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A CASE TEMPORARILY REOPENED**

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The V-copy construction in Mandarin: redux

THE V-COPY CONSTRUCTION IN MANDARIN: A CASE TEMPORARILY REOPENED*

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Abstract:

The focus of this study is the so-called *verb-copy construction(s)* of Mandarin Chinese, where two (or even more) copies of the same verb surface in a single clause, without any semantic consequence of this multiplicity. This family of constructions has received various analyses in the generative tradition (e.g., Tsao 1987, Huang 1988, Li 1990, Shi 1996, Paul 2002a, Gouguet 2005, Cheng 2007), each with its strengths and weaknesses. In recent years, there emerged some partially converging proposals that build on the minimalist framework of Chomsky (1995, 2000, 2001), and fundamentally agree that in these constructions both VP-level and V-level operations are involved (V-copy is not one construction, but a group of surface lookalikes, with different underlying structures), and syntactic effects are heavily interspersed with semantic/pragmatic and phonetic considerations in a proper account; see: Gouguet (2005), Bartos (2008), Cheng (2007), Tieu (2009). On the other hand, some other recent contributions (Fang & Sells 2007, Hsu 2008) seem to call several assumptions of the earlier analyses into question, and present data neglected

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by those proposals. The present paper briefly reviews the earlier accounts, examines and mostly refutes the new potential counterarguments, and refines Bartos's earlier analysis to cater for the full range of structural variation involved, by incorporating certain compatible components of Gouguet's (2005) and Tieu's (2009) proposals into it.

Keywords: Mandarin Chinese, verb copy, Minimalist syntax, chain reduction, copy deletion

1. Preliminaries

The (*family of*) *verb-copy construction(s)* (henceforth: VCC) in Mandarin Chinese has been an object of scrutiny for quite some time now in modern linguistic literature. Essentially, the hallmark of this construction is the occurrence of two (or sometimes even more) ‘copies’ of the same verb¹ in a single clause, without any special semantic consequence of this multiplicity. Such doubling is triggered in contexts where each of the copies of the same verb takes some kind of complement (or other modifier) to its right. No wonder then that many accounts of the grammar of VCC build on what appears to be the primary insight: somehow each of these right-hand-side

¹ Note that the term ‘V-copy’ predates the technical term of ‘copies’ in Chomsky’s (1995) minimalist framework, and these two notions are not inherently related to each other, but many particular analyses (including the present one) make use of Chomsky’s copy theory in accounting for these multiple V-copies, on the assumption that these ‘copies’ are semantically non-distinct, hence do not have independent syntactic footing, either. In other words, the multiple pronunciation is essentially a PF-level phenomenon on this view. See sections 5 and 6 below for further support and detailed discussion.

complements/modifiers strives to be right-adjacent to (some instance of) V, which then triggers some multiplying operation, assigning each of the complements/modifiers to their respective V-copies to their immediate left, catering for their special needs. Taken one step further, this view implies that the operation creating the multiple copies is subject to Chomsky's (1995) notion of Last Resort – it serves the purpose of saving the well-formedness of the construction by an otherwise seemingly superfluous operation. However (as has been argued by Bartos 2003, Gouguet 2005) the clear cases of optionality in applying the VCC render the ‘Last Resort’ accounts difficult to maintain.

Let us give a quick introductory illustration of the VCC. In (1), the most frequent ‘triggering contexts’ are shown – clauses in which there is both a postverbal object and a postverbal modifier of some sort: items that are labeled in traditional and textbook grammars of Mandarin as verbal ‘complements’ (补语 *buyu*; henceforth: COMPL),² in particular:

complements of frequency, duration (1a), result (1b), and various flavors of ‘degree complements’: descriptive and resultative (1c):

- (1) a. *Lisi kai che kai-le san ci / san-ge xiaoshi.*
 Lisi drive car drive-PRF three times / three-CL hour
 ‘Lisi drove cars three times / for three hours.’

² This notion of complement is not related in any way to the notion of (structural or thematic) complement in modern theoretical linguistics, being just a traditionally established class of predicate-level modifiers in Mandarin, some of which are V’s/Adj’s incorporated into compound verb forms, others are adjuncts, while yet others have actually been proposed to be analysed as structural complements (Y.A. Li 1990, Sybesma 1999, HLL 2009). The reason for sticking to this traditional use of the term here is due to the fact that it handily covers all of the VCC-triggering modifiers.

- b. *Lisi kai che kai-lei-le.*
 Lisi drive car drive-tired-PRF
 ‘Lisi got tired (by) driving cars.’
- c. *Lisi kai che kai -de hen bang / hen lei.*
 Lisi drive car drive DE very good / very tired
 ‘Lisi drives cars very well / drives himself tired.’

The general schema of the VCC is thus: ... V+Obj ... V+COMPL ... , where the two instances of the verb root are strictly identical — using synonyms or hyponyms/hypernyms will not do. One must make sure not to confuse the VCC with cases where there is no such identity requirement; this is the situation when the two related verbs are not linked to each other in a particular construction. Compare, for example, the intended (but ill-formed) VCCs in (2) with the ‘unrelated’ cases shown in (3):

- (2) a. **Lisi jia che kai-lei-le.*
 Lisi drive₁ car drive₂-tired-PERF
 ‘Lisi got tired (by) driving cars.’
 - b. **Lisi kai che jia-lei-le.*
 Lisi drive₂ car drive₁-tired-PERF
 ‘Lisi got tired (by) driving cars.’
- (3) a. *Zai zheli jia che bu rongyi, hen kuai jiu hui kai-lei le.*
 at here drive₁ car not easy very fast JIU will drive₂-tired CRS
 ‘Here it’s not easy to drive, one will get tired driving in no time.’
 - b. *Suiran jia che bu rongyi, Lisi haishi kai- de hen bang.*
 though drive₁ car not easy Lisi still drive-DE very good
 ‘Although it’s not easy to drive a car, Lisi nevertheless drives very well.’

As must be clear from the examples and their meaning, VCC is a marked construction, containing a repetition of V that strikes one as ‘superfluous’,

lacking any semantic effect to be associated with it. But what is equally puzzling is that it has a host of (bi- or even trifurcating) well-formedness constraints, partly applicable to a linearized structure, and partly to the semantic representation, of VCC clauses, as will be shown and discussed in subsequent sections in detail, making this construction (family) a prime example of syntax-external considerations constraining the well-formedness of a syntactic construction lying at the ‘*crossroads*’ of *syntax, semantics, and phonology* (“an optimal solution to legibility conditions”, as put by Chomsky (1998: 9)).

2. Some key properties of the V-copy construction

In this section we will list and illustrate the most important syntactic properties of VCC, based on the extensive literature on this topic.³

2.1 VCC only occurs when the object is overtly postverbal

Whenever (for whatever reason) the thematic object is removed from its base postverbal position, VCC is unavailable. The following examples illustrate this with passives (the ‘deep’ object surfacing as the subject of the clause), topicalization (the object DP has undergone fronting by virtue of

³ A thoroughgoing discussion of all properties would obviously exceed the space limitations of this study, so only those properties are discussed that are relevant and important w.r.t. the analyses discussed here. The interested reader is referred to, e.g., Li & Thompson (1981: 442–450), Tsao (1987), Tai (1999), for more details.

serving as the topic of the sentence), and the so-called BA-construction (the object appears before the main verb, preceded by the particle/light verb *ba*):

- (4) a. *Lisi bei Wangwu (*da) da-le san ci.* *passive*
 Lisi BEI Wangwu beat beat-PRF three times
 ‘Lisi has been beaten by Wangwu three times.’
- b. *Che wo (*kai) kai-le hao ji ci.* *topicalized*
 car I drive drive-PRF good some times
 ‘Cars I have driven quite a few times.’
- c. *Wo ba tamen (*da) da-le liang ci.* *BA-constr.*
 I BA they beat beat-PRF two times
 ‘I beat them twice.’

2.2 *With intransitives: only if the two copies of V are not adjacent (if at all...)*

Intransitive verbs hardly ever occur in a VCC, and in the (somewhat marginal) cases when they do, some overt material intervenes between the two copies, in the same way as the object following the first copy in the canonical cases does:⁴

- (5) ? *Wangwu tang *(keneng) tang-le wushi fen zhong.*
 Wangwu lie maybe lie-PRF fifty minute time
 ‘Wangwu *(possibly) lay around for fifty minutes.’

One may speculate that the scarcity of intransitive VCC is due to the impossibility of having two adjacent V-copies, so one only ever expects such a VCC when there is some intervening adverbial ensuring this non-

⁴ See also Hsu (2008: 648–649, fn.11)

adjacency, and the non-occurrence of VCC with adjacent copies may in turn be attributed to some sort of ‘haplology’ effect, barring two identical copies pronounced one after the other. To the extent that intransitive VCCs exist and are acceptable, though, they strongly disfavor the functional account of VCCs appealing to the dual licensing requirement of object and COMPL via right-adjacency to V, as in these sentences the first V-copy licenses nothing this way, so it would then be ruled completely redundant (hence ungrammatical).

2.3 Asymmetry 1: V+Obj behaves as a constituent, while V+COMPL does not

It has been established in the literature that there are (at least) three important ways in which the status of the two copies of V, along with the two phrases that follow them (the object and the COMPL, respectively), is not on a par, i.e., there are asymmetries displayed. One of these is that while ‘V+Obj’ readily shows itself as a syntactic constituent, ‘V+COMPL’ doesn’t. E.g., the ‘V+Obj’ unit can be fronted to different positions in the clause structure (Tang 1990: 98): (6a, c), but the ‘V+COMPL’ sequence cannot: (6b, d):

- (6) a. {**Kan shu**} wo {**kan shu**} keyi {**kan shu**} *kan san tian.*
 read book I read book can read book read three day
 ‘I can read books for three days.’
- b. {***Kan san tian**} wo {***kan san tian**} keyi {***kan san tian**} *kan shu*
 {**kan san tian**}.

- c. {**Kai che**} ta {**kai che**} kai-de hen bang.
drive car he drive car drive-DE very good
'He drives cars very well.'
- d. {***Kai-de hen bang**} ta {***kai-de hen bang**} kai che {**kai-de hen bang**}.

2.4 Asymmetry 2: The order of the two copies along with their complement domains (i.e., V+Obj and V+COMPL) is fixed, not reversible

The examples in (6), as well as (7) below, further show that the two 'V+something' blocks are invariably asymmetrically ordered: in a VCC clause with both a 'V+object' and a 'V+COMPL' sequence, they always occur in this order, never the reverse one.

- (7) * *Lisi kai-de hen bang/lei kai(-le) che* cf. (1c)
Lisi drive-DE very well/tired drive(-PRF) car
intended: 'Lisi drives cars very well / drives himself tired.' = (1c)

2.5 Asymmetry 3: Only the second occurrence of V is 'active' for aspectualization

Of the multiple instances of V, only the second/last one has the potential of displaying aspect-marking:

- (8) *Lisi kai (*-le) che kai (-le) san ci.*
Lisi drive-PERF car drive-PERF three times
'Lisi has driven cars three times.'

