         yesterday 3sg slow-slow-ADVZR   eat rice
         'She ate slowly yesterday.'

(ii)   keoi (tingjat)   wui (tingjat)   heoi tousyugwun
         3sg (tomorrow) will (tomorrow) go   library
         'She will go to the library tomorrow'

phrases and manner adverbs may order freely with each other in (22). If we try to place the time adverb below the manner adverb (29b), the result is also ungrammatical:

(29)   a. keoi [kamjat]   [maan-maan-gam] sik faan
             3sg   yesterday slow-slow-ADVZR eat rice
             'She ate slowly yesterday'

        b. *keoi [maan-maan-gam] [kamjat]   sik faan
              3sg   slow-slow-ADVZR yesterday eat rice
             Intended: 'She ate slowly yesterday'

These data suggest that the time adverb is structurally higher than both the coverb phrase and the manner adverb, when they co-occur. When the coverb phrase and the manner adverb co-occur, focus-marking whichever is in the lower position is also considered ungrammatical, illustrated in (30b) and (31b):

(30)   a. keoi **hai** [hou hoisam gam]   [tung ngodei] sik faan
             3sg   **FM** very happy ADVZR with 1pl   eat rice
             'It's happily eating with us that she's doing.'

        b. *keoi [hou hoisam gam]   **hai** [tung ngodei] sik faan
              3sg   very happy ADVZR **FM** with 1pl   eat rice
             Intended: 'It's eating with us that she's happily doing.'

(31)   a. keoi **hai** [tung ngodei] [hou hoisam gam]   sik faan
             3sg   **FM** with 1pl   very happy ADVZR eat rice
             'It's happily eating with us that she's doing.'

        b. *keoi [tung ngodei] **hai** [hou hoisam gam]   sik faan
              3sg with 1pl   **FM** very happy ADVZR eat rice
             Intended: 'It's happily eating that's what she's doing with us.'

The data examined thus far with regards to cleft construction in this section support the analysis that the coverb phrase is in a low event-internal position—adjoined to PredP following Ernst's analysis—whereas the time adverb should be adjoined anywhere at least higher than PredP. The respective syntactic positions of the time adverb and the coverb phrase (and manner

adverb) explain why the focus marker can come after the time adverb but not the coverb phrase (or manner adverb).[9]

2.4. Against a Pylkkanenian (2002) High Applicative Analysis

To briefly consider an alternative account for coverb phrase structure, Pylkkanen's (2002) high applicative analysis is appealing at least on semantic grounds and on some syntactic grounds.
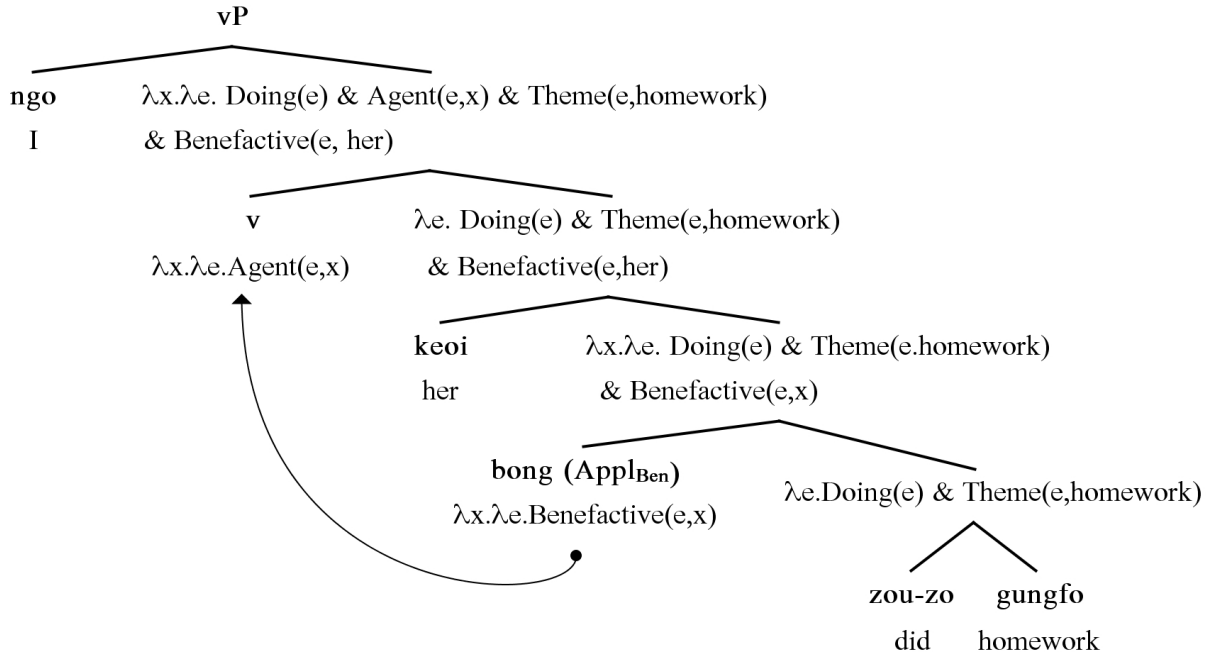
There are two important commonalities between Cantonese coverbs: (i) their syntactic position (between subject and main verb), and (ii) their role of introducing an argument to the clause, in which the argument is related to the event denoted by the verb phrase, and the relationship is encoded in the coverb.

