Verb-Copying Resultatives in Colloquial Singapore English

Candidate Name
Tamisha Lauren Tan Ming Hui

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Contents

1 Introduction

The term Verb-Copying Resultative (VCR) refers to a specific construction where sentences containing both a direct object and post-verbal result predicate include two instantiations of the main verb. An illustration of this construction is given in (1):[1]

(1) He eat rice eat full already.

'He became full from eating rice.'   [*Colloquial Singapore English*]

While research has been conducted on VCRs in Mandarin and Cantonese, this dissertation provides the first account of Verb-Copying Resultatives in Colloquial Singapore English (CSE). CSE refers to a basilectal variety spoken in Singapore, arising from contact between the superstrate lexifier language English and the substrate Sinitic languages (e.g. Mandarin, Hokkien, Cantonese) and Malay. This basilect shows substantial morphosyntactic differences from acrolectal Standard Singapore English, one being the availability of VCRs.

This dissertation focuses on proposing a syntactic structure for CSE VCRs within the Copy Theory of Movement. The aim is for the syntactic asymmetries and semantic traits of CSE VCRs, as outlined in Section 1.1, to fall out directly from the proposed derivation, without resorting to language-specific stipulations. To do this, in Section 1.3 and 1.4 I draw on comparisons between CSE VCRs and resultative constructions in Mandarin and English to produce a provisional derivation. Section 2.1 then expands on this with an elaborated structure, showing how the distribution of VCRs arises from multiple verb movement, information structure requirements, and morphological fusion. In Section 2.2, I propose a unified analysis for both subject- and object-predicated VCRs. Section 3 then critically assesses possible alternative approaches to VCRs, looking at Sideward Movement (Nunes, 2001; Cheng 2007), Serial Verb Constructions (Collins, 1997), and Covert Coordination (Baker, 1989), before arguing that my proposal draws on their successes but improves on them in theoretical elegance and empirical adequacy. Section 4 and 5 discusses directions for future research, looking at other CSE verb-copying constructions and the possible influence of Cantonese, before concluding.

1.1 The Verb-Copying Resultative in CSE

This dissertation will primarily focus on the construction in (1), which illustrates several syntactic and semantic features to be accounted for. The first puzzle concerns why verb-copying is obligatory for transitive verbs, such that (2) is ill-formed in comparison to (1), but unavailable for intransitive verbs in (3):

(2) * He eat rice full already.

(3) * He cry cry tired already.

Another question is why VCRs are ungrammatical without the perfective aspect marker *already*:

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[1] All examples are in Colloquial Singapore English unless otherwise noted. 'English' will be used to refer to Standard English.

(4)   * He eat rice eat full.

Thirdly, several asymmetries exist between the main verb phrase and result predicate. For one, the main verb phrase cannot take aspectual marking:

(5)   * He eat rice already eat full.

The result predicate and direct object also cannot swap places, such that the result predicate cannot occur first:

(6)   * He eat full eat rice already.

This dissertation aims firstly to produce a derivation that predicts these four characteristics of obligatory transitivity, perfectivity, asymmetrical aspectual marking, and the rigid ordering of the two complements with respect to each other. Section 2.1.3 will propose that these features arise from the Agree relations of v *already* triggering multiple verb movement, forming a [V-Pred-v] compound. Section 2.1.4 and 2.1.5 will discuss the mechanisms of verb-copying, where *eat rice* is VP-fronted as a secondary topic for information structure. The VP is then morphologically fused, rendering two copies of *eat* distinct and hence invisible to ordering contradictions. By pursuing an empirical, construction-specific account of VCRs in CSE, this dissertation will avoid theoretically problematic language-particular stipulations such as the Mandarin Postverbal Constraint (Sybesma, 1999) and English Direct Object Restriction (Simpson, 1983), given that they intrinsically lack explanatory power and universal generalisability. The second aim of this dissertation is to address the semantics of VCRs such as the following:

(7)   He wash clothes wash clean already.
      'The clothes became clean from his washing them.'

Comparing (1) and (7), what is immediately obvious is their differing semantic interpretations. In (1), the predicate *full* is subject-orientated and modifies the external argument *he*. In contrast, in (7) the predicate *clean* is object-orientated and modifies the internal argument *clothes*. Section 1.4.3 will argue that subject-predication arises from VCRs' complex event structure requiring at least one argument per subevent, where the internal argument PRO merges as Pred's complement and is controlled by the external argument *he*. An ideal solution would provide parallel underlying structures for both (1) and (7), while accounting for the differences in predicate orientation in as minimal a manner as possible; I will hence propose in Section 2.2 that both sentences have broadly the same syntactic structure, where PRO is controlled by the external argument in subject-predicated constructions, and *pro* is assigned co-reference with the direct object through discourse in object-predicated constructions.

Having set out the main features this dissertation will account for, we turn now to the theoretical framework within which this work will be set.

1.2   Theoretical Assumptions

This dissertation works within the Minimalist Program (Chomsky, 1995), assuming binary branching as motivated by theoretical economy and learnability (Kayne, 1994). I also

assume conventional notions of asymmetric c-command assigning co-reference through binding and control. Within Minimalism, derivations are driven by Agree - newly merged heads with uninterpretable features are Probes, which search their c-command domains for elements with a matching feature (i.e. Goals); Agreement requires that a goal raises into local configuration with its probe, after which Agree then values the unvalued feature on the Probe and deletes uninterpretable features (Chomsky, 2000). Furthermore, this dissertation utilises the Copy Theory of Movement (CTM) to explain multiple copy spell out. The CTM posits that traces arising from movement operations are actually copies of the moved element that form a chain (Nunes, 2004). In order to avoid violating the irreflexibility condition and to prevent ordering contradictions, given that two non-distinct copies cannot both precede and be preceded by intervening elements, copy deletion must occur following Chain Reduction:

(8) **Chain Reduction**
Delete the minimal number of constituents of a nontrivial chain CH that suffices for CH to be mapped into a linear order in accordance with the LCA.

(Nunes, 2004:101)

Formal Feature Elimination means it is more economical to delete lower copies, given that they possess fewer features to eliminate than the head of the chain (i.e. the highest-positioned copy). This means that lower copies are usually phonetically null. Having established the core syntactic assumptions of this paper, we turn now to a review of the current literature on resultatives in other languages, seeking to draw out parallels between CSE VCRs and cross-linguistically similar constructions.

1.3 Resultative Constructions in Mandarin

This paper draws significantly on extant work on resultative constructions in Mandarin. Comparing the glosses from (9) and (10) with (1) and (7) respectively, we note that CSE VCRs are almost a direct calque on verb-compound resultatives in Mandarin:[2]

(9) ta1 chi1 fan4 chi1-bao3 le
he eat rice eat-full PFV
'He became full from eating rice.'

(10) ta1 xi3 yi1fu xi3-gan1jing4 le
he wash clothes wash-clean PFV
'The clothes became clean from his washing them.' [*Mandarin*]

Bao's (2005) work on the aspectual system of CSE has shown that the Mandarin perfective aspect marker *le* has been transferred and relexified as CSE *already* in several contexts, including the perfective completive and inchoative. To further underscore the distributional resemblance between the two languages, Mandarin VCRs show all four characteristics outlined in Section 1.1, requiring verb-copying in (11), marking perfectivity obligatorily in (12) and asymmetrically in (13), and showing fixed ordering between the main verb and result predicate in (14):

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[2] PFV = perfective, CL = classifier, COP = copula, DEF = definite, ACC = accusative, INF = infinitive

(11)   * ta1 chi1 fan4 bao3 le
        he eat rice full PFV

(12)   * ta1 chi1 fan4 chi1-bao3
        he eat rice eat-full

(13)   * ta1 chi1 fan4 le   chi1-bao3
        he eat rice PFV eat-full

(14)   * ta1 chi1-bao3 chi1 fan4 le
        he eat-full   eat rice PFV

[*Mandarin*]

Given this similarity, it would be pertinent to review the current literature on resultatives in Mandarin. One of the main observational generalisations in Mandarin syntax is that of the Postverbal Constraint (PVC):

(15)   **Postverbal Constraint**
If, in a Mandarin sentence, a constituent other than the direct object follows the verb, the direct object is forced to leftward move out of its postverbal base position.
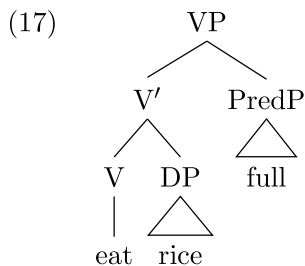
(Sybesma, 1999:1)

Under this Constraint, (11) is ungrammatical given that both the direct object *fan4* and result predicate *bao3* follow the verb. I assume that Mandarin VCRs and CSE VCRs are derivationally similar; it is hence one aim of this dissertation to account for why the PVC appears to hold on CSE resultatives by showing how reflexes of the constraint fall out from the structure of VCRs, without having to assume the PVC as a language-specific stipulation. Several attempts to formalise this constraint have been made; the Phrase Structure Condition (PSC), for instance, states:

(16)   **Phrase Structure Condition**
Within a given sentence in Chinese, the head (the verb or verb phrase) may branch to the left only once, and only on the lowest level of expansion.