Another respect in which only the last V is ‘active’ is negation: although negation in general is rare in VCC for pragmatic reasons (Paul 2002a: 145ff), in the particular cases where it is appropriate, it always affects the second copy (V_2), not the first one (V_1) (Paul 1988: 20, 2002a: 146):

- (9) *Ta {**mei*} kan shu {*mei*} kan san tian, zhi kan-le yi tian.*
 he NEG read book NEG read three day only read-PRF one day
 ‘He hasn’t read for three days, but only for one day.’

Moreover, most auxiliaries can only appear before V_2 , though the pattern is complex, with certain auxiliaries going before V_1 , especially on their epistemic reading. For some discussion and data see Paul (2002a: 146ff).⁵

2.6 *Obligatory vs. optional VCC*

The obligatory vs. optional application of the VCC displays an intricate pattern, depending on several factors. While with certain types of COMPL VCC is the only grammatical option, other types simply allow it as one of the possible ways of expression, but under certain circumstances, VCC is mandatory even with these COMPLs. This subsection presents an overview of the pattern.

⁵ Paul (2002a) also makes the point that predicate-level adverbs target the domain of V_2 , too — a point I will omit here, partly because it does not bear directly on the present proposal, and partly because the syntax of adverb placement in Mandarin is still not satisfactorily clear, in general.

2.6.1 VCC is optional with complements of result (RES)

- (10) *Lisi kai-lei-le che.* cf. (1b) *Lisi kai che kai-lei-le.*
 Lisi drive-tired-PRF car Lisi drive car drive-tired-PRF
 ‘Lisi got tired (by) driving cars.’ ‘Lisi got tired (by) driving cars.’

As shown by (10), with RES there is always a choice of using either the VCC, or simply placing the object DP after the V-complex comprising the main verb, RES (which is an incorporated V/Adj, raised out of a resultative AP/VP or small clause in the complement domain of the main V,⁶ in this particular case: *lei* ‘tired’), and any aspectual affix. In a ‘functional/licensing’ account this can be put down to the fact that V+RES(+asp) form a single (albeit complex) verb, which can license any right-adjacent object the way any transitive verb can in Mandarin in general.

2.6.2 *V-copy is obligatory with degree complements (DEG)*

In sharp contrast to the case of RES, another type of COMPL, namely the ‘degree complements’ (DEG), whether descriptive (‘manner’) or resultative, leave no alternative to the VCC – there is simply no other grammatical form of these sentences. VCC is truly obligatory with them, indeed with a flavor of ‘last resort’. Compare (1c), repeated here, with the attempted but failed non-VCC variants in (11).

⁶ On the syntax of the resultative complement as a small clause predicate see Sybesma (1999).

- (1c) *Lisi kai che kai -de hen bang / hen lei.*
 Lisi drive car drive DE very good / very tired
 ‘Lisi drives cars very well / drives himself tired.’

- (11) a.**Lisi kai-de hen bang/lei che.*
 Lisi drive-DE very good/tired car
 intended: ‘Lisi drives cars very well / drives himself tired.’
- b.**Lisi kai-de che hen bang/lei.*

The classic explanation for such behavior assumes that DEG must be introduced by the particle *-de*, which must attach directly to V as a clitic, and this leaves the object removed from the vicinity of V, hence ‘unlicensed’. Providing an extra copy of V resolves this, by making it possible for DEG and the object to both be right-hand neighbors of V at the same time.

2.6.3 *With Durative/Frequency complements: VCC is obligatory if Obj is a weak definite, but optional otherwise*

The most intriguing case is that of the durative (DUR) and frequency (FREQ) complements: with these, (i) the optionality/obligatoriness of VCC hinges on the quality of the object nominal: weak indefinite objects require the application of VCC; compare (12) with (1a), while referentially strong ones allow for a non-VCC alternative, as well: (13);⁷ moreover, (ii) even for the weak indefinites there is an escape from VCC in the form of an even quirkier construction: the *pseudo-modifying construction*, which creates a

⁷ This issue is discussed in detail in Paris (1988) and Gouguet (2005).

quasi-constituent of DUR/FREQ “modifying” the object bare nominal as an ‘honorary’ determiner (see esp. Sybesma 1999: 110ff, HLL 2009: 91ff.):

(14).

- (12) * *Lisi kai (-le) che san ci* „/ *san-ge xiaoshi*.
 Lisi drive-PRF car three times / three-CL hour
 ‘Lisi drove cars three times / for three hours.’
- (1) a. *Lisi kai che kai-le san ci* / *san-ge xiaoshi*.
 Lisi drive car drive-PERF three times / three-CL hour
 ‘Lisi drove cars three times / for three hours.’
- (13) a. *Lisi kai-le na/mei-bu che san ci* / *san-ge xiaoshi*.
 Lisi drive-PRF that/each-CL car three times / three-CL hour
 ‘Lisi drove that/each car three times / for three hours.’
- b. *Lisi kai na/mei-bu che kai-le san ci / san-ge xiaoshi*.
- (14) *Lisi kai-le [san ci / san-ge xiaoshi che] le*.
 Lisi drive-PRF three times / three-CL hour car MOD
 ‘Lisi drove cars three times / for three hours.’
 (lit. ‘Lisi has driven three times’ / three hours’ [worth of] cars.’)

3. An overview of earlier accounts

There have been numerous proposals in various theoretical frameworks,⁸ even within the variants of the Principles & Parameters general approach of syntactic theory. A complete enumeration being impossible here, I will just briefly review the most influential ones.

⁸ Since the present paper seeks an account of the VCC in ‘formalist’ terms, I am not concerned with proposals couched in entirely different approaches to grammar, such as functionalism. Notable functionalist and cognitive treatments of the problem are C.-R. Huang (1985) and Tai (1989, 1999), among others.

3.1 Analyses in Government/Binding theory and early Minimalism

C.-T.J. Huang (1982) tried to capture the ‘competition’ effect mentioned above by a phrase structure well-formedness filter called the *Phrase Structure Condition (PSC)*, which allowed only a single postverbal constituent within V’, so the rescue strategy in this early GB-theoretic model was to create two V’ domains, using two copies of the same V, one for each inescapably postverbal complement-like item (object and COMPL).⁹ Interestingly, while the technical frame of Huang’s analysis went down the drain with the demise of GB-theory, the spirit of the proposal was quite close to the heart of the emerging Minimalist framework (competition, strict binarity, copies of categories), so the leading idea has been incorporated into most subsequent Minimalist treatments of VCC.¹⁰ However, Huang’s proposal has faced serious empirical challenges. In general, it was not easy to maintain the full force of the PSC *vis à vis* other constructions with more than one postverbal constituent (e.g., double-object constructions, as well as some instances of the VCC, like (13a, b) above). And with respect to the VCC, the ordering and constituency asymmetries (6, 7), as well as the cases

⁹ C.-T.J. Huang (1992) refines the analysis using a referential hierarchy to (partly) account for the variable behavior of nominals with different referential strength, but the essential insight of the account remains the same.

¹⁰ In particular, Cheng’s (2007) idea of ‘reprojection’ is a Minimalist orchestration of Huang’s solution.

of optionality (like (13)) are not accounted for, as Gouguet (2005) pointed out.

Y.A. Li (1990) devised another GB-theoretic account, placing the issue of Case licensing in the focus, essentially claiming that the rationale of copying V is to provide both the object and the COMPL with accusative Case. Again, there is no explanation for the asymmetries shown in 2.3–2.5 above, or for the optionality of the type in (13).

Tang (1990) proposed that the V+object unit is base generated independently of the other (copy of) V, higher up in the extended projection line of VP (sometimes quite high up, cf. (6)), and functions as a domain adverbial, setting the “domain frame” within which the predicate holds of the subject.¹¹ While the idea of domain adverbial creation is worth maintaining, there is a serious burden on all base-generation executions: What requires/ensures the identity of the two (or more) verbs occurring in a VCC? In fact, some (e.g., C.-R. Huang (1985), Shi (1996)) have argued that there is no such requirement: you can have a ‘VCC’ with non-identical verb forms, some salient logical relation between the participant verbs is sufficient for legitimate ‘VCCs’ (both examples from C.R. Huang 1985):

- (15) a. *Ta qi ma shuai-de bi qing lian zhong.*
he ride horse fall-DE nose blue face swollen
'His face got all bruised from falling while riding a horse.'

¹¹ A similar idea was put forth by C.-R. Huang (1985) in a functionalist context.

- b. *Ta mai ma shu-le 10,000 yuan.*
 he sell horse lose-PRF 10,000 yuan
 ‘He lost 10,000 yuan selling horses.’

However, the apparent counterexamples contain no VCC at all: what they constitute is another (more loosely organized) construction, with a base generated domain adjunct, which co-exists beside genuine VCCs. As can be observed, (i) the alleged VCC domain adverbials in these sentences are of a less restricted type: they can easily be turned into (e.g.) a time adverbial: (15a’), cf. also the temporal reading (“*while* riding”) of the adjunct in the original (15a), and (ii) such sentences do not conform to the general pattern of VCCs in other respects, either: for example, (15b) does not contain any kind of COMPL, which would be a hallmark of a VCC.

- (15) a' *Ta [qi ma shi] shuai-de bi qinglian zhong.*
 he ride horse time fall-DE nose blue face swollen
 ‘His face got all bruised from falling **at the time of** riding a horse.’

Note, moreover, that no such example has been put forth (and can be constructed) with COMPLs of result, duration, or frequency, and that the ill-formedness of genuine VCC examples displaying the identity requirement, like those in (2), are difficult (if not impossible) to explain under the independent base generation scenario, in any case.

Paul (2002a) offered a Minimalist technical analysis for the VCC in which V-copying arises by providing phonological support for an empty

proxy head¹² posited ‘sandwiched’ between TP and VP in the Mandarin phrase structure, the primary function of which is to provide a projection domain where a fissioned (categorial) feature of V can be checked. While Paul’s analysis is the technically most detailed, best wrought-out one, it introduces way too many technical specialties to deal with all aspects of the construction, many of which are not part of the (sort of) standard minimalist machinery (the notion of proxies, the Single Checking Hypothesis, the abstract categorial feature of V (independent of, hence checked by, the lexical verb), to name but a few). Furthermore, despite the already complex technicalities, it still remains to be ensured in this account that the filler of the proxy head be the same lexical verb as the one heading the VP below the proxy domain.¹³ Finally, Paul leaves the DEGREE type of VCC completely out of her analysis (reasoning that it is a rather different construction).

3.2 Some recent non-unitary Minimalist analyses

In the past decade, the idea that VCC phenomena cannot receive a unitary treatment emerged in a handful of new accounts phrased within the framework of Chomskyan Minimalism. I wish to briefly introduce those three that (I believe) can be put on convergent paths, so that a final

¹² ‘Proxy’ in the sense of Nash & Rouveret (1997).

¹³ Especially so if there is good reason to prefer ‘Merge over Move’ (Chomsky 1995, 2000; though see Boeckx & Grohmann 2007), on grounds of economy, since then one expects there to be derivations where there is another V available in the Numeration (or directly from the lexicon), and thus instead of moving (copying) the lower lexical V, this other V will be introduced into the structure at the proxy head via Merge.