These two descriptions form the basis for Pylkkanen's proposal for high applicatives, in which they "attach above the verb" and "are very much like the external argument introducing head: they simply add another participant to the event described by the verb" (Pylkkanen 2002: 19). Applying Pylkkanen's proposed framework, after Marantz (1993) and Kratzer (1994), the following tree in (32) describes a probable semantic and syntactic model of sentence (33) (with VoiceP updated to vP; note also that the movement of the applicative/coverb would need to be proposed here for Cantonese, to give us the [coverb – coverb object] order):

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[9] One might wonder whether locational adverbs behave like temporal adjuncts as well, and how they may interact with the adjunct ordering facts examined here. It appears that left-adjoined locational adjuncts in Cantonese can only be expressed with the coverb *hai* 'be at/in/on' + locational noun, and therefore pattern as coverb phrases do. Below illustrate free variation in ordering between the locational coverb phrase and another coverb phrase:

(i) a.   ngo hai Cheung Chau bong keoi maai saam
           1sg be_in Cheung Chau for 3sg buy clothes

    b.   ngo bong keoi hai Cheung Chau maai saam
           1sg for 3sg be_in Cheung Chau buy clothes

           'I'm buying clothes for him in Cheung Chau.'

(32)

vP

ngo   λx.λe. Doing(e) & Agent(e,x) & Theme(e,homework)
I   & Benefactive(e, her)

    v   λe. Doing(e) & Theme(e,homework)
   λx.λe.Agent(e,x)   & Benefactive(e,her)

      keoi   λx.λe. Doing(e) & Theme(e.homework)
      her   & Benefactive(e,x)

       bong (Appl$_{Ben}$)
      λx.λe.Benefactive(e,x)   λe.Doing(e) & Theme(e,homework)

                      zou-zo   gungfo
                      did   homework

(33)   ngo bong keoi <bong> zou-zo   gungfo
       1sg BEN   3sg <BEN> do-PERF homework
       'I did homework for her.'

Pylkkanen's proposal differs from traditional and mainstream studies on applicatives which limit the definition of (high) applicative constructions to a valence-increasing morpheme that must be an overt verbal affix (see Baker 1988, Alsina & Mchombo 1990, and Peterson 2006, inter alia). For example, Pylkkanen considers these Albanian structures in (34) to be of the high applicative type, despite the lack of any overt applicative marker on the verb. Her diagnostic for determining whether a language has a high applicative construction is whether an external argument can be added to unergative and static verbs (presumably without adposition, but note dative marking):

(34)   ALBANIAN   (Pylkkanen 2002: 25)

      a. UNERGATIVE VERB
        I   vrapova
        him(DAT) ran.1sg
        'I ran for him.'

    b. STATIC VERB
      Agimi   I   mban Drites   çanten time
      Agimi.NOM DAT holds Drita.DAT bag.ACC my
    'Agim holds my bag for Drita.'

There are no overt applicative morphemes in (34a,b), but the external argument (*I* 'him' in (34a)

and *Drites* 'for Drita' in (34b)) do show that the external argument is in fact oblique-marked, and

this marking would be the only evidence for a silent applicative at work. Although the Albanian

examples fall short of actually having an adposition, Pylkkanen's proposal has opened up the

study of applicatives to non-affixal constructions, which suggests that coverbs should also be

able to be analyzed as applicative particles.[10] In this respect, Cantonese passes both the

unergative and static verb tests[11], shown in (35):

    (35)   a. ngo wai keoi paau-zo_bou   (unergative)   (cf. (33a))
          1sg for 3sg run-perf
          'I ran for him'

        b. Agim bong Drita zaa ngo ge doi   (static)   (cf. (33b))
          Agim for   Drita hold 1sg poss bag
          'Agim holds my bag for Drita.'

    Returning to the parse tree in (32), the moved position of the coverb from $Appl^o$ to v^o

may explain why the coverb can take verbal morphology instead of the main verb, due to its

closer position to higher projections such as Aspect and Modal.

    There is a very problematic aspect of Cantonese coverbs for the Pylkkanenian analysis,

however—that of the inextractability of the coverb object. Given the coverb object's higher

position relative to the direct object and also its position on the main syntactic spine (and not part

of an adjunct), one would expect that it *should* be able to move.

    This problem cannot be solved by appealing to a constraint like the CCEC proposed by

F&M (2006a) since the coverb phrase under a Pylkkanenian analysis is not an adjunct. Some

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[10] Convincing analyses of non-affixal applicative morphemes have already been proposed for other Chinese languages, e.g., Paul & Whitman (2010) for *gei* in Mandarin, and Aldridge's (2012) analysis of the [*yi*+ DP] phrase in Late Archaic Chinese.

[11] A third test for high applicatives involves depictive secondary predicates (Pylkkanen 2002: 36). Cantonese does not have this construction and therefore this test cannot be applied.

other extraordinary account would need to be proposed. Moreover, the stackability of multiple coverb phrases (as we saw in (20) would be equally difficult to explain as well. That is, in a surface sequence such as [V1 O1]$_{ApplP}$ [V2 O2]$_{ApplP}$ [V3 O3]$_{VP}$ where V3 is the main verb and V1 and V2 are the applicative coverbs, the underlying structure would hypothetically have to be [O1 V1]$_{ApplP}$ [O2 V2]$_{ApplP}$ [V3 O3]$_{VP}$ since applicative objects are supposed to be base-generated in Spec, ApplP position. While V1-to-v movement can be done, V2 would have no place to move to realize the desired surface structure where V2 is in between O1 and O2, leaving us with the ungrammatical sequence * [V1 O1] [O2 V2] [V3 O3].

These two difficulties together cast significant doubt on these Cantonese coverbs as candidates of applicative morphemes.

3. When Coverbs Are Not Actually Coverbs

Armed with a syntactic account of the coverb phrase, we can now examine in detail F&M's (2006a) claims on the verb-like qualities of coverbs, which were briefly introduced in (8-10) and summarized below in respective order:

(36) Verb-like properties of coverbs according to F&M (2006a)

(a) All coverbs are grammaticalized from verbs; some coverbs can also function as main verbs in single-predicate sentences

(b) Verbal marking can appear on coverbs(/V1)

(c) Coverbs(/V1) can be used with negation and also in V-not-V question formation

The following subsections deal with each of these properties in order, arguing for (i) a matrix/main verb reading of the situations in which coverbs are reported to have these verb-like properties, and (ii) that the different readings should be treated as different words. Two following subsections also distinguish object control, subject control, and split (subject+object) control readings, and examine the extraction facts in control verb structures and how they differ from coverb structures.

