

Article

# Rethinking the Description and Typology of Cantonese Causative–Resultative Constructions: A Dynamic Constructionist Lens

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**Abstract:** This article proposes a new description of Cantonese causative–resultative constructions (CRCs), constructions with two verbal elements relevant to the cause and the effect of an event respectively. We present a constructional schema for the CRC with three argument types and without using traditional categories—such as subject, object and pseudo-passivation, present various syntactic and semantic properties, and subsume constructions such as the comparative construction and numerous particle constructions under this banner. We then argue against traditional approaches to CRCs with two lexical verbs that treat the argument structure of the CRC as composed from argument structures of individual verbs (the decompositional approach); instead, CRC arguments belong to the entire construction and have only semantic orientation-based relationships with individual verbs (the holistic approach). We show how our account can shed light on Sinitic typology and the grammaticalisation mechanism of verbal particles within CRCs, particularly the extension of result verbs into a broader range of contexts to become particles. We also argue that Cantonese CRCs challenge many assumptions of serial verb typology, which typically ignore the existence of multiple layers of constructional abstraction and assume decompositional descriptions, and urge for methodological advancements in this field.

**Keywords:** Cantonese; syntax; construction grammar; resultatives; causatives; argument structure

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## 1. Introduction

This paper presents a novel approach to Cantonese causative–resultative constructions (CRCs) (terminology from [Yue-Hashimoto \(2003\)](#)), with implications for both Sinitic and worldwide typology. An example of the construction is (1):

- |     |       |          |          |        |         |
|-----|-------|----------|----------|--------|---------|
| (1) | 喊     | 濕-咗      | 幾多       | 包      | 紙巾?     |
|     | haam3 | sap1-zo2 | gei2do1  | baau1  | zi2gan1 |
|     | cry   | wet-PFV  | how many | packet | tissue  |
- ‘How many packets of tissue did (he) wet by crying?’ [SEA112].

This example (1) is a single clause with two predicative components: the first verb, *cry*, is the cause of the second verb, *wet*. ‘Typical’ CRC examples such as (1) put together one dynamic and one stative verb, but our definition of CRCs encompasses a myriad of other construction types, such as the following directional particle (2) and causative verb (3) constructions:

- |     |         |      |     |            |
|-----|---------|------|-----|------------|
| (2) | 落       | 低    | 個   | 窗簾         |
|     | lok6    | dai1 | go3 | coeng1lim2 |
|     | descend | low  | CLF | curtain    |
- ‘Lower the curtains.’ ([Yiu 2013](#)).

- (3) 成 個 電影 業 俾 你 搞 輾 晒  
 seng4 go3 din6jing2 jip6 bei2 nei5 gaau2 waang1 saai3  
 whole CLF film industry AGT 2SG make ruined all  
 ‘The entire film industry has been ruined by you.’ [SEA159].

In Chinese linguistics, the structure and semantics of these constructions have been an evergreen topic. In China, the resultative component of such constructions is typically known as a ‘complement’, and there are detailed investigations of syntacto-semantic properties of lexical items appearing in this slot in different varieties of Chinese across time and space (e.g., Yue-Hashimoto 1993, 2003; Cheung 1972; Wú 2003, 2005). In Western traditions, these constructions have been explored for their insights on argument structure (e.g., Cheng and Huang 1994; Cheng et al. 1997; Wang 2001; Lau and Lee 2015, 2021) and their role in the grammaticalisation of verbal particles (e.g., Yiu 2013; Chor 2010, 2013, 2018).

Outside Chinese linguistics, these constructions have received less attention. For example, Chappell et al. (2007) wrote that, ‘an area in which the study of Sinitic languages can afford a rich contribution to typology is that of verb complementation . . . These structures show great diversity across the dialect spectrum in China yet are little known outside of Chinese linguistic circles.’ Nonetheless, at least two strands of worldwide typological research have examined this construction: Talmyan verbal semantics (e.g., F. Li 1997; Lamarre 2003) and serial verb typology (Aikhenvald and Dixon 2006; Haspelmath 2016).

These traditions differ substantially in assumptions, terminology, framing and research foci. In this paper, we present and defend our own approach to CRCs which draws from many of these approaches but departs substantially from all of them. Our general approach, while eclectic, is mainly inspired by Western dynamic constructionist approaches that view syntax as an inventory of signs at various levels of abstraction (e.g., Croft 2007; Diessel 2019), and supplemented with Chinese-origin notions, particularly *semantic orientation*, which has received scant attention in the West.