Minimalist analysis can be arrived at in the future. In fact, I intend the present paper as a first step along this road.

As far as I can tell, the first two to propose that ‘V-copying’ in VCC does not always/necessarily mean moving/copying just V itself, but involves the movement/copying of a larger, phrasal unit (some VP) in syntax, were Bartos (2003) and Gouguet (2005). On that view, the ‘V+object’ unit in a VCC is created by copying the lowermost VP (comprising just V and its most deeply merged structural complement, i.e., the object NP/DP) to the left edge of vP, and it is an effect of linearization, reflected at the level of phonetic form (PF), that both copies of V get pronounced, while the object nominal is only pronounced in the higher chain link of the copied VP. They key difference between Bartos’s and Gouguet’s account was that while Gouguet maintained that this is what happens in *all* cases of VCC, Bartos (2003, 2006) proposed a dual analysis: VP-copying with certain COMPLs (DUR and FREQ) vs. the more ‘traditional’ V^0 -level operation with others (DEGREE).

At the same time, both Bartos (2003, 2006) and Cheng (2007) proposed *not* to treat all VCCs in a unitary fashion: Bartos (as just mentioned) saw a V-copying/VP-copying bifurcation in the patterns, while Cheng suggested that V-copying is V-raising accompanied independently by object-raising in some cases, but sideward movement of V, followed by merging this V with its DP object in a separate workspace, and subsequently

freely re-inserting the emerging [V+Obj] unit back into the ‘main’ phrase structure, somewhere in the IP-domain.

These proposals sought to answer the questions and solve the problems troubling the earlier accounts, with some success. However, none of them were perfectly successful at that: Bartos’s analyses left the asymmetries shown in 2.3 and 2.5 above unaccounted for; Gouguet did not have sufficient motivation for copying the VP (= ‘V+object’) upwards;¹⁴ and Cheng resorted to a mechanism (sideward movement) lying outside the mainstream versions of Minimalist syntax. But even to the extent that they did have explanations for the data patterns discussed in section 2, they (along with all earlier Chomskyan analyses) have been called into question by two recent papers (Fang & Sells 2007, Hsu 2008), while a third one (Tieu 2009) provided fresh insights – which necessitates a reassessment and reworking of Bartos’s, Gouguet’s and Cheng’s models, and this might be a good occasion to attempt a unification of the insights and advantages of those three. In the next sections I first review (and reject) Fang & Sells’s and Hsu’s arguments against the viability of a Bartos/Gouguet-type of syntactic account, and then propose a refinement of my own earlier model that points towards the direction of a ‘final’ treatment that may one day attain the desirable unification of the Minimalist analyses of VCC.

¹⁴ He speculated that it must be a case of object shift (in the mood of Soh 1998) pied piping V. However, the fact that intransitives can form VCCs (albeit in a very restricted way; cf. (5)) obviates this possibility immediately.

4. Some recent contributions, their evaluation, and their yield

Of the three recent papers bearing rather directly on the proper account of the syntax of VCC, the earliest and most critical one is Fang & Sells (2007).

4.1 Fang & Sells (2007) – a general critique of Chomskyan accounts

Fang & Sells present new types of data that they believe undermine (most) analyses put forth within the Chomskyan frameworks in the past decades, and then go on with a new proposal in terms of LFG.¹⁵ At the heart of their own proposal lies the idea that VCC is essentially coordinative, i.e., the ‘V+XP’ strings are conjoined units, rather than hierarchically configured (‘subordinative’). However, apart from introducing some genuinely interesting types of VCC which have gone hitherto unnoticed, and which pose real problems for the analyses reviewed in the previous section, their proposal largely rests on a misinterpretation of the data.

Probably the most intriguing set of data they cite is about the applicability of VCC to ditransitive predicates. As (16a) shows, in such cases the ‘V+object’ unit comprises the V with both of its objects:

¹⁵ Fang & Sells present some diachronic data, too, which lie completely outside the concerns of the present paper, but (i) the handling of those data is blatantly speculative, positing ‘commas’, ‘pauses’, ‘pro-drop’, etc. with regard to written vernacular texts, where (obviously) none of these concepts are marked in any form; (ii) even disregarding their speculative parses of the data, these examples do not present any challenges to my current proposal.

‘V+obj1+obj2’. But what really complicates matters is that unlike with monotransitives in VCCs, where the object nominal is not extractable from the ‘V+object’ unit (16c), in the ditransitive cases (at least) obj2 can undergo extraction, such as topicalization: (16b).

- (16) a. *Wo [song ta zhe-jian liwu] song-de hen hao.*
 I give he this-CL present give-DE very good
 ‘I gave him this present, [and it turned out to be] very good.’
- b. *Zhe-jian liwu, wo [song ta zhe-jian liwu] song-de hen hao.*
 – extraction: OK; cf.:
- c. **Zhe-bu che, wo [kai zhe-bu che] kai-de hen bang.*
 this-CL car I drive drive-DE very good
 ‘This car, I drive very well.’
 – extraction: *

If the ‘V+object(+object2)’ string is an adjunctive constituent in a VCC, sitting on a left branch, then all standard Chomskyan accounts are doubly at a loss: firstly, the extraction in (16b) violates a standardly assumed constraint, the Condition on Extraction Domains (CED, C.-T.J. Huang 1982), barring movement out of an adjunct. Secondly, even if it were somehow possible to circumvent the CED, the same strategy should be equally applicable to monotransitives, as well, so we would then be left without an explanation for the ill-formedness of cases like (16c).

Furthermore, Fang & Sells (2007) observe a pattern of VCC not discussed in the literature previously, in which there is no ‘V+object’ unit at all, just two (or more) ‘V+COMPL’ units: (17a). And in fact, the two patterns

can be combined in such a way that after the ‘V+object’ unit there are more than one ‘V+COMPL’ units: (17b).

- (17) a. *Lisi* [wan-le yi-tian] [wan-de hen lei].
 L. play-PRF one-day play-DE very tired
 ‘Lisi played for a day and got tired.’
- b. *Lisi* [wan youxi] [wan-le yi-tian] [wan-de hen lei].
 L. play game play-PRF one-day play-DE very tired
 ‘Lisi played games for a day and got tired.’

Fang & Sells analyse VCCs in an LFG-model as coordinative structures: *all* of the [V+XP] units, whether XP is an object or some COMPL, are *conjoined* VPs. They then explain the invariable ‘V+Obj’ < ‘V-COMPL’ order by LFG-internal technicalities. Ingenious as this proposal may seem at first sight, it is completely on the wrong track: whereas the double/multiple ‘V+COMPL’ examples do display clear traits of a coordinative structure (hence they are not VCCs at all, in the strict sense), the ‘V+object ... V+COMPL (... V+COMPL, ...)’ construction (i.e., the genuine VCC) does *not* behave as coordination. In particular, while the double/multiple COMPL construction admits an overt conjunction between the coordinated units, no such item is ever possible between ‘V+object’ and ‘V+COMPL’, i.e., within a true VCC:

- (18) a. *Lisi* [wan-le yi-tian] *bingqie* [wan-de hen lei].
 L. play-PRF one-day and play-DE very tired
 ‘Lisi played for a day and got tired.’

- b. **Lisi* [wan youxi] ***bingqie*** [wan-le yi-tian] / [wan-de hen lei].
 L. play game and play-PRF one-day / play-DE very tired
 ‘Lisi played games, and did so for a day / got tired.’

Moreover, notice the availability of aspect marking in the first ‘V+COMPL’ unit in (18a), indicating the symmetry between the two conjuncts, as opposed to the unavailability of aspect marking in the ‘V+object’ units in (18b), as well as in any other true VCC – recall 2.5. Finally, to the extent that semantic and pragmatic considerations allow,¹⁶ the order of the conjuncts in the fake ‘VCC’ is reversible: (19), whereas this is never the case for genuine VCCs, as discussed in 2.4.

- (19) a. *Lisi* [wan-le yi-tian] (***bingqie***) [wan-de hen hao].
 L. play-PRF one-day and play-DE very good
 ‘Lisi played for a day and had real fun.’
- b. *Lisi* [wan-de hen hao] (***bingqie***) [wan-le yi-tian].
 L. play-DE very good and play-PRF one-day
 ‘Lisi had fun playing, and played for a day.’

In sum, Fang & Sells are too hasty to conclude that everything can be subsumed under ‘coordination’ here.¹⁷ Nevertheless, their new data of genuine VCCs necessitates the reconsideration of others’ proposals.¹⁸

¹⁶ That (18a) is not reversible this way is probably due to some sort of logical sequencing between the COMPLs: Lisi gets tired as the result of his playing for a whole day. Chinese is known to have a very strong tendency for ordering cause before effect, and earlier events before later ones (see Tai’s (1985) Principle of Temporal Sequence).

¹⁷ See Hsu (2008: 645ff) for further (though not particularly strong) arguments against Fang & Sells (2007).

¹⁸ Largely irrelevantly to our concerns here, Fang & Sells account for the facts shown in (16) by (i) having no ban on dependencies similar to the CED in general (hence the well-formedness of (16b)), but (ii) assuming a constraint specific to Mandarin that disallows any VP with just a V, and without any overt internal argument XP – this rules out the

4.2 Hsu (2008): An information structural treatment of VCCs

Hsu (2008) places the analysis of VCC in the wider context of the role of the ‘sentence internal domain’ in displaying information structural relations in syntax. In particular, the ‘copied’ unit (V+object) is analysed as a base generated topic of focus in an internal topic/focus position between the TP and vP domains, posited following Paul (2002b, 2005). The function of such topics, as Paul (2005) puts it following Chafe’s (1976) definition, is to set up “a frame within which a sentence holds”, one that limits “the applicability of the main predication to a certain restricted domain” (Chafe 1976: 50–51). This, in turn, is hardly distinguishable from what is meant by ‘domain adverbial’ à la Tang (1990: 202):¹⁹ “an adjunct indicating a domain concerning an event or action [...] setting up a domain frame.” In other words, then, Hsu attributes roughly the same function to the ‘V+object’ unit of the VCC as Tang (1990), and (in her wake) myself, at least in those cases where Hsu generates it as a topic (rather than a focus).

Another important observation is that analyses linking/functionally equating the higher V-copy with the light verb *BA* (把), such as Li (2006), Cheng (2007), are on the wrong track – a higher copy of V and *BA* may

‘evacuated’ V+object unit in the case of monotransitives. Needless to say, this account is neither directly adoptable into our Minimalist analysis, nor conceptually desirable.

¹⁹ Note that this is only very loosely and remotely related to Ernst’s (2004) notion of ‘domain adverb’.

cooccur in the same clause, hence it is obvious that they are not alternative lexicalizations of a light verb head:

- (20) *Ta [xunlian ma] ba ma [xunlian-de hen shuncong].*
he train horse BA horse train-DE very obedient
'He trains horses [to be] very obedient.'

However, this 'base-generated TopP/FocP' account Hsu proposes (i) suffers from the general problem of base generating VCCs, i.e., fails to account for the necessary identity of Vs, and (ii) gives no answer to the problem of extraction noted by Fang & Sells (2007).