3.1. Coverbs with Main Verb Functions

We saw in (3) a list of common coverbs, some of which have both a verbal gloss and a prepositional gloss. This is because some coverbs can also function as main verbs, and in most cases the "prepositional" meaning associated with the coverb function is clearly related to the verbal meaning with the main verb function, and likely grammaticalized from it, as noted in F&M (2006a,b). Not all coverbs have a main verb counterpart, however; and some have marginal main verb uses. The list in (3) is expanded and reorganized in (37) according to these different statuses:

(37)		Coverb meaning	Main verb meaning[12]
(A) **No main verb counterpart**	*hoeng*	toward	NONE (ARCHAIC: to face toward)
	jau	from	NONE (ARCHAIC: to come from, originate)
	tung	with	NONE (ARCHAIC: to gather/be together)
	wai	for the sake of	NONE (ARCHAIC: to do; to act/serve as)
	ziu	according to, following	NONE (ARCHAIC: to shine, emit light in a direction)
(B) **Restrictions or non-canonical as main verb**	*deoi*	to, towards (treat sth in a way)	to face *(seldom used)*; to treat *(requires secondary predicate or manner adverb)*
	doi	in place of	to replace, represent *(more often in compound* doitai; *see* tai *below)*
	ging	via (usually physical movement)	to traverse or pass by/through *(only in compound* ginggwo, *same meaning)*
	tai	in place of	to substitute *(more often in compound* doitai, *see* doi *above)*
(C) **Has main verb counterpart**	*bong*	for (the benefit of)	to help
	gan	with, following	to follow
	hai	at/in/on, etc.	to be (at/in/on, etc.)
	jung	with	to use
	pui	with	to accompany
	wan	with, using	to seek, look for

[12] Archaic verbal meanings are obtained from the historical Kangxi Dictionary (Zhang & Chen 1716).

The three categories seen in (37)—which show the different degrees to which each form has or doesn't have both a main verb function as well as a coverb function—are quite evenly divided in numbers. This does not necessarily suggest that the coverbs (or coverb functions) are at different stages of grammaticalization *per se*, butdoes suggest that each form (and its various functions) has a different history of grammaticalization, where some developed a coverb function alongside a main verb function, and others have lost or are losing their main verb function.

To concretely illustrate and explain some of these forms and their (co)verbal functions, the following sets of sentences (38-41) represent an example or two from each group in (37). In (38), we see *ziu* used as a coverb in (38a) and ungrammatically as a main verb in (38b):

(38)   a. ngo **ziu**   nei ge jisi   zou-zo keoi   (coverb)
           1sg **according_to** 2sg POSS intention do-PERF 3sg
           'I did it **according to** your intentions/wishes.'

       b. *ngo **ziu**-zo nei   (*main verb)
            1sg **?**-PERF 2sg
           [No sensible interpretation.]

For group (37B), the coverb *ging* in (39a) contrasts with the lexicalized compound verb *ginggwo* in (39b), and the ungrammatical usage as a single-morpheme main verb in (39c):

(39)   a. keoi **ging** seoidou faan-zo   ukkei   (coverb)
           3sg **via** tunnel return-PERF home
           'She went home through(/passing by) the tunnel.'

       b. keoi **ging.gwo-zo**   seoidou   (in lexicalized compound)
           3sg **pass.cross-PERF** tunnel
           'She passed (by/though) the tunnel'

       c. * keoi **ging-zo**   seoidou   (*main verb)
            3sg pass-PERF tunnel
            Intended: 'She passed (by/though) the tunnel'

On the other end of the spectrum in the same (37B) group, we have *deoi* as a coverb in (40a), which also has two related main verb meanings, but their usage is "less canonical" in the sense that one is a stative verb more often used for inanimate arguments (40b), and the other requires

either a secondary predicate (40c)[13] or a manner adverbial just as in English (40d), otherwise it would be ungrammatical just as a bare verb (40e):

(40) a. keoi **deoi** nei zou-zo di   m-gin-dak gwong ge   je   (coverb)
         3sg **to** 2sg do-perf CL.pl neg-see-can light   POSS thing
         'He did some shameful things (things that cannot see the light of day) **to** you.'

      b. bou dinsigei   **deoi-zyu** go coeng   aa. (faan gwong gaa.)   (main verb)
         CL television **face-DUR** CL window FP   reflect light FP
         'The television **is facing** the window. (There's gonna be glare.)'

      c. keoi **deoi** nei mou   laimaau   (cf. keoi mou   laimau   (main verb)
         3sg **treat** 2sg not.have manners   3sg not.have manners
         'He treats you rudely.'   'He's rude/ has no manners')

      d. keoi [mou-laimaau-gam]_ADV **deoi** nei   (main verb)
         3sg not.have-manners-advzr **treat** you
         'He treats you rudely.'

      e. * keoi **deoi** nei   (*main verb)
           3sg treat 2sg
           'He treats you'

Finally, representing group (37C), we have the coverb *bong* in (41a) with its benefactive usage, and as a main verb in (41b) with a related but distinct meaning:

(41) a. ngo **bong** keoi zou-zo gungfo   (coverb)
          1sg **for** 3sg do-PERF homework
          'I did his homework for him.'

      b. ngo **bong-zo**   keoi   (main verb)
         1sg **help-PERF** 3sg
         'I helped him.'

     Given about half of these coverbs have main verb counterparts, one must necessarily ask if there are situations in which the coverb in a sentence (i.e., where it precedes another verb) may

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[13] Note in (48c) *deoi* could also be considered a coverb. This, however, does not invalidate the main verb reading since it does appear as the sole verb in (48d).

be interpreted as a main verb instead. This question will be explored in detail in the following two sections.