(Huang, 1984:54)

As a point of clarification, Huang (1984) uses 'left-branching' to describe a head being positioned to the left - in current literature, head-initial configurations are instead called 'right-branching', assuming bottom up derivation. The tree in (17) would thus be ill-formed in representing a double-complement resultative without verb-copying, given that the head *eat* has branched to the right twice:

(17)

```
              VP
             /  \
           V'    PredP
          / \     /\
         V   DP  full
         |   /\
        eat rice
```

However, this formulation faces both empirical and theoretical issues. The PSC both under- and overgenerates. For instance, Sybesma (1999:3) notes that the PSC incorrectly disallows the following:

(18)　ta1 qi2　san1-tian1-de　ma3
　　　he　ride three-days-DE horse

　　　'He rode a horse for three days.'　　　　　　　　　　　　　　　　[*Mandarin*]

Huang (1982) proposes a repair strategy to account for this exception by claiming that the two NP constituents *san1-tian1* and *ma3* can be 'restructured' into one NP with insertion of the functional DE morpheme. However, Sybesma (1999) argues that such restructuring based on structural contiguity would instead predict the incorrectly ordered NP compound *ma3-de-san1-tian1* 'horse-DE-three-days'. Hence, the PSC is empirically troubling. In fact, the PVC itself seems to be more tendency than rule. Sybesma (1999:2) identifies numerous examples of objects remaining post-verbal, as with duratives:

(19)　wo3 kan4-le　　liang3-ge xiao3shi2 shu1
　　　I　　read-PFV two-CL　　hours　　book

　　　'I read a book for two hours.'　　　　　　　　　　　　　　　　[*Mandarin*]

This suggests that the PVC is construction-specific, rather than a broad generalisation over all Mandarin syntax. Even more troubling is the fact that as an "ad hoc stipulation for a particular language" (Li, 1990:8), the PSC is inherently theoretically problematic. Consider the nature of inter-language variation within the Minimalist Program:

(20)　**The Borer-Chomsky Conjecture**
　　　All parameters of variation are attributable to differences in the features of particular items (e.g. the functional heads) in the lexicon.

　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　(Baker, 2008:354)

To this end, there cannot be a structural constraint on branching that applies only to certain languages, since all cross-linguistic variation is in the lexicon.

Given these theoretical and empirical issues, this dissertation seeks to provide a better account of why two complements cannot occur post-verbally in CSE resultatives. One step towards this is to model the PSC in more general terms - under the theory of Antisymmetry, one can restate Kayne's (1994:6) Linear Correspondence Axiom (LCA) as follows:

(21)　**The Linear Correspondence Axiom (informal)**
　　　For any given non-terminal category X asymmetrically c-commanding another non-terminal category Y, all terminal nodes dominated by X must precede all terminal nodes dominated by Y.

The LCA maps hierarchical structure onto linear strings for spell out at PF, and hence allows us to assume that the linearly-second iteration of the verb (in *eat full*) is merged first, lower in the derivation, before being copied leftwards to a higher position (in *eat rice*) and linearised there first. This Axiom also predicts universal Spec-Head-Comp branching order, such that the tree in (17) is ill-formed, given that PredP asymmetrically

c-commands DP and V, but is linearised after them; its ungrammaticality thus falls out of language-universal factors (J. Huang, p.c.). The LCA thus helps us account for some of the grammaticality predications of the PSC in CSE without having to resort to language-specific stipulations, yielding a more theoretically sound model. In Section 2, this dissertation will empirically account for how and why the direct object complement is moved leftward in VCR constructions, based on information-structure requirements, to become a secondary topic.

1.4 Resultative Constructions in English

Despite the apparent success of the LCA in deriving the PSC, one key issue raised by situating the PSC within a language-universal framework is why the PVC seems to affect CSE but not English, as with ditransitives:

(22) He gave John a book.

However, constructions like (22) are equally grammatical in Mandarin:

(23) ta1 gei3 zhang1san1 yi4 ben3 shu1
     he give Zhangsan one CL book.
     'He gave Zhangsan a book.'   [*Mandarin*]

As such, (23) is another example of how the PVC does not apply without exception in Mandarin, such that construction-specific accounts of its reflexes may be more fruitful. Yet certain English resultatives do not seem to be constrained by the PVC either:

(24) John danced mazurkas across the room.   (Verspoor, 1997:151)

(25) John jumped the horse over the fence.   (Folli & Harley, 2006:123)

To address these double-complement constructions, we must first compare them to English resultatives with one complement. Consider the following:

(26) The metal was hammered flat.

(27) The lake froze solid.   (Levin & Rappaport-Hovav, 1995:34)

The examples from (24) to (27) all appear to be subject-predicated, thus seemingly violating the English Direct Object Restriction:

(28) **Direct Object Restriction**
     A resultative phrase may be predicated of the immediately postverbal NP, but may not be predicated of a subject or of an oblique complement.

                                                        (Simpson, 2008:354)

Just as in the CSE VCR in (1), where *full* modifies the external argument *he*, in these examples it is the apparent subject *John* that crosses the room/jumps the fence, the *metal* that becomes flat, and the *lake* that becomes solid. However, the DOR violations here will turn out to be illusory. The differences between the double-complement constructions in (24) and (25) and the single-complement constructions in (26) and (27) arise from the fact that they respect the DOR through different mechanisms.
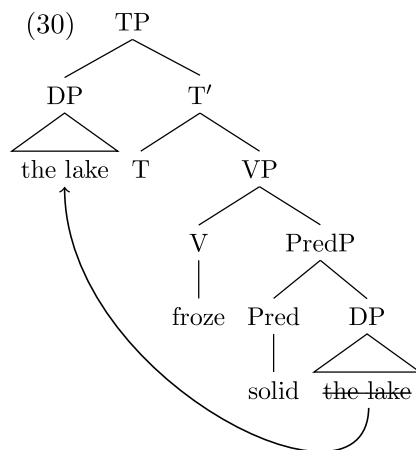
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1.4.1 Single-Complement Subject-Resultatives

As Hoekstra & Mulder (1990) establish, resultatives can be standardly represented as unaccusative small clauses that are complements to the main verb. In this dissertation, these small clauses are labelled PredPs.[3] As for the syntactic structure of single-complement resultatives, we note that (26) is a passive construction and (27) an unaccusative one. Here we turn to Perlmutter (1978)'s UNACCUSATIVITY HYPOTHESIS, which notes that what appears to be the surface subject of passive and certain intransitive verbs is in fact the underlying direct object. The parallels between passive voice and unaccusativity arise from the following observation by Burzio:

(29) **Burzio's Generalisation**
 All and only the verbs that can assign a θ-role to the subject can assign accusative Case to an object.

(Burzio, 1986:178)

Passive and unaccusative verbs fail to assign accusative Case to their DP complements, such that the underlying object raises to subject position to receive nominative Case. This hence gives the appearance of subject-predication when in actuality the DOR is respected (Levin & Rappaport-Hovav, 1995). The actual structure of a sentence like (27) is thus:

(30)
```
          TP
       ／    ＼
     DP        T′
    △        ／  ＼
 the lake    T     VP
            ／  ＼
           V     PredP
           |    ／  ＼
         froze Pred   DP
                |     △
              solid  the lake
```

Building on this, I argue that the subject-orientation of (1) derives from an unaccusative resultative structure much like (30), but where the internal argument is instead a silent PRO controlled by the higher external argument as in the following tree (to be revised):[4]

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[3] The PredP was proposed by Bowers (1993). Until further study of predicative adjectives in CSE is conducted, I withhold from committing to either a V or A analysis of *full*.

[4] Here and throughout, the aspect-marking *already* is taken to be a light verb as in languages like Hindi and Urdu. This is discussed further in Section 2.1.3.

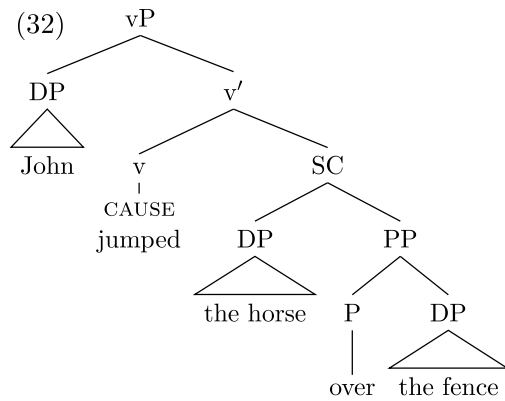(31)

```
              vP
            /    \
          DP      v'
          /\     /  \
         /  \   v    VP
         he  | /  \
          already V   PredP
                  |   /   \
                 eat Pred  DP
                      |    /\
                    full  PRO
```
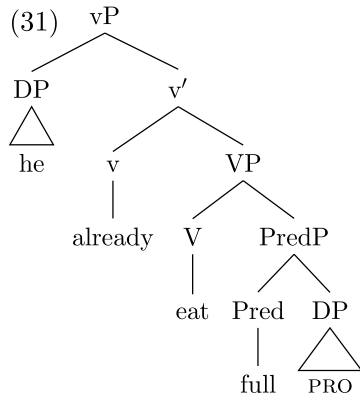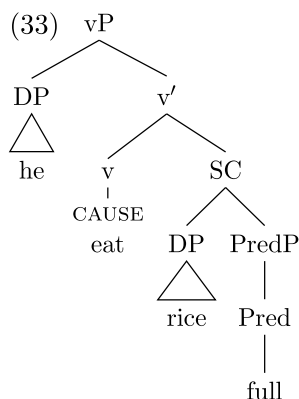
1.4.2 Double-Complement Subject-Resultatives

Having established the nature of single-complement resultatives, we now return to the double-complement English constructions in (24) and (25). According to Folli & Harley (2006), these constructions are directed-motion resultatives with small clauses, such that the structure of (25) would be as follows:

(32)

```
              vP
            /    \
          DP      v'
          /\     /   \
         /  \   v     SC
        John CAUSE   /   \
            jumped  DP    PP
                   /\    /  \
                  /  \  P    DP
            the horse  |    /\
                      over the fence
```

(Modified from Folli & Harley, 2006:137)