4.3 Tieu (2009): An extended version of Cheng's (2007) account

Tieu (2009) takes Cheng's (2007) account as the basis, and extends it by relating it to important observations about the aspectual properties of the VCC, and correlations between the categories Asp, *v*, and V. Its main advantage is that it sheds light on the optional vs. obligatory VCC duality in the case of the DUR/FREQ-subtype, depending on the referential nature of the object nominal (weak indefinite vs. else), as discussed in 2.6.3 above. Tieu (somewhat similarly to Gouguet's ideas) assumes that the dual pattern is due to the different aspectual import of the two.

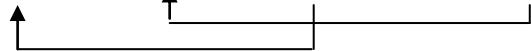
For the resultative subtype of DEGREE-VCCs, Tieu accepts Cheng's (2007) analysis, in which two distinct derivations are assigned to the two

different attested readings: the ‘subject result’ one, and the ‘object result’ one. (21), from Cheng (2007: 160) illustrates these:

- (21) a. *Ta_x qi nei-pi ma qi-de* [sc *e_x hen lei*]. – subject result
 he ride that-CL horse ride-DE very tired
 ‘He rode that horse and got tired.’
- b. *Ta qi nei-pi ma_x qi-de* [sc *e_x hen lei*]. – object result
 he ride that-CL horse ride-DE very tired
 ‘He rode that horse and the horse got tired.’

Cheng (2007) derives the object result reading (i.e., the referential linking of the resultative small clause subject to the object role of the matrix predicate) by raising the object DP from the small clause subject position to the matrix spec,VP for theta- and Case-checking (exactly like object control is implemented in a control-as-movement scenario, cf. Hornstein 1999), and copying the matrix V up to *v*, whereby the ‘V object’ linear sequence emerges. The lower copy of the raised DP deletes (Chain reduction, Nunes 2004), but both copies of V are retained, being non-identical once the obligatory fusion of its lower copy and the clitic *-de* takes place.

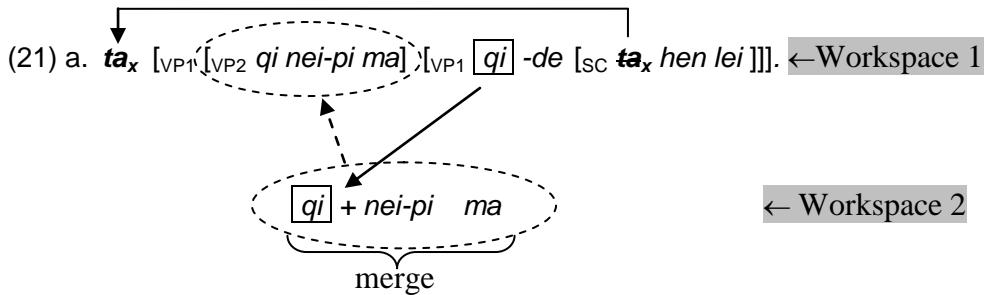
- (21) b' *Ta [vP qi [VP [nei-pi ma] qi -de [sc [nei-pi ma] hen lei]]]*.



chains: <[nei-pi ma], [nei-pi ma]> – chain reduction under identity
 <qi, qi-de> – no reduction ← no full identity

The subject result reading arises by a completely different derivation: in this case it is the matrix surface subject that originates as the subject of

the resultative small clause. A matrix V complemented by a resultative small clause may optionally become ergativized (Hoekstra & Mulder 1990), in which case it will not project any argument in spec,VP. This makes way, on the one hand, for the SC-subject to raise to matrix spec,TP, becoming the matrix subject (hence the referential identity between the subjects of the two predicate domains), and blocks the projection of any object argument of the matrix V, on the other. This is where sideward movement in a multi-workspace setting (Nunes 2004) comes into the picture: the matrix V is copied out of the primary structure, to an empty workspace, where it can merge with an object argument, yielding yet another VP (*qi nei-pi ma* ‘ride that horse’), which can subsequently merge back into the primary structure, as a VP-level adjunct.²⁰

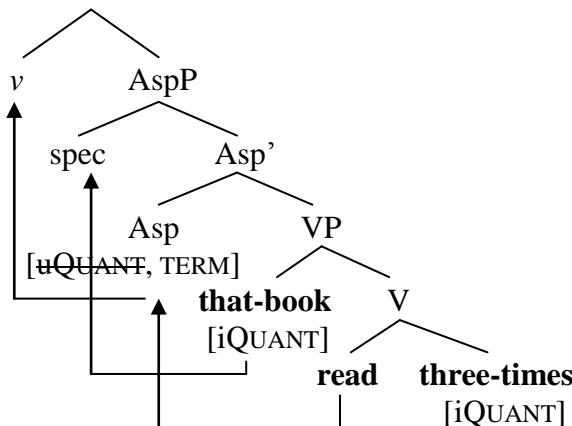


Tieu proposes to extend this dual analysis to the ‘manner/descriptive’ subtype of DEGREE-VCCs (e.g., (6c)), as well. Furthermore, she makes use of the different aspectual properties of weak and strong nominals, via a

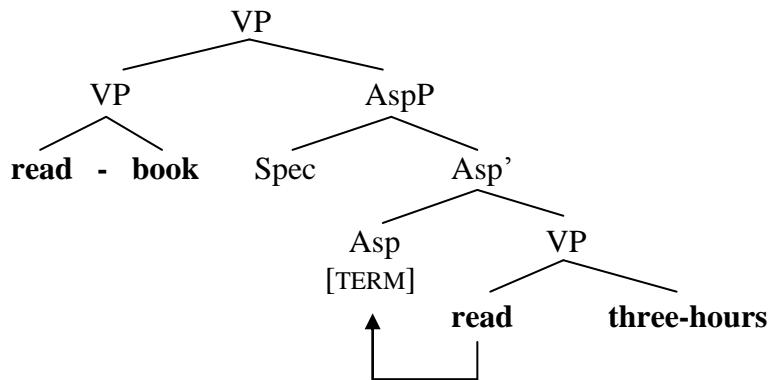
²⁰ Space limitations disallow presenting the analyses in full technical detail; the reader is referred to the original source (Cheng 2007) for that. Also, Cheng observes that for weak object nominals the object result reading is unavailable, and offers an account for that effect, too.

syntactic mechanism of aspectual licensing, to analyse their differential behavior in DUR/FREQ-type VCCs. In her account, both definite DPs and frequency phrases quantize the event, and can therefore check a similar feature on Asp (the closer of the two does so); this is accompanied by V moving to Asp (and then possibly on to *v*): (22a). In contrast, weak indefinite DPs/NPs and duration phrases do not do so, so they won't move to the Asp-domain for checking, i.e., in such cases only V raises to Asp (and maybe on to *v*): (22b).

- (22) a. *Ta kan na-ben shu kan-le san-ci.*
 He read that-CL book read-PRF three-times
 ‘He read that book three times.’



- b. *Ta kan shu kan-le san-ge xiaoshi.*
 He read book read-PRF three-CL hour
 ‘He read (books) for three hours.’



The derivational duality of weak indefinite vs. strong object applies here, too, as suggested by Cheng (2007), and adopted by Tieu: with a weak indefinite object, where VCC is obligatory, the sideward movement scenario applies, because spec,VP is not accessible for weak NPs. The optional use of VCC with a definite object is problematic for the Cheng/Tieu account, however: since spec,VP is accessible for these objects, sideward movement as last resort won't enter the scene, but then the movement of V will create a chain, within which, if the copies of V are non-distinct, chain reduction inevitably occurs, yielding just the 'V Obj DUR/FREQ' surface order, barring the overt repetition of V. To circumvent this problem, they evoke an allegedly related construction from Ernst (1987), containing the same DUR/FREQ expressions in a (seemingly) different structure, shown in (23b):

- (23) a. *Ta kan na-ben shu kan-le san ci.*
 he read that-CL book read-PRF three times
 'He read that book three times.'

- b. *Ta kan na-ben shu you san ci le.*
 he read that-CL book exist three times CRS
 ‘He has read that book three times.’

Cheng suggests that (23a) contains a covert alterego of the same *you* ‘exist’ as seen in (23b), which has fused with V (*kan* ‘read’), rendering the two copies of V distinct for the purposes of chain reduction.

While the Cheng/Tieu account is successful at deriving the patterns of the RESULT and DEGREE types of VCC, and Tieu’s idea to enhance the analyses with the obvious aspectual properties, it has certain problems necessitating further quest for the best treatment of VCCs:

- Sideward movement is not uniformly considered part of the core minimalist machinery (Brody 2006), but even if (and to the extent that) it is, the way it is applied by Cheng is not like the original implementation of the idea (Nunes 2001, 2004): here the sideward moved item is not ‘attracted’ sideways to satisfy the requirement of some lexical head, but initiates its own *reprojection*, violating the “target projects” property of movement (assumed to hold by Chomsky 1995, 2000 et sqq.);²¹
- the account of (23a) by way of relating it to (23b) is not credible: for one thing, there is a rather obvious aspectual difference between the two constructions (observe the distribution of the two *le* particles,

²¹ The idea that in any instance of movement it is always the target category is the one that projects further, never the moved item, has been more or less tacitly assumed by the mainstream minimalist literature. This is violated by Cheng’s analysis, in so far as the V moved out of the original tree starts its own projection in the new tree established by its merging with its complement (cf. Brody 1998 for discussion).

verbal/aspectual and sentence-final/modal²²), for another: (23b) has a totally different syntactic structure, with the string preceding *you* constituting a full subordinate clause, serving as a sentential subject for *you*, which is the main predicate of the matrix sentence: (24).²³

And the duration phrase in this construction specifies the number of occasions that state of affairs spelled out in the subject clause stood or the amount of time that has elapsed during (or since, as in (25)) that state of affairs.

- (24) a. [TP [CP *Ta kan na-ben shu*] [VP *you san ci le*].
 he read that-CL book exist three times CRS
 ‘It has happened three times that he read that book.’
- b. [TP [CP *Ta kan na-ben shu*] [VP *you san-ge xiaoshi le*].
 he read that-CL book exist three-CL hour CRS
 ‘It has been three hours now since he’s been reading that book.’

²² On the distinctness of the two homonymic *le* particles see, e.g., Li & Thompson (1981), Sybesma (1999).

²³ As (i) shows, sentential negation targets *you* in this construction. This, however, does not constitute a clear argument for the structural difference between this *you*-construction and the VCC, since (as we saw in (9)) the COMPL of a VCC shows certain properties characteristic of main predicates (see also Li 1990: 42ff.). But (ii) vs. (iii) indicate that scope facts draw the line between the two: in a VCC, freq cannot scope over the matrix subject, while in the *you*-construction the frequency predicate does reach above the subject of the embedded subject clause – something unexpected in the Cheng/Tieu analysis:

- (i) Lisi kai zhe-bu che mei you san-ci (zhi you yi-ci).
 Lisi drive this-CL car NEG exist three-times (only exist one-times)
 ‘Lisi hasn’t driven this car three times (but only once).’
- (ii) Mei-ge xuesheng dou kai zhe-bu che kai-le liang-ci.
 every-CL student all drive this-CL car drive-PRF two-times
 ‘Every student has driven this car twice.’
 $\exists > \forall$
- (iii) Mei-ge xuesheng dou kai zhe-bu che you liang-ci le.
 every-CL student all drive this-CL car exist two-times CRS
 ‘There have been two occasions of every student driving this car.’
 $\exists > \forall$

- c. [TP [CP *Ta lai Beijing*] [VP *you san-ge yue le*].
 he come Beijing exist three-CL month CRS
 ‘It has been (as much as) three months since he came to Beijing.’