This paper has two main goals. The first is to argue that the constructions under our banner of *causative–resultative construction* (CRC) form a coherent category. Most traditions do not recognise this exact constructional level; they use only terms that are either supersets (e.g., *complement*, *secondary predicate*, *serial verb*) or subsets (e.g., *resultative compound/complement*, *directional complement*) of the CRC. We propose a construction schema for the CRC with various semantic and syntactic properties. Dispensing with traditional notions such as ‘subject’, ‘object’ and ‘pseudo-passive’, our schema accounts for a wide variety of constructions under a single schema, including such subconstructions as resultative, directional, phase and causative constructions. Although the CRC is not without precedents in the literature, we believe our account contains the most explicit definition of and argumentation for this constructional level.

The second purpose is to argue against traditional views, commonplace in most contemporary Western descriptions and typology, that the causative–resultative is composed of two separate argument structures (the *decompositional* approach). After presenting a range of examples not amenable to the decompositional analysis, we argue that a single *argument structure construction* (Goldberg 1995; Goldberg and Jackendoff 2004) suffices to describe the Cantonese CRC (the *holistic* approach). We show that phenomena previously described in terms of individual argument structures can be captured by our approach with the notion of *semantic orientation*, and finally present a typology of Cantonese CRC argument structures that capture all constructions previously described in compositional approaches such as Lau and Lee (2021), while also successfully accommodating argument structure configurations *not* captured in previous typologies.

As we will argue, these two points pose substantial difficulty for typology but also open new avenues for investigation. Methodologically, the higher-level CRC construction’s existence urges typologists to rethink what constitutes a ‘construction’ in typology, which often prides itself on having developed from whole language typology to typologies of constructions (Bickel 2007). The difficulties faced by the decompositional approach also call into question some definitions and proposed universals of serial verb construc-

tions. However, the higher-level CRC construction also provides evidence to distinguish between the two competing accounts of the relationship between SVC symmetry and grammaticalisation in Bisang (2009) and Aikhenvald and Dixon (2006). Semantic orientation analysis also sheds light on the grammaticalisation mechanism of some verbal particles in Chinese, and our work has potential implications for synchronic comparison across Sinitic varieties.

This paper is structured as follows. In Section 2, we will review several research traditions and how they have traditionally dealt with the construction that we discuss in this paper. In Section 3, we define the causative–resultative construction in Cantonese and discuss how it applies to various subconstructions described in the literature. In Section 4, we discuss the challenges that the Cantonese causative–resultative construction poses for decompositional accounts of argument structure. Section 5 discusses the consequences of the results of Sections 3 and 4 and expands the analysis to sketch how the constructional schema discussed in Sections 3 and 4 may apply to other varieties of Chinese and aid in the comparison of differences between varieties. Section 6 concludes.

In contrast to most previous approaches relying on elicited data, our paper uses exclusively natural discourse data to provide a more comprehensive picture, especially as some examples are difficult to understand without context.<sup>1</sup> Examples are mainly taken from the Cantonese Universal Dependencies corpus (Wong et al. 2019) and Google Search, which allows us to locate rarer constructions, many of which are crucial to our analysis.<sup>2</sup> Universal Dependencies sentences are accompanied by a code of the form [UDXXXX], where XXXX indicates sentence number in the corpus, while those from Google are accompanied by a code [SEXXXX] pointing to the relevant line in a spreadsheet given as Supplementary Materials. Premodern examples are taken from the Chinese Basic Ancient Texts Database (Beijing Erudition Digital Research Center 2017).

## 2. The Chinese Causative–Resultative Construction in Different Linguistic Traditions

In this section, we will review several research traditions that have examined the causative–resultative construction, particularly in regard to our two main points: whether they posit a CRC-like category, and whether they gravitate towards the holistic or decompositional approach to argument structure for resultatives with two lexical verbs.