In this way, universal Spec-Head-Comp order is respected such that (32) is well-formed in a way that (17) is not. If we reinterpret the PVC as a construction-specific reflex rather than a stipulation, it follows that similar but non-identical constructions in English and CSE can differ as to whether they display it. Thus, all we need to do is show that (32) cannot be the exact structure for CSE VCRs. One key difference between these examples and CSE VCRs is that directed-motion resultatives show 'accompanied-action', where both the agent *John* and theme *horse* end up *over the fence*. In contrast, in VCRs, it is only the matrix subject *he* that becomes *full*, not the direct object *rice*. According to Folli & Harley, the 'double agentivity' and apparent DOR violation of English directed-motion resultatives arise from independent lexical semantic factors. Their four-way typology suggests that accompanied-action readings arise epiphenomenally from verbs that specify both a path and intentional agent. In this way, the illusory DOR violation arises from Cause-Path cotemporaneity rather than syntactic structure. Indeed, in (32), the state of being *over the fence* is only syntactically predicated of the direct object *the horse*. Given this approach, it is difficult for us to derive the correct semantics for CSE VCRs:

(33) vP
```
(33)   vP
      /  \
    DP    v′
    /\   /  \
   he   v    SC
        |   /  \
      CAUSE  DP  PredP
       eat  /\    |
          rice  Pred
                  |
                full
```

As the verb *eat* does not specify both an intentional agent and path, it cannot result in an accompanied-action reading. The structure in (33) hence produces only object-predication, with *rice* being *full*. In fact, we get the additional incorrect semantics that *he* is causing the fullness of *rice*. Even if we postulate a PRO complement to Pred as in (31), the intervening *rice* would c-command and control it and similarly produce the incorrect co-reference. One question moving forward is thus where *rice* merges such that the derivation produces subject-predication. In any case, the structure of English directed-motion resultatives cannot be the same as that of CSE VCRs. This dissertation is hence free to propose a construction-specific account of why the PVC applies to CSE VCRs but not English double-complement resultatives, given that the two constructions have different syntactic structures.[5]

1.4.3 The DOR Revisited

Having explored the DOR to determine the underlying structure of English resultatives, it is important to note that the DOR itself is an epiphenomenal descriptive generalisation, lacking inherent explanatory power. As a solution, Rappaport-Hovav & Levin (2001) propose that the DOR is in fact the reflex of mapping from event structure to syntax. They argue that resultatives have complex event structures, given that they pass the following diagnostics for complex-event status:

(34)   a. The subevents need not be temporally dependent.
       b. The result subevent cannot begin before the causing subevent.
       c. Only the result subevent can bound the event as a whole.
       d. There is no intervening event between the causing subevent and the result subevent; that is, causation is direct.

(Rappaport-Hovav & Levin, 2001:783)

Indeed, CSE VCRs fit all these criteria. Consider (1), here restated as (35):

---

[5]Another possible syntactic difference can be drawn from Matushansky et al. (2012), who argue that while property-denoting results are small clauses as in Section 1.4.1, path-denoting PPs are in fact vP adjuncts. In this way, they claim that double-complement subject-resultatives are not true resultatives and hence not subject to the DOR. Both Folli & Harley and Matushansky et al. provide numerous tests as to whether Path-PPs are complements or adjuncts respectively; this dissertation simply notes that in either case the syntax does not correspond to that of CSE VCRs.

(35)   He eat rice eat full already.

     'He became full from eating rice.'

The first diagnostic (34)a identifies that simple events are necessarily coterminous and coextensive, such that "the progress of the event denoted by the verb and the progress towards the achievement of the state denoted by the result XP [...] unfold at the same rate" (Rappaport Hovav and Levin, 2001:775). For instance, in (27), the events of the lake freezing and the lake becoming solid occur at the same point in time. In contrast, complex events do not need to be coextensive.[6] The temporal independence of subevents can be determined by testing the felicity of contrastive adverbial modification as follows, where (36) shows a simple event and (37) a complex one:

(36)   # The lake quickly froze but only slowly became solid.

(37)   a. He quickly ate rice but only slowly became full.

     b. He slowly ate rice but quickly became full.

Thus, (35) passes the first diagnostic for complex-event status. It also passes (34)b, given that one cannot have become full from eating before beginning the event of eating rice. Thirdly, (34)c notes that while the end point of the entire complex event is directly tied to the end point of the result subevent, there is no link between the temporality of the causing subevent and that of the entire complex event. That is, if *he* has already become full from eating rice, it does not necessitate that he has stopped the causing subevent of eating rice (but it does necessitate that he has become full):

(38)   He eat rice eat full already but still continue to eat.

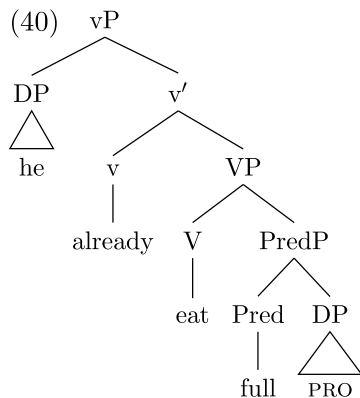   'He became full from eating rice but continued to eat.'

Finally, (34)d requires that there cannot be another subevent occurring in between the cause and result subevents that mediates or enables the causal relationship. (35) lacks a third subevent; thus the causation is direct. Complex event structure then interacts with the following well-formedness condition:

(39)   **Argument-Per-Subevent Condition**
     There must be at least one argument XP in the syntax per subevent in the event structure.

                                          (Rappaport-Hovav & Levin, 2001:779)

This Condition requires that complex events such as VCRs must have transitive structures, while simple events like (27) where *the lake froze solid* can be intransitive. Returning to the structure (31), here repeated as (40), this transitivity-based account fits well with the proposal of CSE VCRs having both an overt external argument and a silent internal argument PRO, rather than the object-raising of passive/unaccusative sentences:
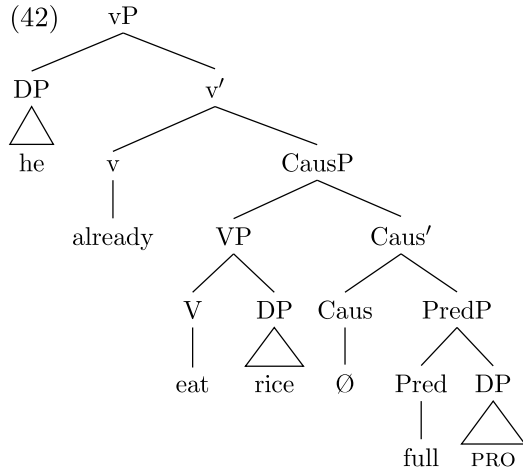
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[6]Folli & Harley use 'cotemporaneity' to refer to this characteristic. That VCRs are complex events while directed-motion resultatives are simple is another reason why they cannot share the same syntactic structure.

(40)

```
              vP
         ╱         ╲
       DP            v′
       △         ╱      ╲
       he       v         VP
                │      ╱      ╲
             already  V        PredP
                      │      ╱      ╲
                     eat   Pred     DP
                           │        △
                          full     PRO
```

Similarly, Rappaport-Hovav & Levin use the Argument-Per-Subevent Condition to account for the overt reflexive in the following construction:

(41)   Kelly sang herself hoarse.   (Rappaport-Hovav & Levin, 2001:775)

(41) is subject-predicated due to the co-reference between *Kelly* and *herself* as determined by anaphoric binding, where the reflexive is required as the second argument given two subevents. This directly parallels the proposed assignation of co-reference of PRO through control in (40). The DOR hence appears to hold, given that the predicate modifies the internal argument in both cases, when in fact it is complex event structure that requires an internal argument to begin with. Drawing from what has been established so far, we can propose the following transitional structure (to be revised):

(42)

```
              vP
         ╱         ╲
       DP            v′
       △         ╱      ╲
       he       v          CausP
                │       ╱        ╲
             already   VP         Caus′
                     ╱    ╲     ╱      ╲
                    V      DP  Caus     PredP
                    │      △   │      ╱      ╲
                   eat    rice Ø    Pred      DP
                                    │         △
                                   full      PRO
```

The tree in (42) serves as a good starting point in incorporating many of the insights gleaned from Mandarin and English resultatives. In particular, it respects universal Spec-Head-Comp order, accurately captures the unaccusative argument structure of the property-denoting PredP, and produces subject-predicated interpretation with PRO controlled by the external argument *he* without intervention effects from *rice*. However, this tree is insufficient in its present form and results in an ungrammatical construction:

(43)   * He already eat rice full.

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For one, it fails to produce the correct surface linearisation with sentence-final *already*. Furthermore, it fails to show reflexes of the PVC, given that both the direct object *rice* and the predicate *full* occur post-verbally - this is also linked to the absence of verb-copying of *eat*. This dissertation will hence proceed to revise this derivation to address these issues.