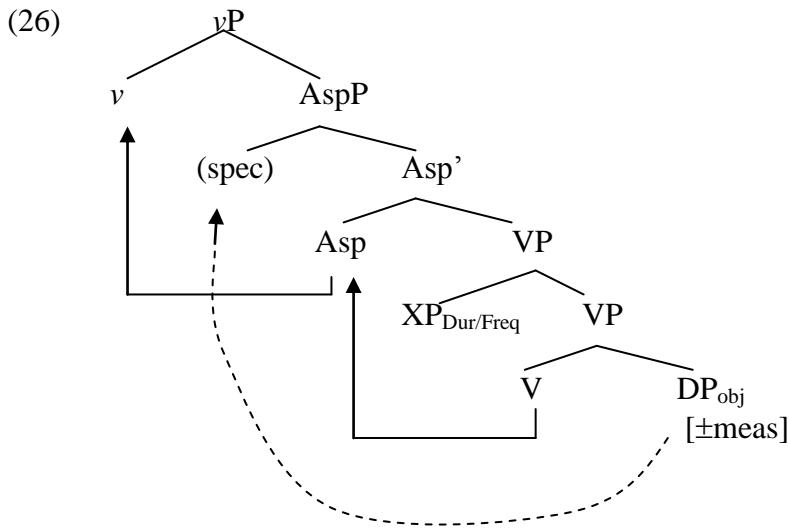
- Finally, the distinction in aspectual import, drawn between durative and frequency phrases by Tieu, does not mesh well with the fact that these two types of COMPL behave alike in VCCs. It is more reasonable to follow Gouguet (2005) in insisting that while durative phrases have mostly not been thought to participate in telicizing the events they modify, given their incompatibility with telic predicates (**Lucy ate up the chicken for two hours*), they nevertheless do possess the ability to delimit an event temporally, measuring out the event, thus from the perspective of aspectual licensing, they are expected to pattern with frequency phrases, *pace* Tieu.

5 The Proposal – Part 1: VCC with DUR/FREQ phrases

In this section and the next one I present my proposal concerning the proper analysis of the different types of VCC, significantly improving on my earlier one (Bartos 2008), partly incorporating some useful insights from recent competing accounts (Cheng 2007, Hsu 2008, Tieu 2009), and partly also addressing the issues raised by Fang & Sells (2007) against Chomskyan treatments in general.

First I focus on VCCs with durative/frequency COMPLS – in this type VP-movement underlies the surface pattern, following original ideas from Bartos (2003, 2008) and Gouguet (2005). The general background is Chomsky's (1995, 2000, 2001) Minimalist framework, where all syntactic movement is conceived of as copying, followed by the subsequent determination of which chain links (copies) are pronounced, i.e., the deletion of certain chain links (chain reduction).

The phrase structure and the relevant operations are depicted in (26) below. Object nominals are merged with V first. The durative and frequency phrases are adjoined to this lowest V-projection (here: VP), in line with HLL's (p. 92ff.) conception.²⁴



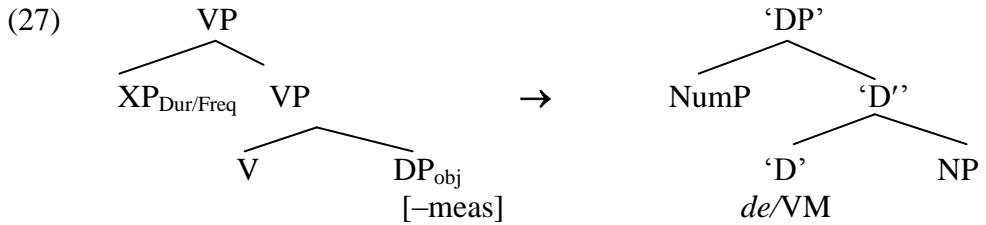
²⁴ In fact, HLL claim that these phrases are adjoined to V', placing the two objects (direct, indirect) in the complement and specifier of V, respectively, with the frequency/duration phrase sandwiched between those. The fact that the 'V+object' unit can be moved is not compatible with the V'-adjunct analysis anyway, and nor is any X' accessible for adjunction in general in Chomsky's Minimalist model. On the other hand, it is still a matter of question whether movement of a lower segment of an adjunction structure can be targeted by Move. If there is good reason to rule this possibility out then (26) must be modified so that FREQ/DUR is not a VP-adjunct, but a specifier of some FP whose head merges with the lowest VP, similarly to Gouguet (2005).

There are thus two relevant operations involved in any case, whether there is VCC or not: the raising of V, and the movement of certain object nominals to spec,AspP. V obligatorily raises to Asp (and then further to *v*), to pick up any Asp-suffix and to participate in shaping the aspectual properties of the event. Objects behave differentially, in correlation with their relation to aspect, encoded here by the formal feature [meas] ('measuring out' the event): [+meas] object DPs raise to spec,Asp, while [-meas] nominals do not.²⁵ This immediately yields the following welcome results:

- When no extra material is involved apart from V and its object, there will be no variation whatsoever: whether the object stays in situ or raises to spec,AspP, it will follow V in the linear structure (PF).
- When, on the other hand, a DUR/FREQ phrase is adjoined to VP, the [\pm meas] property of the object does matter: a [+meas], i.e., referentially strong, object, raised to spec,Asp, will precede the DUR/FREQ phrase, while [-meas] ones will follow it (cf. (13a)). In the latter case, in order to realize the 'measuring out' for Asp, the VP-domain will get reanalysed as a quasi modificalional structure which inherits the [+meas] feature inherent in the DUR/FREQ phrase, and fulfils its aspectualizing role with respect to Asp (cf. (14)):²⁶

²⁵ The licensing of the object will occur independently of movement, via remote agree, as in Chomsky (2000, 2001).

²⁶ In (27), the use of single quotes on the reanalysed structure denote the occasional ('honorary') nature of the nominality of the whole expression; VM = verbal measure (the same VM unit as the one in the original XP_{freq}), while the particle *de*, whose general role is to link attributive modifiers to the modified nominal projection, appears optionally in this



5.1 The nature of VCC with durative/frequency COMPLS

As we have seen in section 2, VCC is optional in the durative/frequency COMPL construction: if the object is referentially strong ([+meas]), its alternative is the simply derived ‘V object COMPL’ order, as shown in (26) above, while if the object is weak ([–meas]), its alternative is the reanalysis just depicted in (27). Given that I adopted Tang’s (1990) insight about the domain adverbial function of the proposed ‘V+object’ unit, the obvious factor that determines whether there will or will not be a VCC is the choice whether the formation of such a domain adverbial is called for. If the choice is taken, an operation of Move copies the lowermost VP (= V + object) to somewhere above vP (see Paul’s (2002) arguments of adverb placement), yielding structures like (1a), (13a).²⁷ This extraction of the VP passes through spec,Asp (possibly because VP inherits the [±meas] feature of its

reanalysed structure (at least with duration phrases (HLL, p. 96), though maybe with frequency phrases as well (Y.A. Li 1990: 9)).

²⁷ In the strict technical sense this movement must be triggered by some formal feature (the ‘generalized EPP’ of some adverbial-hosting projection above vP), and must pass through (some) spec of v to observe phases (in Chomsky’s (2000, 2001) sense) – technical details that remain to be worked out, along with a theory of the movement possibilities of adverbial adjuncts in general.

daughter DP), precluding the movement of the object phrase to the same location.²⁸ In this derivation the absence of any aspect marking on the V of the copied ‘V+object’ unit is guaranteed because what is moved/copied is just the core lexical VP, which in turn is the consequence of this operation being a case of *backgrounding* (cf. the discussion in 4.2, as well as Gouguet’s (2005) speculations in the same direction), so the informationally focal durative/frequency COMPL cannot be included in it.

5.2 The determination of pronunciation for the copies

We must now see how the surface pattern of VCC arises, after the syntactic operations have taken place. The default **basic rule of chain reduction** is that within any chain, the copy serving as the highest link is pronounced, with all the other copies ‘silenced’ (deleted).²⁹ This is overridden only if something enforces the pronunciation of an extra copy, such as issues of recoverability, and phonetic considerations (Landau 2006).

In our particular case, there are three non-trivial chains whose reduction must be taken care of: the chain of V, the chain of the object (if it moves), and the chain of VP (in the VCC scenario). In the <v, Asp, V>

²⁸ This could alternatively be conceived of as the object pied piping the whole VP on its way to spec,Asp (cf. fn. 14). On the other hand, in the case of intransitives (as in (5)), a VP comprising just the V head is copied up, and this need not (hence will not) pass through spec,Asp.

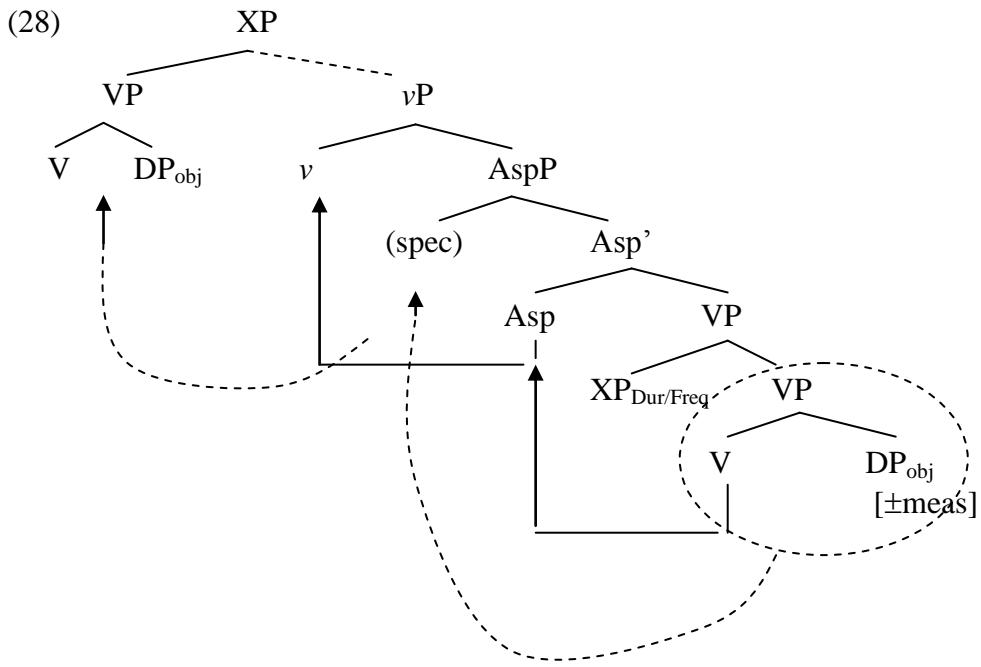
²⁹ This is what is (tacitly or explicitly) assumed by mainstream Minimalism (for some discussion see. e.g., Bobaljik 2002, Nunes 2004, Bošković & Nunes 2007).

chain, the verb is pronounced in its highest link, v .³⁰ In a non-VCC scenario, a [+meas] object DP is pronounced in spec,Asp, that being its highest chain link, which yields a $V(-PRF) Obj DUR/FREQ$ linear order, while a [–meas] object does not move at all, forming just a trivial one-link chain, and is therefore pronounced in situ, with a $V(-PRF) DUR/FREQ Obj$ linear order as the outcome.