### 2.1. The Chinese Structuralist Tradition

Most linguists in the Chinese structuralist tradition consider V1s in CRCs as the (main) verb. The V2 is known as 補語 *bǔyǔ* ('complement'). Originally a translation of *complement* as used for post-verbal adjectival predicates in English linguistics (e.g., Quirk et al. 1985), it has since expanded to refer to any post-verbal element other than the 'object' 賓語 *bīnyǔ* (Jin 2009). Thus, *bǔyǔ* is typically much wider than CRC. Cheung (1972) exemplifies this tradition in Cantonese.

Within this tradition, some proposals have proposed subsets of complements that resemble our CRC. Rejecting *bǔyǔ* altogether, Jin (2009) considers 'complements' that depend semantically on the subject or object as 'secondary predicates', including most constructions under our CRC. Takahashi's (2021) *kinōsei hogo* 機能性補語 'functional complement' is even closer; though Takahashi only explicitly includes resultative and directional complements, the definition can easily encompass the other constructions under our CRC. In addition, many Chinese structuralists treat the potential structure (see Section 3.1) as a separate construction, e.g., Zhū's (1982) 'potential complex verb-complement structure'. We consider the potential resultative construction a *form*, i.e., subconstruction, of the CRC, so studies on these constructions are about the CRC, minus the non-potential form.

With some exceptions (e.g., Yuán 2001; Jin 2009), the Chinese structuralist tradition typically does not regard *bǔyǔ* as verbs with their own argument structure, thus following the holistic approach.

## 2.2. The Talmyan Tradition in Worldwide and Sinitic Typology

The Talmyan tradition of verb lexicalization patterns (Talmy 1985) resembles the Chinese structuralist tradition in treating V1 as the main verb and V2 as the *satellite*.<sup>3</sup> Originally focused on motion verbs, it has come to encompass other verbal semantic properties such as cause, result and phase (Talmy 2000), similar to Goldberg and Jackendoff (2004), who regard English directional phrases as resultative. Thus, Talmyan studies frequently regard directional, phase and resultative ‘satellite’ constructions in Chinese as subsets of a single construction resembling our CRC. This approach is adopted in many diachronic and typological approaches in Chinese linguistics (F. Li 1997; Lamarre 2003). Yiu (2005, 2013) represents this tradition in Cantonese, though she does not extend her discussion to non-directional verbs.

As this tradition focuses on the verb, there is no explicit position on argument structure, though most seem to adopt a holistic approach implicitly.

## 2.3. Contemporary Western Descriptive Traditions

Contemporary Western and Western-influenced descriptions, both generative and functional-cognitive, tend to regard Chinese resultative constructions as compositionally formed VV compounds (e.g., Thompson 1973), whereas phase and directional complements are treated as particles modifying verbs with simple argument structures. Matthews and Yip (2011) influentially adopt this approach. Therefore, there is typically no unified CRC, a position explicitly defended by Huang (2007).

The exact details of the argument structure composition differ. In the ‘morphological’ or ‘lexical’ approach, the thematic role structures of the verbs are composed (e.g., Huang 2007); in the ‘syntactic’ approach, it is grammatical relations, i.e., subject and object (e.g., Her 2007; Matthews 2006; Lau and Lee 2015).<sup>4</sup> Some authors seem to compose on multiple levels (e.g., Chow 2011, 2012). Many authors adopt a hybrid of the holistic and decompositional approaches; they supplement the two verbs’ individual argument structures with a construction-level argument structure that is not simply a sum of individual ones. For Chang (2003) and, in Cantonese, Lau and Lee (2021), referents have *thematic roles* assigned by the individual verbs and *event roles* in the wider resultative construction. Similarly, Huang (2007) argues that referents are *event participants* of individual verbs and *constructional participants* of the wider construction. Similar positions are widespread in 21st-century accounts (e.g., C. Li 2013; Fong 2018). Cheng and Huang (1994) come closest to the holistic approach. For them, arguments of the resultative construction may be required by the composite event structure even if they are not arguments of the individual verbs.

## 2.4. Serial Verb Constructions in Worldwide Typology

The literature on serial verb constructions in worldwide typology and descriptions based on this tradition often discusses Chinese SVCs. The definitions of SVCs vary, ranging from very wide (e.g., Li and Thompson 2009), moderately wide (Matthews 2006), to fairly narrow (e.g., Chor 2018), but they always require that a clause denote a single event (or some formal correlate of single eventhood), and that the two verbs have no explicit marking of coordination or subordination, which CRCs satisfy. Major works include Aikhenvald and Dixon (2006) (including Matthews’ (2006) chapter on Cantonese), Durie (1997), Bisang (2009) and Haspelmath (2016).