To note, F&M's (2006a) major contention that coverbs should be considered verbs—with the implication that the division of coverb and main verb functions is problematic—is based on the argument that coverbs behave like verbs. If it is not in fact the case that coverbs exhibit properties of canonical verbs, as I will show in the next two sections, then F&M's stance on coverb categoriality needs to be reexamined.

3.2. Verbal Marking on V1

As illustrated earlier in (9a-c), F&M (2006a) note that the V1 in a [S V1 O1 V2 (O2)] structure, which they analyze as a coverb, verbal markers with aspect, modal, and quantificational functions can attach. Sentence (9a) with the modal marker on V1 is reproduced below in (42b), in contrast to when the marker is on V2 in (42a):

(42)   a. ngo tung^{V1} keoidei king-**dak_gai**^{V2} (cf. (9a))
            1sg with   3pl   chat-**can**
            'I can chat with them.'

        b. ngo tung^{V1}-**dak** keoidei king_gai^{V2}
            1sg with-**can**   3pl   chat
            'I can chat with them.'

While the English translations are identical and F&M (2006a) do not explicitly mention any difference in meaning, they do mention in F&M (2006b) that when the verbal marker is attached to V2 (*king_gai* in (42)), it takes scope over the entire clause. The unstated implication would be that when the verbal marker is attached to V1 (*tung*), its scope is different in some way. I submit this to be exactly the case. Sentences (42a,b) are semantically distinguished in the following more nuanced and implied readings in (43a,b), respectively:

(43)   a. 'The thing that I can do with them is chat.'

                → The modal scopes over the activities that 'I' can engage with 'them'
                ('In view of what is allowed, in some possible world where I engage in an
                activity with them, the activity of chatting is true')

b. 'The people that I can chat with is them.'

$\rightarrow$ The modal scopes over the people with whom 'I' can do the activity of chatting

('In view of what is allowed, in some possible world where I engage in the activity of chatting, doing it with them is true.')

The target of the deontic modal[14] in (42b) and its reading in (43b) is on the relation of the activity to the participant introduced by V1 *tung,* in contrast to (42a) and (43a) where the target is on the activity of chatting itself expressed by V2 *kinggai.*

Another set of examples shows an even greater contrast in meaning when verbal marking and negation work together on V1 versus on V2:

(44)   a. ngo wai^{V1} keoidei **m**-heoi^{V2}-**dak** Feizau
           1sg for_sake_of 3pl   **NEG**-go-**can**   Africa
           'I can't go to Africa for their sake.'
               $\rightarrow$ 'For their sake, I can't go to Africa.'

b. ngo **m**-wai^{V1}-**dak**   keoidei heoi^{V2} Feizau
           1sg **NEG**-for_sake_of-**can** 3pl   go   Africa
           'I can't go to Africa for their sake.'
               $\rightarrow$ 'My going to Africa cannot be done for their sake.'

The differences in meaning between the (a) and (b) sentences in (42) and (44) indicate that verbal marking between V1 and V2 is not a case of free variation. One would also expect the syntactic structures between the (a) and (b) sentences to be different in some way, given the semantic difference. Thus, it is necessary to question whether it is appropriate to call the V1 in the (a) sentences of (42) and (44), which have no verbal marking, by the same term as for the V1 in the (b) sentences *with* verbal marking. That is, should they both be called coverbs?

Let's consider the (co)verb *bong* in V1 position, where the presence of verbal marking lends to a more likely reading as a main verb:

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[14] The modal *-dak* may also denote dynamic modality (i.e., ability). I leave this reading out for explanatory efficiency.

(45)   a. ngo **bong**^{V1} keoi zou^{V2}-**zo** gungfo   (= (41a))
          1sg **for/help** 3sg   do-**PERF** homework
          'I did his homework for him.'

       b. ngo **bong**^{V1}-**zo**   keoi zou^{V2} gungfo
          1sg **for/help-PERF** 3sg do   homework
          'I helped him do his homework.'
          ?? 'It was for him that I did the homework.'

The first reading of (45b) is substantiated and the second questionable reading rejected when we

try to cancel the entailment that the homework has been completed, given the perfective aspect

zo renders verbs telic. If in (45b) the perfective *zo* actually still applies to the verb *zou* 'do', we

would expect that the completion of the homework cannot be cancelled, as in (45a'), but indeed

it can, illustrated in (45b'):

(45')   a. ngo bong   keoi **zou-zo**   gungfo,
           1sg for/help 3sg   **do-PERF** homework
           'I did his homework for him,

                #daanhai di   gungfo   taai naan,   zou-m-saai
                 but   CL.pl homework too difficult, do-NEG-all
                #but the homework was too difficult, I couldn't get them all done.'

       b. ngo **bong-zo**   keoi zou gungfo
          1sg **for/help-PERF** 3sg do   homework
          'I helped him do his homework.'

                √ daanhai di   gungfo   taai naan,   zou-m-saai
                 but   CL.pl homework too difficult, do-NEG-all
                √ but the homework was too difficult, he couldn't get them all done.'

We must conclude that when *bong* in V1 position has verbal marking, it must be interpreted as a

main verb; it also suggests that when there is no verbal marking on at least V1 if not also V2,

both coverb and main verb readings should be possible, which is indeed the case:

(46)   ngo bong keoi zou gungfo
        1sg for/help 3sg do homework
        'I'm doing his homework for him' OR 'I'm helping him do his homework'

Thus, *bong* in (45b) with verbal marking on V1 should be reanalyzed as an object control verb, where [PRO do homework] is a clausal argument of the verb:

(45b''') ngo$_i$ bong-zo keoi$_j$ [PRO$_{*i/j}$ zou gungfo]
        1sg help-PERF 3sg PRO   do homework
        'I helped him do his homework.'

Note that it is perfectly grammatical to omit the bracketed part of the sentence in (45b''), in which case we would get simply "I helped him." How can we be sure, however, that *bong* cannot be a subject control verb? That is, in (45b''), why can't both the activity of helping and the activity of doing homework have the same subject argument? We rule out subject control by virtue of sentences such as (47), where one person's bodily activity inherently cannot be done by another person who inhabits a different body:

(47)   ngo$_i$ bong-zo   keoi$_j$ [PRO$_{*i/j}$ fangaau]
        1sg help-PERF 3sg$_j$ [PRO$_j$ sleep]
        'I helped him sleep.'