If VP-copying is applied, and a VCC is formed, then the VP will also form a non-trivial chain, with links in (at least) the base position, spec,Asp, spec, v , and the target position. The chain of V will be exactly like in the non-VCC case, while the object nominal’s movement is precluded by the raising of the VP, so its chain will have no link outside the lowest VP. This situation is shown in (28):³¹

³⁰ The $\langle V, Asp, v \rangle$ chain may be a simplification, on the traditional view of head movement as successive adjunctions of the involved head categories to the next higher heads, but given that the status of head movement is not properly solved in Minimalist syntax, and that, as far as I can judge now, the current proposal can probably be compatible with any actual technical implementation of head movement, I do not dwell on this issue here.

³¹ The precise identity of the adjunction site of the copied VP is left unspecified, as (i) it depends on what particular projections there are in the given structure, and (ii) it is variable (the VP can raise either as close as an outer spec of v , or as far as the left periphery of the clause, cf. 2.3 above), and the possible intermediate domains between XP and vP are left out, represented by the broken line.



There are thus two chains to undergo reduction for pronunciation. In the chain of VP, there is no reason to diverge from the basic rule: the whole copied VP, that is, ‘V+object’ string will be pronounced in the position of the highest link (in spec,X), and the lower copies (in spec,v, if distinct from the target position, as well as in spec,Asp and the base position) will be silenced. The chain of V has three links (in V, in Asp, and in v), again, the basic rule leaves the copy in v pronounced, and the other copies silent. Interestingly, the movement of the VP has created further ‘phantom’ copies of V, as a term of the whole moved VP. They, however, are **not** in the head-chain of V, so they do not count in the computation of chain reduction for V.³² What emerges is a situation with two copies of V (chain-independent of

³² Since certain copies of the V head-chain c-command certain copies of V inside the raised VP-copies (e.g., V’s copy in v c-commands the V-copy inside the VP-copy in spec,Asp), one might suggest that forking chains emerge for V. But even in such a scenario, no problem arises because the topmost V-copies (in v, and inside the VP adjoined at least as

each other) being pronounced, one in its own right as the topmost chain-link of the head category V, the other as a term of the VP forming another, phrasal, chain. Since they do not compete for pronunciation, both can be (and in fact are) pronounced at PF. The result is a $V \text{ } Obj \dots V(-\text{PRF})$ *DUR/FREQ* linear sequence.

5.3 How the basic properties are derived

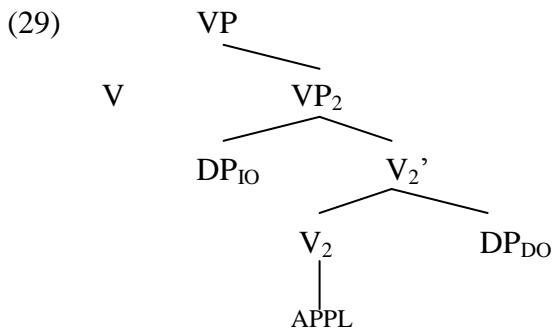
Let us briefly review how the crucial VCC properties (sec. 2.) are accounted for:

- If V is intransitive (as in (5)), the picture is much simplified: a ‘V-only’ VP is copied somewhere above the v -domain (possibly via spec,v), the fate of the copies in the V-chain and the VP-chain is as sketched above: since there is no c-command relation between the two topmost copies, both are deemed to be pronounced.³³ However, if the two verb-copies end up linearly adjacent at PF, in the absence of any linearly intervening material, a rule of haplology ‘contracts’ them into one (or deletes one of them).

high as spec,v) are mutually non-commanding, hence neither is a superior chain-link w.r.t. the other, so neither will cause the other to remain silent.

³³ In Bare Phrase Structure theory (Chomsky 1995 et sqq.) things get trickier since a ‘VP’ consisting of just an intransitive verb is non-distinct from just the verb head, so what is adjoined to X in (28) is really just a simplex, which moreover c-commands the ‘head’ copy in v . However, even in the bare theory, head chains and phrasal chains must be distinguished (e.g., they obey different locality constraints, and target different positions in the structure), so copies of the two chains involved will not ‘mingle’ at any level.

- The ‘V+object’ unit passes constituency tests – no wonder, since they *are* one constituent, and can end up pronounced at any of different sites (cf. (6)).
- Only the second occurrence of V is aspect-marked, since that is the one chain-linked to the Asp-head, while the copied VP only contains a bare form of V.³⁴
- The order of the two ‘V+something’ units is irreversible, as long as the VP is copied at least as high as spec,*v* – which must be the case for it to serve as a domain adverbial.
- Ditransitive VP-copy necessitates a shelled VP-structure for the two objects, so that we have a VP comprising V, IO, DO in this order, which can be copied if need be. Following ideas from Soh’s (1998: 177ff.) analysis of ditransitive/applicative constructions, simplified for our convenience, it is reasonable to posit something along the lines of (29):



³⁴ Here it is important that aspectual markers are particles (syntactic entities), rather than affixes, since the latter are part of the V-form merged into the structure on the standard (lexicalist) version of Minimalism. (Alternatively, a non-lexicalist version must be sought, such as Marantz’s (2001) model.)

Here APPL is incorporated into V, then V moves out to Asp, as usual, while the whole VP is copied up, again as usual, including the objects, which (as in the simple transitive case) do not get to move to spec,Asp, because it is the whole VP that makes this move, *en route* to the domain adverbial position, leading to structures like (16a).

- The extraction pattern of (16b) may arise in one of two ways. In the first scenario, extraction occurs directly from the copied VP, to the topic position of the clause. If so, the CED must be relieved to allow this movement. The reason why such an option never obtains with monotransitives is probably none else than the haplology effect discussed above: if the object is extracted from the higher copy of VP, this leaves the two overt copies of V adjacent to each other, thus subject to contraction at PF (given that in that case chain reduction silences that copy of the object). In the other, more CED-friendly scenario, the movement of a [+meas] DO to spec,Asp may precede (and preclude) the movement of VP there.³⁵ VP moves more directly to its surface position (via a spec of v), while the object moves to topic position. This yields a case of forking chains for the object DP: one branch is formed with the link inside the raised VP, and another with the links in spec,Asp and the base position. The pronunciation of the object DP's topmost copy in the

³⁵ One might speculate that in the shelled VP-structure the [+meas] feature cannot percolate to VP, so the VP cannot enter into Agree with Asp. Note that this derivation is only available to strong DPs ([+meas]), and it is precisely such DPs that may topicalize, i.e., the unavailability of this derivation to [-meas] DPs won't block any possible case of topicalization.

topic position induces the suppression of all other copies for both branches of the forked chain.

5.4 A partially similar construction

A reviewer has pointed out that there is yet another construction displaying the V-copy effect – the one illustrated in (30), with something like a partial object DP following the second copy:³⁶

- (30) a. *Wo he kafei he-le san bei.*
I drink coffee drink-PERF three cup
'I drank three cups of coffee.'
- b. *Lisi yang gou yang-le san zhi.*
Lisi raise dog raise-PERF three CL
'Lisi raised three dogs.'

Superficially these sentences may look very much like the DUR/FREQ examples. There is, however, a crucial difference, as well: here the fronted NP can be considered to have been moved out of the numerically quantified DP, with a gap in the latter, because the given Num+Cl+N(P) sequence is a legitimate unit within the given sentence both syntactically and semantically:

- (31)

- (30') a. *Wo he kafei_x he-le san bei kafei_x.*
I drink coffee drink-PERF three cup coffee
'I drank three cups of coffee.'

³⁶ Note, incidentally, that (unlike the core cases with DUR/FREQ or DEG complements), this type is not unanimously accepted by Mandarin speakers with V-copying.

- (31) [DP *san bei* [NP *kafei*]]
 three cup coffee
 ‘three cups of coffee’

The same analysis, however appealing it might seem, won’t apply to the DUR/FREQ complements, even if, for instance, the event classifiers in frequency complements are often seen as parallel to nominal classifiers (Sybesma 1999: 118ff). Here we assume with HLL (2009: 91ff) that DUR/FREQ expressions are V'-level adjuncts, as depicted in (26) above, to ensure their invariable syntactic placement, no matter whether they modify a V' with a definite DP-object, or a bare NP-object – the ‘honorary’ NP-modifier analysis of DUR/FREQ, as shown in (32), could only apply to the latter case.

- (32) a. *kan* [_{DP} *san ci* [NP *dianying*]] *kan* [_{DP} *wu tian* [NP *shu*]]
 watch three times movie read five day book
 ‘watch movies three times’ ‘read books for five days’
- b. **jian* [_{???} *san ci* [DP *ta*]] * *kan* [_{???} *wu tian* [DP *zhe-ben shu*]]
 meet three times he read five day this CL book
 ‘meet him three times’ ‘read this book for five days’

Thus the account for the DUR/FREQ-construction does not carry over plain and simple. Nevertheless, in view of the similarities, I believe that the main lines of that analysis should be followed for (30), too: the lowermost VP consists of V and the quantified object DP (as in (31)), dominated by an Asp- and a *v*-projection, with V-to-Asp and then [V+Asp]-to *v* obtaining. Then the whole VP containing the quantified DP object (as a clear instance

of [+meas]) raises to spec,Asp (again, precluding object movement to that position), yielding something like (33):

- (33) [_{vP} [_v he] [_{AspP} [_{VP} [_v he][_{DP} san bei [_{NP} kafei]]] [_{Asp} he] [_{VP} [_v he]
[_{DP} san bei [_{NP} kafei]]]]]

Finally, the VP is moved (=copied) up to the domain adverbial position (spec,X), just like it was in (28):

- (34) [_{XP} [_{VP} [_v he] [_{DP} san bei [_{NP} kafei]]] X⁰ ... [_{vP} [_v he] [_{AspP} [_{VP} [_v he]
[_{DP} san bei [_{NP} kafei]]] [_{Asp} he] [_{VP} [_v he] [_{DP} san bei [_{NP} kafei]]]]]]]