2   The Syntactic Structure of VCRs

2.1   The Derivation

The following structure is proposed for the subject-predicated VCR in (1):

(44)   'He eat rice eat full already.'
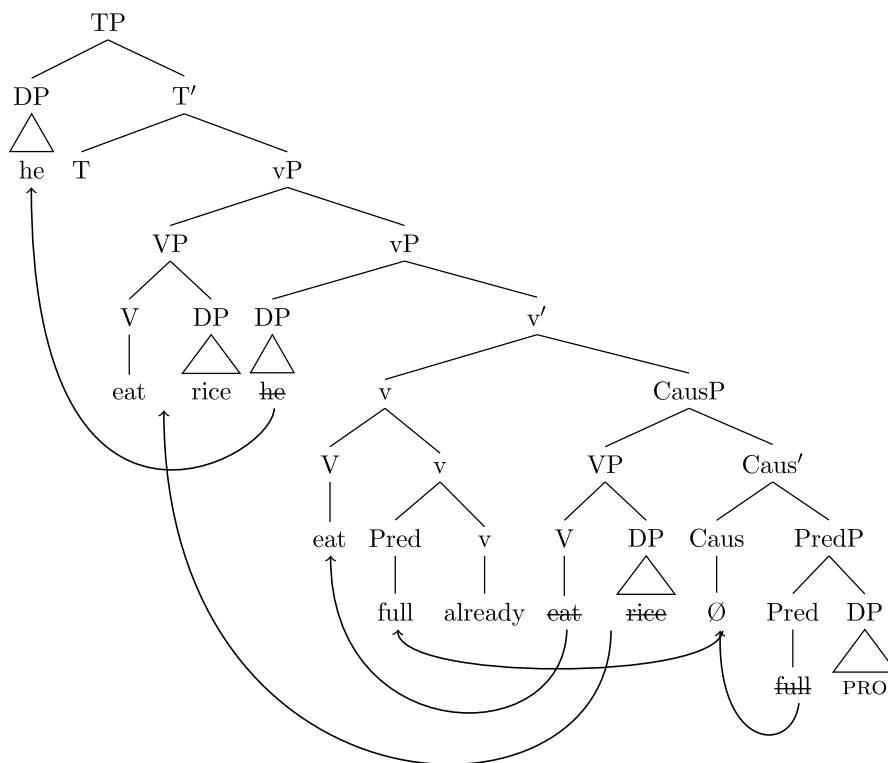
Drawing significantly on Gouguet's (2006) work on Mandarin, the essential components of this derivation are as follows, from bottom up: the resultative predicate *full* merges the internal argument PRO as its complement. This projects an unaccusative PredP. The functional head Caus (what Gouguet names F_{Qty}) then merges, taking the PredP as its situation delimiter, which identifies the endpoint of the event (Wechsler & Lee, 1996) and conveys telic 'inner' aspect (Kratzer, 2002). This Caus head then selects the 'causer' event by merging the VP *eat rice* in its Spec. The merging of the aspectual v *already* then triggers several processes - first, it introduces the external argument *he* in its Spec. Then, v probes its c-command domain and matches with two Goals - the Pred *full* and V *eat* - triggering multiple head movement of both to adjoin to v to form a compound [V-Pred-v] as in work by Collins (2002) on ǂHoan. As proposed by Gouguet for Mandarin, the VP *eat*

rice is then raised to the edge of the vP phase for information-structure purposes, serving pragmatically as a secondary topic (Fang & Sells, 2007).[7] This VP is morphologically fused into a [V+O] compound, rendering the higher copy of *eat* distinct from the lower copy and invisible to ordering contradictions under the LCA, hence enabling multiple copy spell out. Finally, the external argument is raised to [Spec, TP] to be assigned nominative Case. I will now proceed to elaborate on various aspects of and evidence for this derivation.

2.1.1 The PredP

As described in Section 1.4.1 and 1.4.3, the structure of PredP can be accounted for through complex event structure. Further support for the internal argument of *full* being a PRO and not a copy of the external argument *he* comes from work by Huang (1992) on Resultative Clauses in Mandarin. Consider how subject-predicated VCRs exhibit effects of Visser's Generalisation (Visser, 1963), which states that subject-control predicates cannot be passivised, as in:

(45)   * Rice by him eat full already.

VCRs also respect Bach's Generalisation (Bach, 1979), which states that subject-control predicates can omit their objects:

(46)   He eat full already.
        'He has become full from eating.'

Given this and earlier discussion, this dissertation forwards the structure of the unaccusative PredP as having a PRO complement.

2.1.2 The CausP

The primary difference between the account in (44) and in Gouguet (2006) is that the latter suggests a functional $F_{Qty}P$, rather than a CausP. This $F_{Qty}P$ switches the positions of the PredP and VP such that the former is the specifier and the latter is the complement:

(47)

$F_{Qty}P$

PredP $F_{Qty}P'$

Pred   DP F_{Qty} VP

full   PRO   Ø   V   DP

              eat   rice
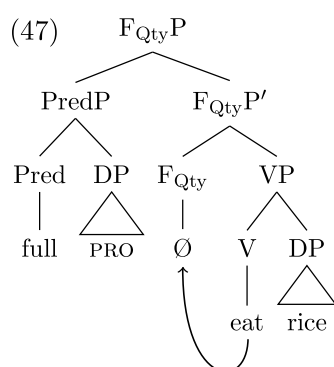
However, the structure in (47) is inadequate for several reasons. Firstly, in order to get the correct semantics, the structure in (47) requires passive causativity in the sense that 'PredP

---

[7]The movement of the same element *eat* to two different positions is assumed to follow from Move being broken down into Copy and Merge, where full copies remain at extraction sites.

is caused by VP'. It hence results in a semantically unintuitive derivation. The proposal in (44), on the other hand, utilises a functional head with active causativity to derive the interpretation of the VP subevent causing the PredP subevent. Secondly, Gouguet himself notes in a footnote that the head movement of V through F_{Qty} results in V being closer to v than Pred, given that V-F_{Qty} is the head of v's complement. This would result in multiple verb movement where V is merged first, predicting:

(48)
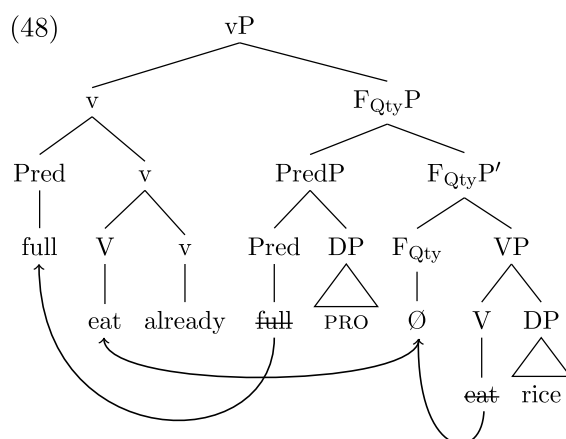
The structure in (48) would produce the wrong [Pred-V-v] compound and linear order:

(49)   * He eat rice full eat already.

This dissertation hence novelly proposes switching the configuration of the VP and PredP constituents, as well as a different functional phrase CausP. Nevertheless, this proposal seeks to preserve the successes of Gouguet's derivation in noting that the PredP *full* PRO, as a situation delimiter, is able to provide an endpoint for the complex event as discussed in diagnostic (34)c in Section 1.4.3.

2.1.3   The [V-Pred-v] Compound

The light verb in Minimalism has been thought of as an explicating auxiliary serving aspectual functions (Hook, 1991). As in seminal work by Butt (1995), languages such as Hindi and Urdu make use of light verbs in monoclausal aspectual complex predicates, where they are instantiations of v. Indeed, VCRs appear to contain complex predicates that comprise at least two semantic heads that both contribute to the predication and share a single subject. This dissertation argues that the perfective *already* is a v within a complex predicate.[8] Following the Split vP hypothesis (Ramchand, 2008), the fact that VCRs without *already* are ungrammatical follows directly from how v both subcategorises for VP and is necessary to introduce external arguments:

(50)   * He eat rice eat full.

---

[8]Mandarin has both the post-verbal completive *-le* and sentence-final inchoative *le*. Here we assume that CSE has a similar distinction between completive *already*, which is a v, and Sentence Final Particle (SFP) *already*, which is a head-final complementiser above TP (Erlewine, 2018). The *already* in VCRs is the former structurally-low v.

Furthermore, CausP's association with telic aspect accounts for why the v is spelt out as perfective *already*. Just as V-to-v movement is common cross-linguistically, the v *already* triggers head movement by probing its c-command domain for Goals. In this case, the v detects two possible Goals: the Pred *full* and the V *eat*. This results in multiple verb movement, as proposed by Collins (2002) for ‡Hoan, where both goals adjoin to the v to produce a new verbal [V-Pred-v] compound. That v triggers head movement then accounts for why the entire VP *eat rice* cannot be adjoined to produce a [VP-Pred-v] sequence:

(51)   * He eat rice full already.

Thus the reflex of the Postverbal Constraint falls out of the head-head Agree relation between v *already* and main verb *eat*. At this point we must address why intervention effects do not block multiple verb movement. To this end, I assume that v is [+multiple], allowing one Probe to participate in multiple Agree relations, as per Collins' proposal:

(52)   **Serialization Parameter**
       The light verb v can license multiple Vs.

(Collins, 2002:8)

This 'parameter' instantiates a difference in the feature geometry of a particular functional head in the lexicon, following the Borer-Chomsky Conjecture. Indeed, Collins believes that Ewe, Yoruba, Chinese, and ‡Hoan all have [+multiple] v heads. An analogous phenomenon is that of multiple *wh*-fronting in languages such as Bulgarian:

(53)   Koj kogo   vizda?
       who whom sees

       'Who sees whom?'   [*Bulgarian*]
       (Rudin, 1988:472)

Here, C is [+multiple] so as to allow for multiple *wh*-fronting. It is thus feasible that v in CSE could enter into Agree relations with both Pred and V. The question then is how this multiple movement interacts with locality constraints to prevent linearisation of the incorrect compound order, as discussed in Section 2.1.2 and example (49) - i.e., how do we prevent [Pred-V-v] *full eat already*? Consider how locality constraints hold on multiple *wh*-fronting in Romanian:

(54)   Cine ce   a   cumpărat?
       who what has bought

       'Who bought what?'
(55)   * Ce   cine a   cumpărat?
         what who has bought

                                                                           [*Romanian*]
                                                               (Bošković, 2002:359)

Here, the order of fronting of the *wh*-phrases directly corresponds to the underlying hierarchical structure of the base sentence, where 'who' c-commands 'what' and hence must be raised first due to the Minimal Link Condition:

(56) **Minimal Link Condition**
     α can raise to target K only if there is no legitimate operation Move β targeting K, where β is closer to K.