And as expected, the coverb reading in (48) is pragmatically peculiar unless given a special context, because now the sleeping activity is done by the subject rather than the object, but doing one's own bodily activity for someone else's benefit is an unusual activity:

(48)   (#) ngo bong keoi fan-zo_gaau
          1sg for   3sg   sleep-PERF
          'I slept for him'

This control analysis is further supported by the following sentences in (49) which are identical on the surface, but structurally different. I use the person-neutral reflexive pronoun *zigei* 'self' to help illustrate the two otherwise ambiguous readings of the same string of words:

(49)   a. ngo$_i$ bong keoi saat-zo   zigei$_i$ (coverb *bong*)
          1sg for   3sg   kill-PERF self
          'I killed myself for him'

b. ngo bong keoi$_j$ [PRO$_j$ saat-zo   zigei$_j$]   (control verb *bong*)
   1sg   help   3sg   PRO   kill-PERF self
   'I helped him kill himself.'

The contrast exhibited between (49a) and (49b) is that in the former coverbal reading of *bong*, *ngo* 'I' is the subject of the verb *saat* 'kill', whereas in the latter control verb reading of *bong*, PRO is the subject of the verb *saat* 'kill' and it is co-indexed with both the embedded object *zigei* 'self' and with the matrix object *keoi* 'him' to obtain the correct reading. The two sentences are structurally represented in (50) and (51):
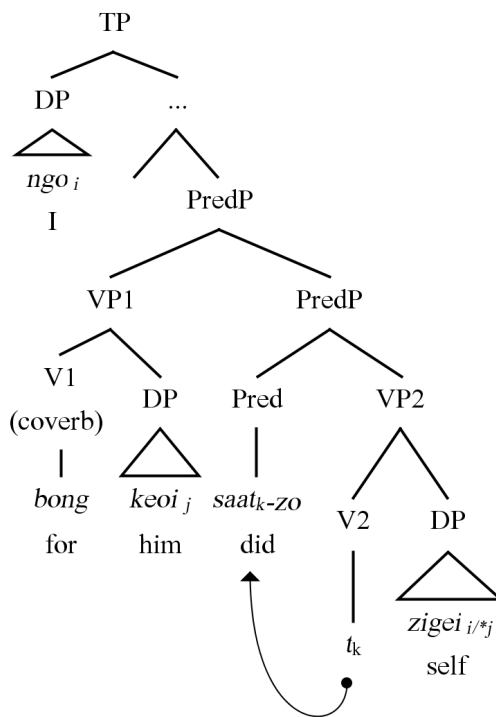
(50) V1 = coverb (cf. 49a)   (51) V1 = control verb (cf. 49b)
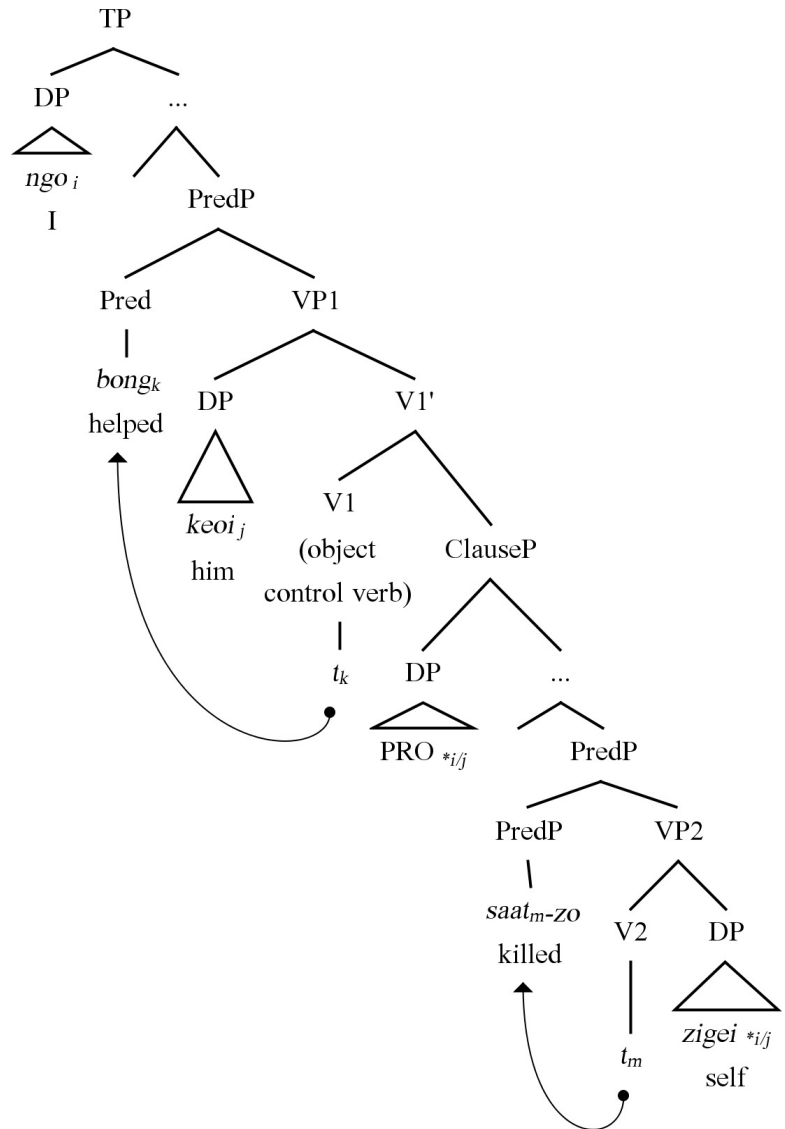
In (51), V1-to-Pred movement ensures that both the object *keoi* 'him' and the clausal complement follow V1 in surface structure.