Next come the PF-operations, but here we must take into account yet another operation influencing chain reduction: information structure-based accenting and deaccenting (Selkirk 1995, Schwarzschild 1999, Truckenbrodt 1999). Let us consider the copies of the two chains in this respect. The chain of V is not affected by information structural effects, hence chain reduction proceeds there in the default way: it silences all non-topmost copies. The chain of the VP, however, will receive certain prosodic markings affecting chain reduction. In particular, since the domain adverbial forming VP-movement is a case of backgrounding (cf. 5.1 above), this copy undergoes IS-based deaccenting as a whole, making focus-accenting impossible. On the other hand, the quantificational part of the object DP, *san bei* ‘three cups’, is focal information, and thus must be marked for accenting. Because of this IS conflict, prosodic F-marking must target a

different copy of VP than the topmost one – assume that the it is the next highest copy, the one in spec,Asp:

- (34') [XP [VP [v he] [DP san bei [NP kafei]] X⁰ ... [vP [v he] [AspP [VP [v he]
[DP **san bei**_F [NP kafei]]]] [Asp **he**] [VP [v he] [DP san bei [NP kafei]]]]]

In this situation, chain reduction must follow a *scattered deletion* pattern (Cavar & Fanselow 1997, *pace* Nunes 1999): *san bei* must be retained in the middle copy of VP,³⁷ resulting in the partial reduction of the other two VP-copies:

- (34'') [XP [VP [v he] [DP ~~san bei~~ [NP kafei]] X⁰ ... [vP [v he] [AspP [VP [v he]
[DP **san bei**_F [NP kafei]]]] [Asp **he**] [VP [v he] [DP ~~san bei~~ [NP kafei]]]]]

Finally, the non-F-marked portions of the low and middle VP-copies are deleted, too, yielding the PF-string ‘*he kafei he(-le) san bei*’:

- (34''') [XP [VP [v he] [DP ~~san bei~~ [NP kafei]] X⁰ ... [vP [v he] [AspP [VP [v he]
[DP **san bei**_F [NP kafei]]]] [Asp **he**] [VP [v he] [DP ~~san bei~~ [NP kafei]]]]]

Thus the interplay of focus/background (de)accenting and chain reduction derive the correct PF-representation, while (as we have seen) in syntax the derivation of this pattern is identical to that of the DUR/FREQ-construction,

³⁷ On the necessity of pronouncing prosodically marked chain-links see Landau’s (2006: 56) notion of recoverability.

modulo the placement of DUR/FREQ *vs.* numeral quantifier + classifier/massifier.

6 The Proposal – Part 2: DEGREE complements

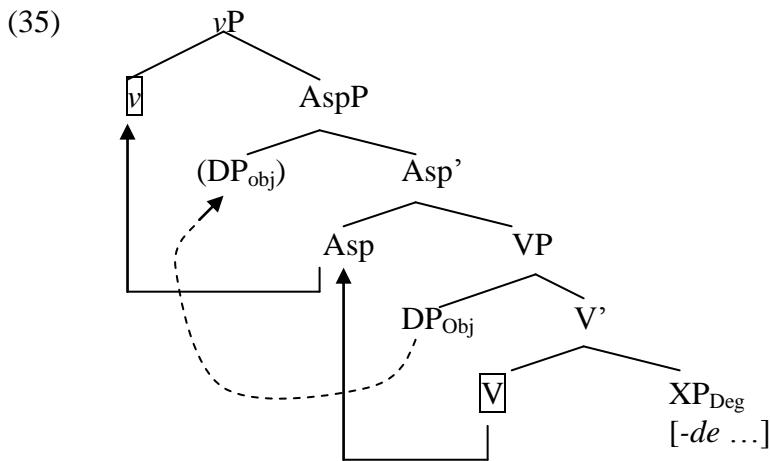
The derivation of VCC with the DEGREE types of COMPL is markedly different from what we have just seen for the DURATION/FREQUENCY type.³⁸ That is, the similarity of verb copying is only apparent. In fact, in this type there is no movement of any ‘V+object’ unit anywhere. Instead, VCC emerges as copies of V surface at two distinct points in the structure, one before (the only copy of) the object nominal, and the other in V’s base position, adjacent to the DEGREE COMPL introduced by the particle *-de*. In contrast with the DUR/FREQ-type VCCs, here there is no optionality in applying the copy construction with postverbal (i.e., non-fronted) objects, and nothing hinges on the referential properties of the object phrases. So the pattern for transitive predicates can be simply generalized this way: either the object is fronted (by topicalization, quantification induced fronting, or BA), or VCC is the only option to realize the sentence. A key factor in this situation is the nature of the particle *-de*: it is a PF-clitic which must cliticize

³⁸ Many make a sharp distinction between two subtypes of DEGREE COMPLS: ‘descriptive/manner’ and ‘result’ (e.g., HLL: 87ff.). However, despite the differences in their syntax, from the perspective of VCC they behave alike, and the hallmark *-de* particle, shown to play a crucial role in VCCs, is identical in the two. Furthermore, as HLL (pp. 86–87) argue, both occupy a structural complement position of V. Therefore in this paper I consistently ignore the differences between the two subtypes, as irrelevant to the analyses pursued here.

to the right side of V, whereby (some overt copy of) V and the left edge of the DEGREE COMPL must be strictly adjacent.

The first question that must be clarified is the locus of the COMPL in the syntactic structure. Although this was a matter of debate for some time, the clear recent consensus is that it stands as the innermost complement of the verb (Tang 1990, Sybesma 1999 (at least for the ‘result’ subtype), Paul 2002, Bartos 2010, HLL pp. 86–91). This means that there will simply be no VP comprising just V and an object nominal in these derivations – with the DEGREE COMPL occupying the sister node of the lexical V, any object may only be merged in higher, in a next step.³⁹ In other respects, the derivation is basically the same as seen in the previous section: V raises via Asp to *v*, and the object DP does or doesn’t raise to spec,Asp, depending on the value of its [meas]-feature. All these steps yield the representation in (35):

³⁹ This is obviously incompatible with the UTAH (Baker 1988), but HLL (p. 94, fn12) argue against the tenability of the UTAH in Mandarin Chinese, in general. In general, first and second merge to the predicate root do not differ w.r.t. the theta-relation they encode: if for any reason first merge of V is *not* with the internal argument, as in (29), second merge (to ‘spec’ of V) necessarily serves the purpose of saturating the lowest predicate chunk with the internal argument related to in its argument structure.



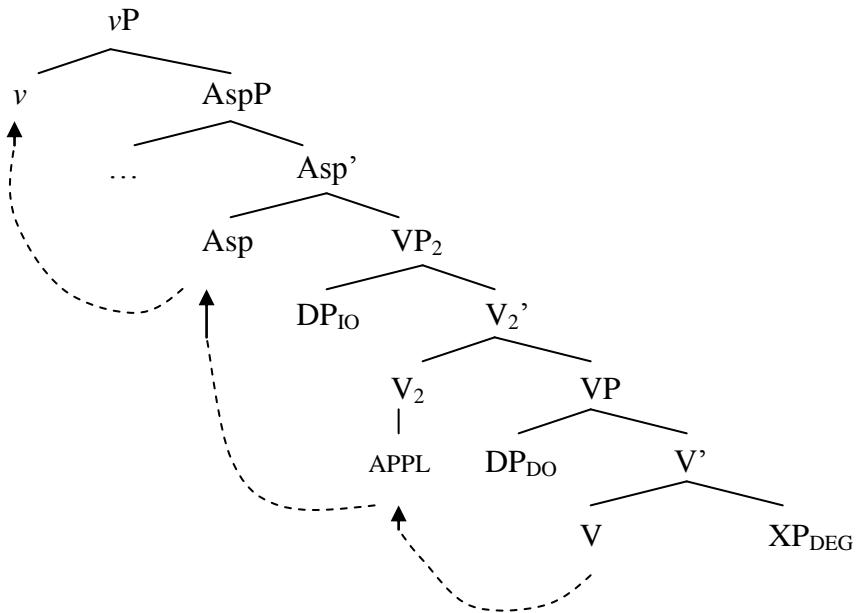
The inevitability of the VCC pattern follows from how chain reduction proceeds: apart from the possible object chain (which won't make a difference in the linearized structure), there is just one chain involved, the chain of V, with three links: in the base position, in Asp, and in *v*, respectively. The basic reduction rule, as introduced in 5.2, dictates that the topmost link, i.e., the one at *v*, be pronounced, and the others be silenced. However, this is partially overridden by PF-level considerations, in particular, by the clitic properties of *-de*: the PF-adjacency of some copy of V and *-de* must be ensured (clitic hosting), thus the lowest copy of V must be pronounced, too, resulting in a **V Obj V DEG** surface linear order. (The two pronounced copies appear boxed in (35).)

If for whatever reason the object phrase is further leftward-moved (topicalized, etc.), it is removed from between the two sounding copies of V, so there will be no need to pronounce the lowest V-copy any more, given that the particle *-de* will automatically be right-adjacent to the (by default)

pronounced topmost V-copy, so the resulting *Obj ... V DEG* linear order opens up the way for *de*-cliticization to occur. In this case, then, the VCC pattern does not arise.⁴⁰

The combination of DEGREE COMPL with a ditransitive predicate (shown to be possible by Fang & Sells 2007) presents a problem: on one hand, DEG must be the first-merged complement of V, while on the other hand, V must be combined with a shelled structure containing the applicative head establishing the necessary relation between the two objects. As we have just seen, the complementhood of DEG takes precedence,⁴¹ so the VP-shell structure must be constructed in a different, non-canonical way. The simplest solution is an inverse combination of the V-root with APPL:

(36)



⁴⁰ The same reasoning should apply to cases with intransitive verbs.

⁴¹ Bartos (2010) offers some speculations on why this should be so.

One of the objects, presumably only the closer one (here: IO), may possibly raise to spec,Asp, as before, making no difference in the PF-string.

Otherwise the essential story is the same: two copies of the V-chain will be pronounced: the highest one in *v* (by the basic rule), and the lowest one in *V*, to satisfy clitic hosting for *-de*. Moreover, the DO can undergo A'-movement such as topicalization quite freely here, without CED-issues, leaving the rest of the VCC intact.⁴²

6.1 Some remaining questions

There are a few questions concerning this proposal that (unlike what was the case with the account of the DUR/FREQ type) do not receive a straightforward answer, and need to be addressed separately.

6.1.1 Why can't the 'V+Deg' unit be copied upwards just like 'V+Obj' in the DUR/FREQ case?

This question can be answered from a functional perspective. Given that the kind of domain adverbial formation we saw with the DUR/FREQ VCC is functionally an instance of *informational backgrounding* (cf. Gouguet 2005, Hsu 2008), and that the DEGREE COMPL is (part of) the focus of these

⁴² Both here, and in the DUR/FREQ-type, there is a question of why the IO cannot be extracted/fronted from the double object construction, but it is a more general question concerning Mandarin double object constructions (Li 1990: 69–76), not specific to VCCs, or the COMPL constructions. Fang & Sells (2007), who have drawn attention to the double object VCC data, have nothing to say about this issue, either.

sentences (Li 1990, Bartos 2010), it would lead to a functional contradiction, i.e., an interpretational failure at the level where information structure is resolved.