(Chomsky 1995:296)

To apply this condition to multiple verb movement, we must determine the relative heights of V and Pred with respect to each other. Unlike in (54), there is no c-command relation between V and Pred, given that V cannot c-command out of its VP. However, Pred *full* is necessarily closer than V *eat* to v *already*. As discussed in a footnote by Gouguet (2006:162) and in Section 2.1.2, this is because Pred moves through the null Caus head and thus becomes the head of v's complement. In comparison, V is within the VP in the specifier of v's complement, and hence further away from v. By first adjoining the Pred *full* to v *already* to produce [Pred-v] (labelled v), and subsequently adjoining the V *eat* to the new v to produce [V-Pred-v], we can produce the correct surface order *eat full already*.[9]

Unlike Serial Verb Constructions, these [V-Pred-v] verbal compounds necessitate that their constituent verbs are adjacent/consecutive. This requirement then accounts for both asymmetries noted in Section 1.1 regarding aspectual marking as in (57) and the ordering of complements as in (58):

(57)   * He eat rice already eat full.

(58)   * He eat full eat rice already.

Essentially, the compound *eat full already* cannot be broken up, and any change to compound order or intervening elements results in ungrammaticality. Further evidence for this verbal compound includes the distribution of CSE VCRs that are ditransitive:

(59)   a.   He write letter to Mary write finish already.

        b.   * He write letter write to Mary finish already.

              'He completed writing the letter to Mary.'

In (59)b, the PP adjunct *to Mary* cannot disrupt the [V-Pred-v] compound *write finish already*. We have thus seen how multiple verb movement as triggered by v *already* predicts obligatory perfectivity, asymmetrical aspectual marking, and the rigid ordering of complements with respect to each other. What remains to be addressed is the mechanism for verb-copying, the ungrammaticality of intransitive VCRs, and the structure of object-predicated constructions.

2.1.4 VP-Fronting

This dissertation proposes that verb-copying is the result of VP-fronting for information structure purposes, where *eat rice* serves as a secondary topic. Indeed, verb-fronting with doubling of the verb (i.e. 'predicate clefting') is extremely common cross-linguistically according to Cheng & Vicente (2013), who provide examples from Spanish, Hungarian,

---

[9]Alternatively, Hiraiwa's (2000) notion of Multiple Agree reduces multiple movement to a single simultaneous operation without countercyclic merger, hence preserving the base order of *eat* and *full* with respect to each other. This likewise obviates Richards' (1997) theory of 'Tucking-In' as used by Gouguet.

Nupe, and Bulì, amongst other languages. However, it is important to differentiate between different types of copying - consider for instance bare verb-clefts in Mandarin:

(60) **chi1**, wo3 shi4 **chi1**-guo4 le,   bu-guo4...
      eat, I   COP eat-finish PFV, but

      'As for eating, I have eaten, but...'   [*Mandarin*]

Cheng and Vicente propose that this is long-distance head movement of V to [Spec, TopP]. Likewise, consider topicalisation in Hebrew:

(61) **liknot** et   ha-praxim, hi **kanta**
      buy.INF ACC the-flowers she bought

      'Buy the flowers, she did.'   [*Hebrew*]

                                                         (Landau, 2006:34)

According to Landau (2006), constructions such as (61) involve A′-movement of the VP to [Spec, TopP]. This dissertation proposes that the VP-fronting in CSE VCRs is neither of these, but instead A′-movement to [Spec, vP], the phase edge. For one, that CSE VCRs cannot front just the verb suggests it is not long-distance head movement:[10]

(62)   * He eat eat full already rice.

Additionally, the copied VP can cross finite clauses, as would be expected of A′-movement:

(63)   Eat rice I think that he eat full already.

        'I think that he became full from eating rice.'

At the same time, the VP cannot have risen above TP given that it occurs after the external argument *he*. Indeed, Soh (1998) notes that object scrambling in Mandarin only allows movement to the left of adverbs, right below vP. Additionally, VP-fronting would provide another explanation for the rigid ordering of the complements with respect to each other:

(64)   * He eat full already eat rice.

(65)   * He eat full eat rice already.

In (64), the entire compound *eat full already* cannot be fronted to [Spec, vP], given that it is a v head and not a VP. In (65), the string *eat full* is not a valid phrasal constituent that can be raised, given that both elements are heads adjoined to v:

(66)

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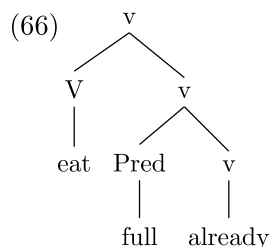
[10]Section 2.1.5 argues that intransitive verbs cannot copy in VCRs due to the absence of an object to enable morphological fusion, which may also explain the ungrammaticality of (62).

Given this, it is reasonable to propose that VPs in CSE front to the phase edge through A′-movement; this is exactly what Gouguet (2006) proposes for Mandarin VCRs.[11] We turn now to the mechanism behind multiple copy spell out in transitive VCRs.

2.1.5 Morphological Fusion and Multiple Copy Spell Out

While the external subject *he* is only spelt out once, both higher and lower copies of the verb *eat* are spelt out, seemingly in contradiction of the LCA and Chain Reduction. I propose that morphological fusion of the [V+O] unit within the higher VP renders the higher copy of V 'invisible' to ordering contradictions, since the two copies are no longer non-distinct (Nunes, 2004). Evidence for the morphological fusion of the [V+O] unit *eat rice* comes from how VCRs become less acceptable as the internal argument DP gets heavier:

(67) ?? He eat spaghetti with meatballs eat full already.

'He became full from eating spaghetti with meatballs.'

Here, morphological fusion is blocked by the complex DP containing the PP *with meatballs*. This parallels German data where complex wh-phrases cannot be multiply realised:

(68) **Wen** glaubt Hans **wen** Jakob gesehen hat?
who.ACC thinks Hans who.ACC Jacob seen had

'Who does Hans think Jacob saw?'

(69) * **Wessen Buch** glaubst du **wessen Buch** Hans liest?
which.ACC book thinks you which.ACC book Hans reads

'Which book do you think Hans reads?'   [*German*]

(McDaniel, 1986; in Nunes, 2004:39)

Further evidence for fusion comes from attempts to front just the direct object *rice* to [Spec, vP] to become the secondary topic as in Section 2.1.4:

(70) He rice eat full already.

(71) * He rice eat full already eat ~~rice~~.

In (70) and (71), *rice* has raised from within the VP *eat rice* located in [Spec, CausP]. However, the multiple copy spell out in (71) of both the higher *eat* in the [V-Pred-v] and stranded lower *eat* in the VP is disallowed because the lower verb copy no longer has an object to fuse to, such that both copies are non-distinct; the lower copy is hence deleted at PF under Chain Reduction to avoid ordering contradictions in (70). Morphological fusion may also account for why verb-copying cannot occur with intransitive resultatives:

(72) * He cry cry tired already.

---

[11]VP-fronting to [Spec, TopP] may also be possible, where *eat rice* becomes the primary topic:

- ? Eat rice he eat full already.
  'As for eating rice, he became full from eating it.'

In this case the VP must move intermediately to [Spec, vP] to escape the phase for subsequent raising.

In (72), there is no object for the higher verb copy *cry* to fuse to, such that both instances of *cry* remain non-distinct, where one copy must be deleted under Chain Reduction:[12]

(73)   He cry tired already.

'He became tired from crying.'

Further research should assess how 'heavy' the [V+O] argument can be in relation to the possibility of conjoined objects, adverbial modification, and adjectival modification. More evidence to diagnose fusion in CSE may also arise from testing for phonological rules that apply word-internally. At present, indirect evidence for fusion can be found in Mandarin, where the [V+O] unit often takes conventionalised or idiomatic meaning. Consider the following conversation:

(74)   A: ta1 yao4-bu-yao4   gen1 wo3-men2 qu4 chi1 wu3-can1?
       he want-don't-want with us   go   eat lunch

       'Does he want to come eat lunch with us?'

(75)   B: ta1 yi3-jing1 chi1 **fan4** le
       he already   eat rice PFV

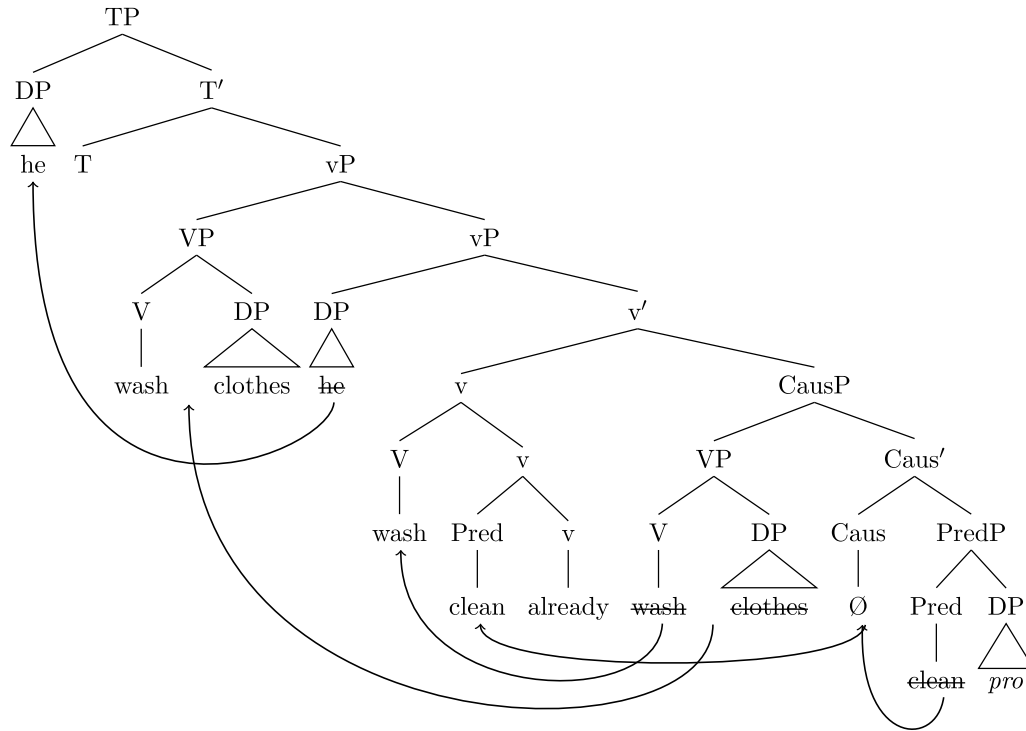   'He has already eaten food.'   [*Mandarin*]

In (75), *fan* lexically means rice, but can be used as a dummy object to refer to food in general, especially if the speaker does not know exactly what was consumed. In fact, dummy objects are often used in Mandarin to make constructions transitive for VCRs (cf. *shui4* 'sleep' vs. *shui4-jiao4* 'sleep(V) sleep(N)'). Although CSE cannot use 'rice' generically as a dummy object, if the VCR construction were transferred from Mandarin then it is possible that the process of [V+O] morphological fusion is retained regardless of whether the object is dummy or not. To this end, we have established how multiple copies of the main verb are spelt out, with the added benefit of accounting for the ungrammaticality of intransitive VCRs. Having dealt with the main syntactic characteristics of VCRS, we turn finally to how our proposed derivation in (44) can be modified to account for object-predicated VCRs.