The intuition we may come away with the control analysis is that if a verb has verbal markers, especially ones with functional meanings such as aspect or modality, the verb must be part of a clause rather than an adjunct. The implicit argument to be made is that V1 with aspect or modal markers cannot be a coverb (but V1 without verbal markers can still be a main verb, as in (49b)). The coverb phrase being a PredP adjunct should not have its own aspect or modality if it is an event-internal modifier of the matrix verb phrase. In a clause containing a control verb with a clausal argument, the clausal argument also shares tense with the matrix clause (as in (49b), despite aspectual marking in the embedded clause), but the clausal argument is a subordinate event (e.g., my help may be preparing poison on the day before).

If we return to sentences (42a,b) or (44a,b), this difference in terms of which verb is expressing the main event would explain the differential readings. Let us consider V1 in (44b) as a subject control verb and V2 as part of the embedded clause and as an obligatory argument besides *keoidei* 'them,' reproduced in (52):

(52)   ngo$_i$ m-**wai**-dak   [keoidei] [PRO$_i$ heoi Feizau]   (cf. (44b))
        1sg NEG-**for_sake_of**-can 3pl   [PRO go   Africa]
        'I can't go to Africa for their sake.'
        ➔ 'My going to Africa cannot be done for their sake.'
        ➔ 'I can't do-for-sake-of [them] [go to Africa]'

Although in Section 3.1. it was noted that *wai* does not have a main verb counterpart, I propose here that in a sentence such as (52), verbs like *wai* do function as a main verb, and more specifically a control verb requiring a clausal complement.

If the control verb analysis is correct, we should predict that other verbal qualities should be available in the control verb construction but not in the coverb construction. This is borne out in the case of complement coordination (or gapping/stripping of subject and (co)verb)[15], in (53):

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[15] There doesn't seem to be other gapping or coordination phenomena available for the control construction which would allow us to distinguish it from the coverb construction. This may be due the complexity of the control construction in having two complements, a DP and a clausal phrase. I therefore only have this example to test out the prediction.

(53)   keoi [**wai-zo**   ngodei heoi Feizau] tungmai [(_{keoi wai-zo}) neidei heoi naamkik]
       3sg   for_sake_of-PERF 1pl go   Africa   and   2pl   go Antarctica

       'It was for our sake that he's going to Africa and for your sake that he's going to
       Antarctica.'
       ALSO POSSIBLE: 'It was for our sake that he's going to Africa, and you're going to
       Antarctica.'

                                                                      (control verb)

(54)   [keoi **wai**   ngodei heoi-zo Feizau] tungmai [(*_{keoi wai}) neidei heoi-zo naamkik]
       3sg for_sake_of 1pl   go-PERF Africa and   2pl   go-PERF Antarctica

       *INTENDED: 'He went to Africa for our sake and to Antartica for yours.'
       OBTAINED: 'He went to Africa for our sake, and you went to Antartica.'

                                                                      (coverb)

In (53), omission of the subject and verb in the latter of the coordinated clauses allows
coreference with the previous clause. No gapping can also interpreted, such that the second
clause has no coreference correspondence with the previous one. In (54), however, no
coreferential reading is possible, only the non-coreferential reading where they are two
independent clauses juxtaposed next to each other. Note that in (54), a reanalysis of *neidei*
'you (pl)' in the second clause as the subject and *wai ngodei* 'for our sake' as the gap in the
second clause in (54) is also impossible:

(54') [keoi **wai**   ngodei heoi-zo Feizau] tungmai [neidei (*_{wai ngodei}) heoi-zo naamkik]
       3sg for_sake_of 1pl   go-PERF Africa and   2pl   go-PERF Antarctica

       *INTENDED: 'He went to Africa for our sake and you went to Antartica (for our
       sake).'

       To summarize, this section examined the cases where verbal morphology is marked on
V1 in a [S V1 O1 V2 (O2)] structure, and found that it is not in free variation with the same
structure where verbal marking is on V2. The two are found to differ with respect to semantic
interpretation of both the marked V and the sentence in question. Tests on reflexive binding
further revealed that verbal marking on V1 can only yield a control verb reading and not a
coverbal reading. The prediction that the control verb reading should have other verb-like

properties not applicable to the coverb reading is also positively tested in one instance of VP-complement gapping.

The advantage of the control verb analysis is that there no longer needs to be an explanation for why coverbs can take verbal markers, because under this rubrik a coverb with verbal markers—whether aspectual markers or modal markers—is actually a control verb, and thus a main verb. The implausibility or unusualness of a verbal unit in an adjunct (instead of the main verb) bearing verbal markers would no longer be a puzzle that requires solving.

3.3. Negation on V1 and V-not-V question formation

If the analysis from the previous subsection holds, these two remaining purported verbal characteristics of coverbs are no longer an anomaly and can be explained by the coverb in such constructions as being a control verb instead. In (55a) we see *deoi* in V1 position with V1-not-V1 structure, in contrast to V2-not-V2 structure in (55b):

(55) a. ngo **deoi-m-deoi**^{V1} nei zou^{V2} di   seoi je   hou le?   (V1-notV1)
          1sg toward-not-toward 2sg do   CL.pl bad thing okay FP   (control verb
          'Shall I do something bad to you or not to you?'   *deoi*)
              ('As for doing something bad, shall I do it to you or not?')

      b. ngo deoi^{V1} nei **zou-m-zou**^{V2} di   seoi je   hou le?   (V2-not-V2)
          1sg toward 2sg do-not-do   CL.pl bad thing okay FP   (coverb *deoi*)
          'Shall I do something bad or not do something bad to you?'