6.1.2 How can the ‘V+Obj’ string be fronted, i.e., used as topic, etc.?

In fact, it can’t. Since the verb and its object form no exclusive constituent at any point in the derivation described above, one does not expect that to be possible. Nevertheless, there are examples that look like that has happened, such as (6c), repeated here simplified, as (37):

- (37) **Kai che ta kai-de hen bang.**
 drive car he drive-DE very good
 ‘He drives cars very well.’

The only reasonable explanation is that whenever a ‘V+Obj’ string surfaces anywhere higher than *v* in the DEGREE type of VCC, it must be a base-generated domain adverbial (as in Tang 1990, Hsu 2008). Some support for this view comes from the absence of the V-identity effect:

- (38) **Ta [yang ma] ba ma [xunlian-de hen shuncong].**
 he raise horse BA horse train-DE very obedient
 ‘(When) he raises horses, [he] trains the horses [to be] very obedient.’

The light verb *BA* is not lower in the structure than *v*, so the first ‘V+object’ sequence (*yang ma* ‘raise horses’) is definitely not part of the VCC-structure

of the kind proposed in (35). It is indeed an independently generated domain adverbial, consisting of a verb and its object.⁴³

6.1.3 Why can't V bear any aspect-marking in this type of VCC?

Unlike in the DUR/FREQ type, where the linearly second copy of V can be overtly aspect-marked by aspectual particles originating in Asp⁰, in this type neither copy can be – even though (as proposed) V moves through Asp. In the case of the base-position copy, one may assume that (i) for hosting -de we need the bare stem form of V, and that (ii) in that position V hasn't picked up the particle yet, anyway, so the lower copy will never display Asp-marking. As for the higher, leftward copy, I speculate that the descriptive subtype of DEGREE COMPL only combines with aspectually neutral VPs, for semantic (or pragmatic?) reasons, so exponents of marked values for Asp do not cooccur with this kind of DEGREE COMPL at all. On the other hand, for the resultative subtype it does not appear to be true that V never bears aspect-markers in this VCC⁴⁴ – with even a cursory search, it is easy to find counterexamples on the web, such as (39):⁴⁵

- (39) *Wo kan-le na-ben shu kan-de yan zhuzi dou diao-chu-lai-le.*
I read-PRF that-CL book read-DE eye ball even fall-out-come-PRF
'I read that book so that my eyeballs nearly dropped out.'

⁴³ And possibly of an empty subject, as well, identified by the matrix subject.

⁴⁴ Whether this differential behavior has semantic/pragmatic reasons, or (as the reviewer has pointed out) is due to the variance of syntactic structures (descriptive DEGREE COMPLS are APs, while resultative ones are full clauses) is unclear to me as yet.

⁴⁵ Found at <http://book.kanunu.org/files/yqxs/201103/2207/67451.html>, accessed on July 17, 2012.

7 The proposal – Part 3: Resultative compounds

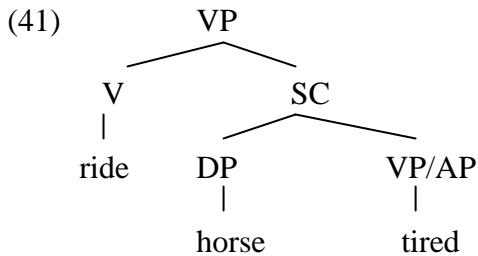
The seemingly least complicated type of VCC is the one with a compound verb form containing a COMPL of result, as (1b), to be compared with its non-VCC counterpart, (10) (both repeated here):

- (10) *Lisi kai-lei-le che.* cf. (1b) *Lisi kai che kai-lei-le.*
Lisi drive-tired-PRF car Lisi drive car drive-tired-PRF
'Lisi got tired (by) driving cars.' 'Lisi got tired (by) driving
cars.'

However, on closer scrutiny, this one turns out to be the most problematic type, with data directly invalidating the application of either of the derivations offered above for the other two major types. For one, the structure illustrated in (10) is associative with both subject result and object result construals: (40a), but the VCC ‘variant’ only has the subject result reading, not the object result one (Cheng 2007: 167): (40b).

- (40) a. *Lisi qi-lei-le na-pi ma.* – subject or object result
Lisi ride-tired-PRF that-CL horse
'Lisi rode that horse, and he/the horse got tired.'
- b. *Lisi qi na-pi ma qi-lei-le.* – subject result only
Lisi ride that-CL horse ride-tired-PRF
'Lisi rode that horse and got tired.'

The structure usually proposed to underlie these sentences is like (41) – see Sybesma (1999), Cheng (2007), with the resultative VP/AP-head incorporating into the main V, and this verbal compound subsequently going way up to *v* via Asp:

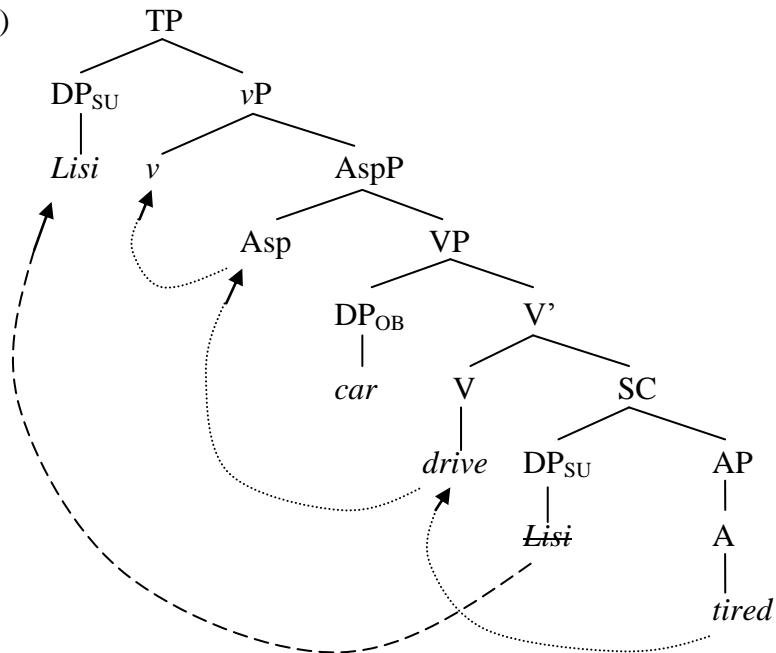


This easily derives (40a) with the object result reading, and provides a straightforward explanation for the lack of object result VCCs: since there is no motivation for pronouncing V in its base position (the resultative A/V is not cliticized but incorporated, note its position in the compound V between the V-root and the aspectual particle to be picked up at Asp), and there is no constituent comprising just V and its object (to the exclusion of the resultative head), VCC cannot arise in either of the ways sketched in the preceding sections.

But what about the subject result reading, and the two variants (1b) and (10)? The most basic question concerns the origin of linking the resultative predicate to the matrix subject. If we follow Cheng (2007) in generating the matrix subject inside SC, forming an ergativ(ized) VP, we must either merge in the object at spec,VP – then by incorporation and V-to-

Asp-to-*v*, followed by the raising of the SC-subject to spec,TP, we can derive (10), as depicted in (42), but then the VCC (1b) is not derivable: there is no way to move ‘V+object’, and no way to get the lowest copy of V pronounced.

(42)



Alternatively, following Cheng’s proposal throughout, we must resort to sideward movement: the ergativized VP leaves no space for projecting the object argument, hence V must be sideward moved out of the primary structure, then allowed to project this argument in an independent structure, which is then merged back into the main one at/above *v*-level, as was shown in (21a). But note that this way (10) cannot be derived, *pace* Cheng: if the thus obligatorily ergativized structure blocks the projection of the object

argument (Cheng 2007: 169–170) then V must move sideward and project it, but once it does so, there is no way to avoid the VCC: the V inside the merged-back VP won't allow/trigger the reduction of its lower copy. Furthermore, an otherwise unwanted operation (sideward movement) is inevitably introduced into the system.

These considerations leave us with a single option: base generation of the ‘V+object’ unit of (40a) as a domain adverbial adjoined at the top of the predicate phrase, with the inherent problem of not being able to ensure the identity of the verbs of the VCC in any simple, direct way. Undesirable as it may seem at first blush, this account may turn out to be the only viable one, at least for the time being. A key reason to doubt the viability of alternatives is provided by the following type of examples (from Cheng 2007: 171), which look like a ‘combination’ of the VCC and the compound-with-postverbal-object structure (i.e., the types of (1b) and (10)), with two different arguments projected as the object of the matrix V and the subject of the resultative SC:

- (43) a. *Ta kan shu kan-lei-le yanjing.*
 he read book read-tired-PRF eye
 ‘He tired his eyes by reading books.’
- b. *Ta ti qiu ti-po-le qiu-xie.*
 he kick ball kick-broken-PRF ball-shoe
 ‘He broke his sports shoes by ball-kicking (= playing football).’

Cheng easily derives these by sideward movement and reprojection of the matrix V, but one cannot be sure if it is a virtue or a problem, considering further properties of this type of data. Firstly, there is more leeway in using different verbs in this subtype than in the types discussed so far, which actually points in the direction of the base-generation account:

- (43') a. ?*Ta du shu kan-lei-le yanjing.*
 he read book read-tired-PRF eye
 ‘He tired his eyes by reading books / studying.’
- b. ?*Ta wan qiu ti-po-le qiu-xie.*
 he play ball kick-broken-PRF ball-shoe
 ‘He broke his sports shoes by ball-playing.’

Secondly, these examples hardly ever (if at all) occur with definite/quantified objects in the domain adverbial part – in fact, they are almost exclusively the ‘V + cognate object’ units, which are arguably lexical items (lexemes) in this complex form:

- (44) a. ??*Ta kan na-ben shu kan-lei-le yanjing.*
 he read that-CL book read-tired-PRF eye
 ‘He tired his eyes by reading books.’
- b. ??*Ta ti na-chang qiu ti-po-le qiu-xie.*
 he kick that-VM ball kick-broken-PRF ball-shoe
 ‘He broke his sports shoes (by) playing in that (foot)ball match.’

If such examples are truly ill-formed, and those in (43a', 43b') acceptable then Cheng’s theory will have a hard time accounting for them, apart from likewise resorting to a base-generation analysis.

8 Conclusion

Concluding the findings of this paper, we can establish that the most tenable accounts of the VCC in the Chomskyan tradition, such as Gouguet's (2005), Cheng's (2007), Tieu's (2009) and mine (Bartos 2008, and the present one) have been on (slowly) converging paths, and are complex enough to handle the rather complex types of VCC:

- Syntactic effects are heavily interspersed with semantic/pragmatic and phonetic considerations.
- Both VP-level and V-level operations are involved (V-copy is not one construction, but a group of surface lookalikes, with different underlying structures).

Some recent contributions to the discussion of VCCs have presented certain challenges, have triggered some new insights, and brought up certain objections to our analyses (e.g. Fang & Sells 2007, Hsu 2008), , but have been shown not to invalidate them. I hope to have demonstrated that some account couched in the terms of Minimalist syntax can be maintained for the wide spectrum of VCCs, be it Cheng's sideward movement based treatment, or Gouguet's VP-raising analysis, or my triple (V-movement, VP-movement, base generation) setup. But the re-opening of the case of VCC in the light of the new challenges has been temporary, and it can be put to rest.

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