2.2   Object-Predicated VCRs

Assuming the null hypothesis for object-predicated VCRs, I propose that they have the same underlying structure as subject-predicated VCRs with the minimal change that they merge *pro* as the complement to Pred rather than PRO:

---

[12]Although we cannot tell if it is the higher or lower copy that becomes phonologically null, Formal Feature Elimination suggests deletion of the lower copy.

(76) He wash clothes wash clean already.

```
                    TP
             ┌──────┴──────┐
            DP             T'
            △          ┌───┴────┐
            he         T        vP
                          ┌──────┴──────┐
                         VP             vP
                      ┌───┼───┐     ┌────┴─────┐
                      V  DP   DP    v         CausP
                      │   △    △  ┌──┴──┐   ┌───┴────┐
                    wash clothes he V    v   VP      Caus'
                                 wash  ┌──┴──┐  ┌───┴───┐  ┌──┴───┐
                                      Pred   v  V   DP  Caus   PredP
                                       │     │  │   △   │    ┌──┴──┐
                                     clean already wash clothes Ø  Pred  DP
                                                                    │    △
                                                                  clean  pro
```

In (76), the *clothes* become *clean* rather than the matrix subject *he*, where *pro* gets its referent from discourse rather than control. This is a viable solution considering that CSE has radical *pro*-drop (RPD), like Mandarin:

(77) A: Did you visit him?
      B: Ø visit Ø already.

      'I visited him.'

Note also how CSE has seemingly free variation with regards to the need for agreement. Indeed, Wee & Ansaldo (2004) believe that this agreement is sporadic. In a novel proposal by Sato (2011), however, when verb-subject agreement does occur in CSE, it blocks RPD. Hence, we find variations such as:

(78) A: John plays football well right?
      B1: Yes, he plays well.   (Agreement, no RPD)
      B2: Yes, Ø play well.   (No agreement, RPD)
      B3: Yes, he play well.   (No agreement, no RPD)

(79) * B4: Yes, Ø plays well.   (Agreement, RPD)

To test whether (76) has *pro*, we can check if object-predicated VCRs can take agreement:

(80) a. * He washed clothes washed clean already.
      b. * He wash clothes washed clean already.
      c. * He washed clothes wash clean already.

20

Object-predicated VCRs seem to reject all possible configurations of tense-marking. That agreement is illicit despite the overt external argument suggests that RPD is occurring with another argument; presumably the internal one. This thus provides indirect evidence for *pro* in (76).

Having outlined the proposal for both subject- and object-predicated VCRs, we can see that the syntactic characteristics of perfectivity, asymmetrical aspectual marking, and the rigid ordering of the two complements with respect to each other fall out of the nature of the [V-Pred-v] compound *eat full already*. This dissertation has also accounted for reflexes of the PVC in CSE through VP-fronting, without resorting to language-specific stipulations. Furthermore, morphological fusion has enabled us to account for why VCRs must be transitive. In the next Section, we critically assess possible alternative derivations for VCRs, looking at Sideward Movement, Serial Verb Constructions, and Covert Coordination, before arguing that these approaches are either empirically insufficient or produce the wrong semantic interpretations.

3   Alternative Approaches to VCRs

Several proposals for the structure of verb-copying and multiple-verb constructions have been formulated for languages other than CSE, such as Mandarin or Ewe. In this section, I will not only critically review these proposals as set out in the literature, but will also novelly extend these accounts beyond the languages and constructions they were originally proposed for to assess the degree to which they can be successfully applied to CSE VCRs.
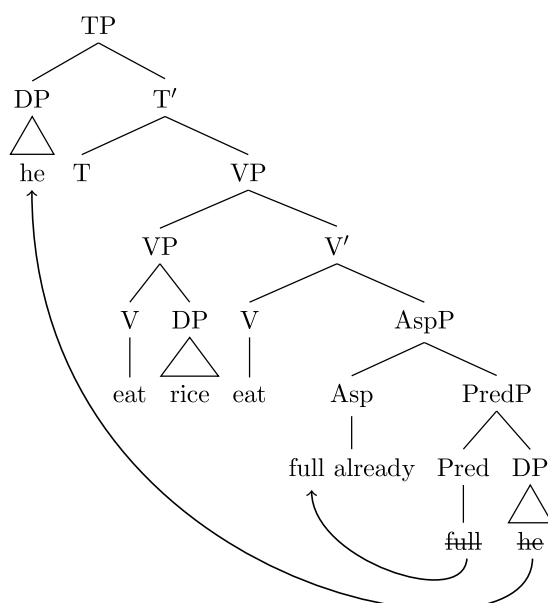
3.1   Sideward Movement

One seminal proposal is that of Cheng (2007), who argues that VCRs in Mandarin use Sideward Movement triggered by Last Resort. Sideward Movement is the process by which the computational system "copies a given constituent α of a syntactic object K and merges α with a syntactic object L, which has been independently assembled and is unconnected to K" (Nunes, 2001:305). This independent object L can then be merged back into K. This mechanism is enabled by the nature of Move within the CTM; once decomposed into the processes of Copy and Merge, Nunes notes that there is no explicit requirement that the copy must be merged into its original structure. Cheng also adopts Hornstein's (1999) proposal that θ-roles are features on verbs, and that a chain can bear multiple θ-roles such that the θ-criterion is dispensed with under the Movement Theory of Control. She uses this approach to account for Mandarin sentences such as:

(81)   ta1 qi2 ma3 qi2-lei4   le
     he   ride horse ride-tired PFV

     'He rode a horse and got tired.'   [*Mandarin*]

(Cheng, 2007:167)

To determine how well this account extends to CSE, we here sketch out the proposed derivation using the VCR in (1):

(82)   He eat rice eat full already

TP
├─ DP
│   └─ he
└─ T'
    ├─ T
    └─ VP
        ├─ VP
        │   ├─ V — eat
        │   ├─ DP — rice
        │   └─ V — eat
        └─ V'
            └─ AspP
                ├─ Asp — full already
                └─ PredP
                    ├─ Pred — full
                    └─ DP — he

Cheng also assumes an unaccusative resultative PredP but suggests that the complement to Pred is the matrix subject *he*, rather than the null PRO argued for in this dissertation. When the derivation generates up to V', where V has taken AspP as its goal argument, V has no position to merge the direct object *rice* as its theme argument. This hence triggers Sideward Movement so as to satisfy *eat*'s θ-feature requirement - the main verb *eat* is copied and merged into an independent syntactic tree with the direct object *rice*, assigning it a theme θ-role. This separate tree is then adjoined to the original VP. The multiple spell out of *eat* then follows from morphological fusion rendering the two copies distinct, as in Section 2.1.5.

However, this proposal faces several difficulties. For one, this account cannot deal with object-predicated VCRs. Cheng does not identify this as an issue as she believes that sentences like (81) cannot have object-predicated interpretations, where the 'horse' has become tired. Indeed, she believes that the Mandarin equivalent for (76) is ungrammatical for some speakers:

(83)   ? ta1 xi3   yi1fu2 xi3-gan1jing4 le
          he   wash clothes wash-clean   PFV

        'The clothes became clean from his washing them.'   [*Mandarin*]

Thus, the derivation in (82) intentionally excludes the possibility of the direct object *rice* being merged as the complement of Pred; if it were, then the θ-requirements of V *eat* would be satisfied, such that the verb would have no reason to Sideward Move or copy under Last Resort. However, this account does not work out for CSE given that there do exist object-predicated VCRs as discussed in Section 2.2. Hence, we find a difference between CSE and Mandarin that suggests that while the VCR construction may have been calqued at some point, they may have developed different distributions over time. Thus,

even if the structure in (82) were appropriate for Mandarin, it may not be for CSE. A second objection is raised by Gouguet (2006:171), who highlights that (82) "would be an unusual instance of sideward movement because it requires that the V head trigger its own movement, while it is still the 'locus' of the derivation." The big question here is why the direct object cannot simply merge into [Spec, VP]. Cheng (2007:163) proposes that [Spec, VP] is necessarily unavailable for non-specific indefinites in subject-predicated sentences, given intervention effects; if *rice* is merged into [Spec, VP], it would be closer to [Spec, TP] than *he* (merged as complement to Pred) and hence would raise first to produce:

(84)   * Rice eat full already he.

An intervening [Spec, VP] would indeed pose a problem for subject-predicated VCRs, given that it would c-command PRO and incorrectly produce object-predication. Hence, (44) avoids incorporating it. However, rather than Sideward Movement, I propose a causative layer that takes the VP *eat rice* in its specifier, allowing the first merge of *eat* to fulfil its θ-feature without additional copying.[13] The proposal in Section 2 hence draws from Cheng's (2007) successes in incorporating unaccusativity and dispensing with [Spec, VP], but has more theoretical elegance and empirical scope in avoiding an unusual type of Sideward Movement and being able to account for object-predicated VCRs.