The different readings suggest that in (55a), *deoi* is better analyzed as a subject control verb, with a PRO before *zou* 'do', whereas in (55b) *deoi* is functioning as a coverb. The data for negation behave similarly:

(56) a. ngo **m**-wai^{V1} nei heoi^{V2} Feizau   (not-V1)
          1sg **not**-for_sake_of 2sg go   Africa   (control verb *wai*)
          'I will not for your sake go to Africa.' OR 'My going to Africa will not be for
           your sake.'

      b. ngo wai^{V1} nei **m**-heoi^{V2} Feizau   (not-V2)
          1sg for_sake_of 2sg **not**-go   Africa   (coverb *wai*)
          'For your sake, I will not go to Africa.'

Again, it is no longer an issue that V1 in (55a) and (56a) behave like main verbs, because if we analyze them as control verbs, then the V-not-V structure and negation on them would be entirely expected.

This section resolves the last purported verb-like properties of coverbs described in F&M (2006a). What we may conclude from the preceding discussion is that coverbs do not in fact have any verbal properties at the syntactic level; their resemblance to verbs is mostly if not exclusively semantic, in that they all seem to have grammaticalized from (main) verbs, many (though not all) of which still maintain a verb function.

The control verb counterparts to the coverbs are not a homogenous group, however. I discuss this in the next two subsections and examine O1 extraction in control constructions to see if they differ from the extraction facts for coverb constructions.

3.4. Subject, Object, Split, and No Control

The previous sections saw only a few examples of coverbs with control verb counterparts: object control *bong* 'help' in (45b), (46), (47), and (49b); subject control *wai* 'do something for the sake of someone' in (52), (53), and (56a); and subject control *deoi* 'do something to someone' in (55a). However, there are some coverbs whose control verb counterpart is split control (i.e., subject + object control; see Williams 1980 and Landau 2000, among others, for discussion of this phenomenon), and some which don't even have a control verb counterpart. The list of common coverbs in (3) is reorganized below in terms of the categories of control mentioned:

(57)		**Coverb meaning**	**Single-predicate verb meaning**	**Control verb meaning**
Has no control verb function	*ging*	via (usually physical movement)	(in compound *ginggwo*: to traverse, pass by/through)	NONE
	jau	from	NONE (ARCHAIC: to come from, originate)	NONE

Has object control function	*bong*	for (the benefit of, in place of)	to help	to help someone do something
Has split control function	*gan*	with, from, folllowing	to follow	the follow somebody doing something
	pui	with, accompanying	to accompany	to accompany somebody doing something
	tung	with (comitative)	<u>NONE</u> (ARCHAIC: to gather/be together)	to be with somebody doing something
Has subject control function	*deoi*	to, towards (treat somebody in a way)	to face	to do something to somebody
	doi	in place of	to replace, represent (usually in compound *doitai*)	to substitute/ represent somebody in doing something
	hai	at/in/on, etc.	to be at/in/on	to be in/at/on a location doing something
	hoeng	toward	<u>NONE</u> (ARCHAIC: to face toward)	to face a certain direction doing something
	jung	with (instrumental)	to use	to use something doing something
	tai	in place of	to substitute (usually in compound *doitai*)	to substitute somebody in doing something
	wai	for the sake of	<u>NONE</u> (ARCHAIC: to do; to act/serve as)	to do something for the sake of someone
	wan	with (instrumental)	to look for	to get something/somebody to doing something
	ziu	according to, following	<u>NONE</u> (ARCHAIC: to shine)	to do something according to something

An example of the split control category, which we haven't seen yet, is illustrated in (58), where PRO is coreferential with both arguments:

(58)   keoi$_i$ pui-zo   ngo$_j$ PRO$_{i+j}$ faan hok
        3sg accompany-PERF 1sg   return school
        'He accompanied me to school.'

The split control function falls out from the inherent semantics of the verbs, where 'following' (*gan*), 'accompanying' (*pui*), and 'being with'(*tung*) entail that both the subject and the object are involved in the activity of the verb.

The key observation from the table above is that the non-homogeneity of the coverb readings in comparison to the control verb readings is a further argument for the separation of the two functions. If coverbs were truly as verb-like as F&M contend, one might expect to see that every coverb should have a corresponding control verb function, but the fact that at least 2 coverbs don't have control verb counterparts (and that some do not even have single-predicate verbal meanings) suggest they are different classes of words.

3.5. Extraction in Control Constructions

While in a coverb structure, the coverb object (O1) cannot under any circumstance be extracted—as we saw in (5-7) for relativization, topicalization, and passiviation, respectively—the DP complement (O1) of the control verb in most cases arguably cannot be extracted either. Although it may seem unusual that the control verb object cannot be extracted, since it is in an argument position and not couched inside an adjunct such as the coverb phrase, the acceptability of extraction in Cantonese is at best questionable. Sentence (59) illustrates relativization of the control verb object, whereas sentence (60) illustrates topicalization; both of these cases are not clearly acceptable, if not ungrammatical, without pronoun resumption:

(59)   ngo bong-zo */???(keoi$_i$) zou gungfo   ge hoksaang$_i$] feilou-zo   (relativization)
        1sg help-PERF   3sg   do homework POSS student   fail-PERF   (object control)
        'The students whom I helped do homework failed.'

(60)   Aaming, ngo bong-zo */???(keoi$_i$) zou gungfo   (topicalization)
        Aaming 1sg help-PERF   3sg   do homework   (object control)
        'Him, I helped do homework.'

In the Cantonese sentences, different types of control verbs would yield the same judgement if the gap is simply empty—whether object control (*bong* 'help' in (59a) and (60a) above), subject control (*doi* 'replace' in (61a,b) below), or split control (*pui* 'accompany'in (62a,b)):

(61) a. *[ngo doi-zo   ___$_i$ zou gungfo   ge hoksaang$_i$] feilou-zo   (relativization)
            1sg replace-PERF   do homework POSS student   fail-PERF   (subject control)
            Intended: 'The students whom I replaced doing the homework failed.'

        b. * keoi$_i$, ngo doi-zo   ___$_i$ zou gungfo   (topicalization)
            3sg   1sg help-PERF   do homework   (subject control)
            Intended: 'Him, I replaced doing homework.'