3.2   Serial Verb Constructions

Another possible account of VCRs is as a serial verb construction (SVC) in a single spine.

(85)   **Definition of SVC**
       A serial verb construction is a succession of verbs and their complements (if any) with one subject and one tense value that are not separated by any overt marker of coordination or subordination.

(Collins, 1997:462)

Collins' (1997) work on Ewe accounts for argument sharing in SVCs such as:
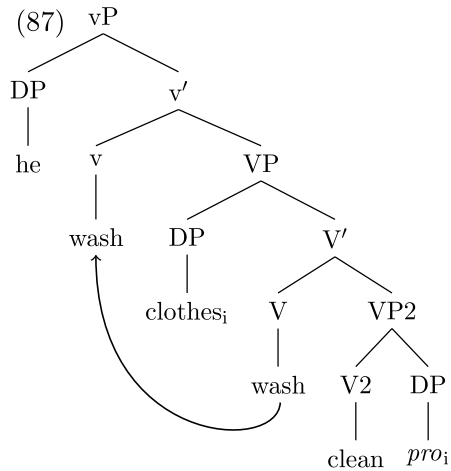
(86)   Me nya   ctevi-c   dzo.
       I   chase child-DEF leave
       'I chased the child away.'   [*Ewe*]

(Collins, 1997:461)

Like this dissertation, Collins also uses empty categories to facilitate argument sharing. In particular, he defends the notion that all SVCs involve the first and second verb sharing an internal argument. He assumes that the internal argument of the second verb is a *pro* co-indexed with the higher internal argument, where co-reference is assigned by c-command. He then assumes that the second verb is LF-incorporated into the first. Modifying Collins (1997:474), object-predicated VCRs could be SVCs:

---

[13]Indeed, in a footnote, Cheng (2007:158) allows that a causative vP layer could be added to the derivation. As it stands, she does not use any vP, raising issues concerning how the derivation introduces an external argument.

(87)

```
                vP
              /    \
            DP      v'
            |      /  \
            he    v    VP
                  |   /   \
                wash DP    V'
                     |    /  \
                 clothes_i V   VP2
                          |   /   \
                        wash V2    DP
                             |     |
                           clean  pro_i
```

However, this account also faces several difficulties. Most obviously, there is nowhere to merge *already* as a v. Instead, it must be a Sentence Final Particle, merged as a head-final complementiser above TP. However, this head-final projection would be above the head-initial TP, violating the Final-Over-Final Constraint (Biberauer et al., 2007). Furthermore, we cannot model the multiple copy spell out of *wash* in (87), given that there is no complement for the higher copy to morphologically fuse to, as discussed in Section 2.1.5. Indeed, in canonical Ewe SVCs, only the higher copy is pronounced. Something then must differ in CSE to allow for the multiple pronunciation of *wash*. Additionally, one key trait of SVCs is that the second verb cannot be independently negated:

(88) Emi ko   mu   iwe   wa.
      I   not take book come
      'I did not bring a book.'

(89) *Emi mu iwe ko wa.
       I take book not come

<div align="right">[Yoruba]</div>
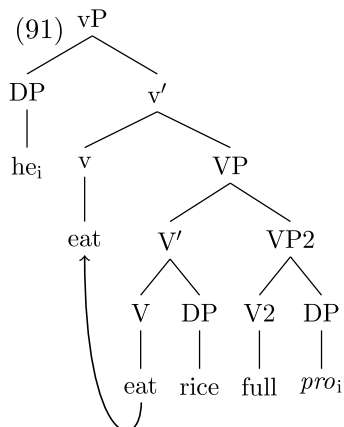
<div align="right">(Bamgbose, 1974:19)</div>

The expected reading of (89) would be 'I took the book but did not come here.' Collins uses this as evidence for LF-incorporation of the two verbs, given that an intervening Neg head would block head movement of the lower verb up as per the Head Movement Constraint (Baker, 1988). However, this would mean that VCRs are not SVCs, given that we do find negation alternations:[14]

(90) a. He never wash clothes wash clean.

          'He did not wash the clothes until they became clean.'

      b. He wash clothes never wash clean.

          'He washed the clothes but they did not become clean.'

Example (90)b shows negation of the second verb only, where the act of washing clothes still occurred. Hence, VCRs cannot be SVCs. Finally, an SVC account cannot model

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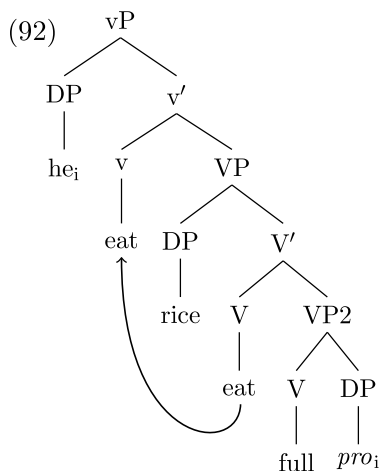[14]CSE *never* can be a simple negator, as discussed in Section 4.

subject-predicated VCRs, where the internal argument of the second verb and external argument of the first verb co-refer, since the two verbs do not share an internal argument. Consider two possible accounts of subject-predicated SVCs:

(91)

```
                vP
          ┌─────┴─────┐
        DP            v'
         │        ┌────┴──────┐
        he_i      v          VP
                  │      ┌────┴────┐
                 eat    V'        VP2
                       ┌─┴─┐    ┌──┴──┐
                       V  DP   V2   DP
                       │   │    │     │
                      eat rice full  pro_i
```

(Modified from Collins, 1997:484-5)

This derivation is illicit in several ways. Firstly, the structure in (91) blocks Collins' mechanism of LF-incorporation since the V2 *full* is not c-commanded by and hence cannot raise to V *eat*. Furthermore, it does not show reflexes of the PVC in that both *rice* and *full* occur after the main verb. Additionally, even if the V' unit *eat rice* is fused, multiple copy spell out would still produce the incorrect linearisation *he eat eat rice full*.

Another possible account is as follows:

(92)

```
                vP
          ┌─────┴─────┐
        DP            v'
         │       ┌────┴────┐
        he_i     v        VP
                 │     ┌───┴────┐
                eat   DP       V'
                      │    ┌────┴────┐
                     rice  V        VP2
                           │      ┌──┴──┐
                          eat     V    DP
                                  │     │
                                full   pro_i
```

As in (87), we cannot account for multiple pronunciation of *eat*; furthermore, Collins' *pro* would be co-referent with *rice*, again producing object-predication. Collins hence claims that all apparent instances of subject-predicated SVCs in fact involve covert coordination, which we will discuss in the following section. In sum, where Cheng's (2007) account can derive subject- but not object-predication, Collins' (1997) account can derive object- but not subject-predication. To this end, I have sought a unified analysis of both predicate orientations. Furthermore, an SVC account fails to deal with the empirical facts of CSE VCRs, including multiple copy spell out, the position of *already*, and the possibility of lower negation. We thus turn to one final alternative proposal.

3.3 Covert Coordination

Collins (1997) claims that subject-predicated SVCs in fact involve covert coordination with Across-the-Board (ATB) movement, drawing on Baker (1989). ATB movement follows from Ross (1967), whose Coordinate Structure Constraint requires that movement from within one conjunct must be accompanied by equivalent movement from the other conjunct. Modifying Collins (1997:483), the derivation of VCRs would hence be as follows:

(93)
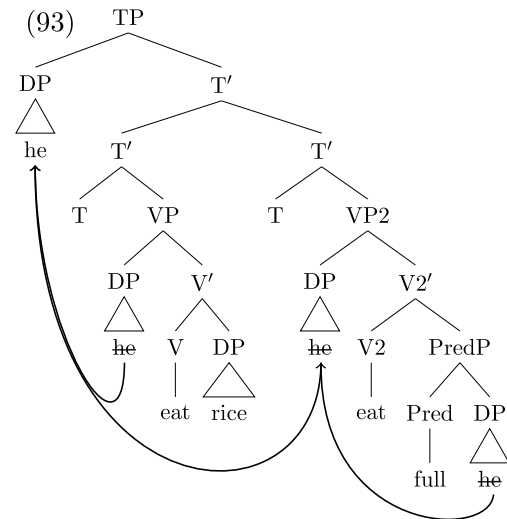
In (93), we find T′-coordination, with ATB movement of the subject DPs to [Spec, TP]. To derive the correct subject-predication interpretation, *he* in the second conjunct must first merge as complement to Pred within the unaccusative PredP, before raising to [Spec, VP2]. Only after this raising can ATB movement occur. This requires us to assume that ATB movement can proceed when conjuncts are not exactly structurally parallel; however, independent evidence for this assumption exists in English where one can coordinate active and passive TPs (McNally, 1992). Collins' evidence for covert coordination then comes from obligatory future marking of both VPs in Ewe:

(94) M-a   du nu   *(a) no   tsi
      I-FUT eat thing FUT drink water

      'I will eat something and drink water.'   [*Ewe*]

   (Collins, 1997:467)

(94) is ungrammatical in the absence of the second future marker *a* on the verb *no*, showing that both T head positions in (93) must be identically filled in a coordinate structure. However, this poses an empirical problem for CSE VCRs, given that it is not obligatory to mark both verbs for future tense:

(95) He will eat rice eat full.

      'He will eat rice until he is full.'

(95) is well-formed despite future-marking only the first verb. In fact, the double-filling of T is ungrammatical:

(96)   * He will eat rice will eat full.