(62) a. *[ngo pui-zo   ___$_i$ zou gungfo   ge hoksaang$_i$] feilou-zo   (relativization)
            1sg accompany-PERF   do homework POSS student   fail-PERF   (split control)
            Intended: 'The students whom I accompanied doing the homework failed.'

        b. * keoi$_i$, ngo pui-zo   ___$_i$ zou gungfo   (topicalization)
            3sg   1sg help-PERF   do homework   (split control)
            Intended: 'Him, I accompanied doing homework.'

The extraction facts with regards to passivization, however, are slightly different. Passivization is
ungrammatical for subject control as well as split control constructions in Cantonese (63a, 64),
and at least for subject control in English (63b):

(63) a. * go-go lousi   bei ngo doi-zo   ___ gaau jingman tong   (passivization)
            that-CL teacher PASS 1sg replace-PERF   teach English class (subject control)
            Intended: 'That teacher was replaced by me teaching his English class'

        b. * He was promised by me to arrive early.
            (cf. 'I$_i$ promised him PRO$_i$ to arrive early')

(64)   * keoi bei   ngo pui-zo   jaai daanche   (passivization)
            3sg PASS 1sg accompany-PERF step bicycle   (split control)
            Intended: 'He was accompanied by me riding bicycles.'

For object control, however, passivization is acceptable in both Cantonese and English:

(65) a. keoi$_i$ bei   ngo bong-zo   PRO$_i$ zou gungfo   (passivization)
   3sg   PASS 1sg help-PERF   do   homework   (object control)
   'He was helped with doing his homework by me.'

    (cf. ngo bong-zo   keoi$_i$ PRO$_i$ zou gungfo
     1sg   help-PERF 3sg   do   homework
    'I helped him do his homework.')

  b. He$_i$ was told PRO$_i$ to arrive early.
   (cf. I told him$_i$ PRO$_i$ to arrive early.)

The passive structures in Cantonese and English are not entirely equivalent (the agent or "by phrase" in Cantonese, *(bei) ngo* in (65a), is preverbal, and it is also obligatory[16]), but they both involve a patient argument that has been promoted to subject position, whereas the agent argument has been demoted to oblique position and is optional in the case of English. This demotion seems to render control by the agent (but not by the promoted patient) impossible, and thus passivization of subject control constructions is also rendered ungrammatical, an observation that has been noted by Jenkins (1972), Bresnan (1982), and van Urk (2013). Van Urk in particular found this observation to be true at least in Norwegian and Swedish as well. Since split control constructions also involve the agent as a controller, passivizing them is also expected to be ungrammatical, as seen in (64).

   I will not attempt to address the reasons for the control restriction observed above since it is not crucial to the arguments made in this paper. However, I will point out that since the impossibility of passivization for the subject (and split) control constructions in Cantonese holds in other languages as well, this suggests that inextractability in (subject and split) control constructions and inextractability in coverb constructions are in fact due to different reasons and due to their different syntactic structures. The possibility of passivation in the object control construction seen in (65a) further supports this view. Fortuitously, the only object control verb

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[16] As noted in F&M 2006a, even when the agent is unknown, *jan* 'person' is used:

(i) nei bei jan ngaak-zo   (cf. (47) in F&M 2006a: 80)
    2sg PASS person cheat-PERF
    'You've been cheated (by someone).'

we have here, *bong*, was also instrumental in showing how reflexive binding distinguishes the coverb reading from the control reading in (49) in Section 3.2.

While the impossibility of topicalization and relativization of the object in control constructions also remain unexplained in this paper, the following conclusion is clear: the differential reading of V1 as coverb vs. control verb is not merely semantically motivated, but also syntactically motivated. If otherwise, we would not expect to see passivization possible in the object control reading of V1.

4. Conclusion

This paper reexamined Francis & Matthews's (2006a) descriptions and proposals regarding the verbal nature of Cantonese coverbs, with respect to its syntax, semantics, and categorical status. The beginning sections assessed two general syntactic models of the coverb phrase—F&M's VP-adjunct analysis with proposed revisions utilizing Ernst's (2002) PredP-adjunct model, and Pylkkanen's (2002) high applicative structure as a competing analysis. The paper found the adjunct analysis to be superior in accounting for the inextractability of the coverb object as well as the ability of multiple coverb phrases to stack next to each other and to freely order with manner adverbs.

Using the adjunct model as basis for the structure of the coverb phrase, I have shown that in a [S V1 O1 V2 (O2)] sentence where V1 participates in constructions in a canonical verb-like manner vs. a sentence where V2 does so instead of V1, the overwhelming case is that there are significant enough semantic differences between the two sentences to consider them to have different syntactic structures. Namely, aspect and modal marking, V-not-V question formation, and negation all produce semantic differences between when they are on V1 vs. on V2. I proposed that in the former scenario V1 is in fact functioning as a control verb with an obligatory clausal complement (which contains V2), whereas only in the latter case where there are no verbal markers on V1 do we have a true coverb. To further support the differential coverb and control verb readings of V1, I demonstrated that the two cannot participate in the same syntactic processes—specifically in the case of passivization, where object extraction is not possible in the coverb interpretation, but possible in the (object) control verb interpretation. Coverbs therefore do not display any true morphosyntactic verbal properties as F&M have instantiated, and are in fact far more preposition-like than F&M claim.

Nonetheless, if we examine the different functional readings of these (co)verbs, as seen in the table in (57), we can see that they are likely diachronically if not also synchronically related. While it is beyond the scope of this study to speculate on whether Cantonese speakers consider coverbs to be verbs in their mental representation, a future extension of this paper can investigate the possible grammaticalization paths and diachronic relations between the single-predicate verb, control verb, and coverb functions. If the control verb functions appear to have developed via the coverb functions, for example, then there may still be an argument to be made for the verbal status of coverbs. At present, however, from the viewpoint of synchronic syntactic description, coverbs are clearly not verbs, but more like prepositions.

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