Similar judgements are found with other modals like *can, must,* and *should.* Hence, CSE VCRs cannot be covert T′-coordination, given that it appears to be only one T position. Consider instead the possibility of covert VP-coordination:

(97)
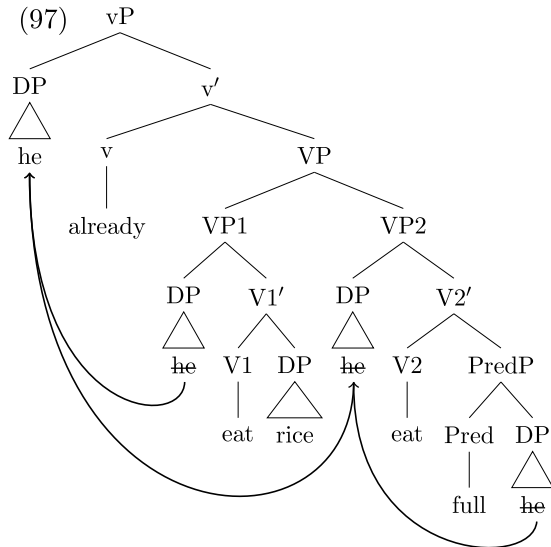
Here we face the issue of how to linearise *already* such that it occurs sentence-finally. One could presumably front the entire coordinated VP to [Spec, vP] as in Section 2.1.4, before raising *he* to [Spec, TP]. However, three key issues remain - firstly, nothing in (97) predicts the rigid ordering between the causing VP and predicate VP, such that one could easily swap the positions of VP1 and VP2 to produce the incorrect *he eat full eat rice.* Secondly, it is impossible to derive object-predicated VCRs with covert coordination, given that there is no way for the direct object to be co-referent with the complement of Pred, as the direct object will never c-command it:

(98)

27
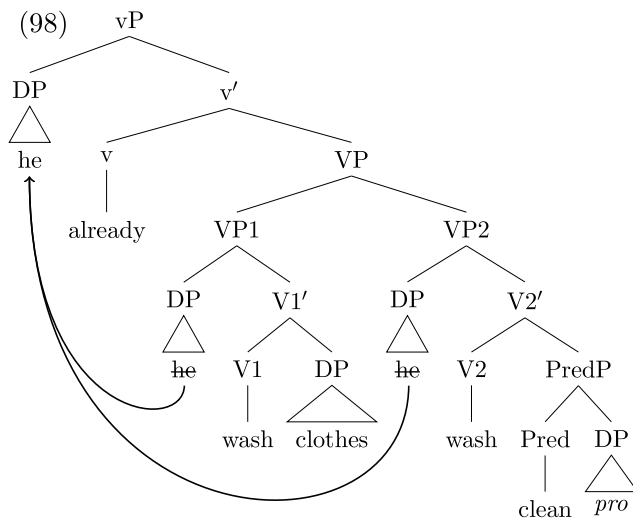
Under Collins' notion of *pro*, it will always be co-referent with *he* in (98). Of course, we could instead assume that co-reference of *pro* is assigned through discourse to get object-predication, as in Section 2.2. Yet this still leaves us with the biggest issue in that coordination produces the wrong semantics. A coordination account would suggest a reading of 'he eats rice **and** eats himself full' or 'he washes clothes **and** washes them clean', losing the resultative link between the main verb and predicate result. This suggests that while (97) and (98) may be possible derivations for some other grammatical construction in CSE, they are not semantically appropriate for modelling VCRs. One could argue that the resultative/causative reading of covert coordination comes from the temporal and causal implicatures inherent in conjunctions, as in:

(99)   a. It was icy and John slipped. $+>$ John slipped **because** it was icy.
       b. Jane got married and had a baby. $+>$ Jane got married and **then** had a baby.

However, if we try to cancel the supposed implicatures, VCRs become infelicitous:

(100) a. It was icy and John slipped but the two events were unrelated.
       b. Jane got married and had a baby but not in that order.

(101) a. # He eat rice eat full already but the two events were unrelated.
       b. # He eat rice eat full already but not in that order.

Thus, while the syntax of covert coordination may be able to derive the surface linearisation of VCRs, for semantic reasons we must reject a covert coordination account of CSE VCRs in favour of the current proposal. Having established the main argument of this dissertation, the subsequent section will briefly explore possible directions for future research.

4   Additional Verb-Copying Constructions

CSE shows other productive uses of verb-copying constructions, as in:

(102) He write essay never write properly.

      'He did not write the essay properly.'   (Negation of Manner)

In fact, the current President of Singapore, Madam Halimah Yacob, ran with a campaign slogan exemplifying verb-copying:

(103) Do good do together.   (Koh, 2017)

This slogan appears to be a manner imperative with an implicit elided 'We should...' preceding it. These examples pose an interesting problem for our current proposal, in that that they lack the overt aspectual marker *already* so key to the VCRs discussed thus far (cf. Section 2.1.3). The question then is what instantiates v in these constructions to trigger multiple verb movement. The semantics of (102) strongly suggest that *never* expresses simple negation combined with completive aspect. Habitual aspect, as one would expect of English *never*, would be better expressed as:

(104) He write essay always never write properly.

      'He never writes essays properly.'

Additionally, the fact that *never* and *already* are in complementary distribution suggests that *never* also instantiates a v head:

(105)   * He write essay never write properly already.

This raises the issue of why *never* appears compound-initially rather than finally; i.e. why is the linearisation *never write properly* instead of the canonical [V-Pred-v] compound *write properly never*? Here, I assume the Late Insertion of Vocabulary Items under Distributed Morphology (Halle & Marantz, 1993), where the aspectual features that normally spell out *already* on v move to the head of the higher NegP, such that the new Neg+v head is spelt out late as *never* and linearised before *write properly*. I leave the exact position of NegP within the derivation and its interaction with VP-fronting to future work; presumably it occurs somewhere between TP and vP.

Informally sourced semantic intuitions regarding (103) differ as to whether the correct interpretation is that of a compound predicate 'we should do good together' or of coordination 'we should do good and do things together.' The second interpretation would fall neatly under the covert coordination account presented in Section 3.3; yet the first interpretation must still be accounted for, which I leave to future work.

Finally, we find the possibility of verb-copying constructions using *until*:[15]

(106)   I wash test tube wash until sian already.
          'I became frustrated from washing test tubes.'

(107)   Who here got eat snake eat until whole Singapore knows?
          'Who here has skived off work to the extent that the whole of Singapore is aware?'

(108)   Now talk watches talk until like women like that.
          'Now we're talking about watches as if they were women.'

The precise syntactic function of *until* must be determined; what is interesting is that complement after *until* need not be a simple result predicate as in (106), but can also be a TP as in (107) and (108). As *until* is a calque on the Mandarin light verbs *de2/dao4* and Cantonese *dou3*, the parallel construction to (106) - (108) is available in both languages:[16]

(109)   ta1 qi2 nei4-pi2 ma3 qi2-**de2**   hen3 lei4
          he ride that   horse ride-UNTIL very tired
          'He rode that horse until he/the horse was very tired.'   [*Mandarin*]
                                                                                    (Cheng, 2007:160)

(110)   zoeng1-saam1 se2   leon6-man4 se2-**dou3**   hou2 gui6
          Zhangsan   write essay   write-UNTIL very tired
          'Zhangsan is tired for he has been writing his essay.'   [*Cantonese*]
                                                                                    (Lau & Lee, 2015:237)

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[15] All of the following examples are from a preliminary search of online forums and message boards based in Singapore.

[16] We note that Mandarin *de2* is different from DE, where the latter corresponds to Cantonese *ge* and has been lexified in CSE as *one*.

In Mandarin, *de2* is thought to produce a small clause, much like the resultative PredP used in this dissertation. According to Lau & Lee (2015), verb-copying in Cantonese and Mandarin is impossible with non-canonical word orders, where the direct object and matrix subject have been switched. Compare the following example with (110):

(111)   * pin1 leon6-man4 se2   zoeng1-saam1 se2-dou3   hou2 gui6
       CL   essay   write Zhangsan   write-UNTIL very tired

<div align="right">

[*Cantonese*]
(Lau & Lee, 2015:237)

</div>

This constraint also holds in CSE:

(112)   * This essay write John write until tired.

The ungrammaticality of (111) and (112) hint at the morphological fusion of the contiguous [V+O] unit *write essay* being obligatory to facilitate multiple spell out, as in Section 2.1.5, since the equivalent construction is acceptable in both Cantonese and CSE without verb-copying:

(113)   pin1 leon6-man4 se2-dou3   zoeng1-saam1 hou2 gui6
      CL   essay   write-UNTIL Zhangsan   very tired
      'Zhangsan is tired for he has been writing his essay.'   [*Cantonese*]

<div align="right">

(Lau & Lee, 2015:237)

</div>

(114)   This essay write until John very tired.
      'John is tired for he has been writing his essay.'

To this end, future research should determine what other strategies CSE has to deal with resultatives with non-canonical word orders. Indeed, determining the relationship between resultative constructions in Cantonese, Mandarin, and other Sinitic substrates such as Teochew and Hokkien may help contribute significantly to an analysis of CSE syntax.

5   Conclusion

This dissertation has put forward a novel proposal for the structure of Verb-Copying Resultatives in Colloquial Singapore English. Primarily, we have accounted for the four main syntactic characteristics of CSE VCRs: perfectivity, asymmetrical aspectual marking, the rigid ordering of the two verbal complements with respect to each other, and obligatory transitivity. The first three traits have been shown to fall out from the Agree relations of v *already*, which trigger multiple verb movement of both the Pred and V to form a [V-Pred-v] compound that must be linearised in contiguous order. The final trait of obligatory transitivity has likewise been accounted for through the modelling of verb-copying as VP-fronting to [Spec, vP] for information structure. That both copies are spelt out is then due to morphological fusion of the [V+O] compound rendering the higher verb copy distinct. This proposal has been shown to have both theoretical and empirical benefits over alternative possibilities in being able to account for verb-copying as well as both subject- and object-predicated VCRs through a minimal change to the empty category merged as

complement of Pred. Future expansions of this work with reference to other verb-copying constructions in CSE, Cantonese, and other Sinitic languages will hopefully contribute to both the study of syntactic transfer during language contact and the currently-understudied field of CSE syntax.

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