Works in this tradition typically assume each language variety has a finite, countable number of SVCs. They first identify the SVCs in each language and then classify them using formal and semantic properties. Generally, this tradition only recognises a category far wider than the CRC, i.e., the SVC (which encompasses many other construction types in Chinese), plus much narrower constructions such as causative and cause-effect SVCs (which fall under our CRCs in Cantonese).

A recurring theme of this tradition is *argument sharing*—how arguments simultaneously belong to the argument structures of the two verbs involved. It is frequently noted

that the vast majority of SVCs exhibit some argument sharing; in fact, some authors define SVCs to exhibit argument sharing (e.g., [Foley and Van Valin 1984](#)) or even a certain type thereof (e.g., [Ameka 2005](#)). Thus, this tradition falls squarely into the decompositional approach. [Lovestrand \(2021\)](#) reviews this tradition and additionally details several conceptual difficulties it faces, including some that interlock with our arguments.

### 3. Properties and Scope of the Causative–Resultative Construction

#### 3.1. Definition and Terminology

Before introducing our constructional schema for the CRC, we define it as follows:

A *causative–resultative construction* is a construction with two verbal elements that has an affirmative and a negative potential form. In the affirmative potential form, 得 *dak1* appears between the two elements, indicating the possibility of the event expressed by the clause. In the negative one, 唔 *m4* appears between the two elements, indicating impossibility.<sup>5</sup>

Example (4) shows, for example, that the construction with the two verbal elements 追 *zeoi1* ‘chase’ and 到 *dou2* ‘accomplishment’ is a CRC:

- (4) a. 怪 唔 之 得 追 唔 到 女仔 啦!  
 gwaai3 m4 zi1 dak1 zeoi1 m4 dou2 neoi5zai2 laa1  
 blame NEG ASSOC POT chase NEG DOU girl SFP  
 ‘No wonder why (you) can’t successfully court any girls!’ [UD605]
- b. 佢 追 得 到 女仔 ...  
 keoi5 zeoi1 dak1 dou2 neoi5zai2  
 3sg chase POT DOU girl  
 ‘He managed to court a girl successfully ...’ [SEA122].

The term *causative–resultative construction* references the roles of the two verbal elements; one is relevant to the cause of the event, and the other to the result. Our label and definition sidestep two hot-button issues in the literature: wordhood and headedness. We use the word *construction* in the CxG sense of any conventional form-meaning pairing ([Croft 2007](#)) and remain equivocal on whether the two verbal elements form a word, unlike terms such as *resultative compound*. Moreover, unlike terms such as *secondary predicate*, *complement* or *satellite*, we do not imply that the first verbal element is the head, which is hotly debated (e.g., [Tai 2003](#); [C. Li 2009](#)).

The term *verbal element* indicates only that the form exhibits verb-like properties *when used in this construction*; the element may not be classified as a verb in traditional word-class systems. In dynamic constructionist approaches ([Croft 2007](#)), categories such as ‘noun’ and ‘verb’ are not inherent to the forms, but emergent from patterns in which constructional slots the forms may appear. Nevertheless, the rest of the paper will use *verb* for brevity.

To qualify as a CRC, *both* positive and negative potential forms must exist, since, in Cantonese, the affirmative potential form exists outside of the CRC (cf. [Chappell and Peyraube 2015](#)).<sup>6</sup> In the following example, (a) is not a causative–resultative construction, since it only has the affirmative potential form. Although (c) is an acceptable sentence in Cantonese, it *cannot* be interpreted as the negative potential form of (a).<sup>7</sup>

- (5) a. 係 咪 叫 佢 讀書 就 可以 解決 所有 問題?  
 hai6 mai6 giu3 keoi5 duk6syu1 zau6 ho2ji5 gaai2kyut3 so2jau5 man6tai4  
 COP NEG.COP tell 3sg study then can solve all problem  
 ‘Can telling them to study solve all problems?’ [SEA001]
- b. 諗 落 佢 老實 叫 得 佢 讀書...  
 nam2 lok6 keoi5 lou5dau6 giu3 dak1 keoi5 duk6syu1  
 think down 3sg dad tell POT 3sg study  
 ‘Thinking along these lines, if his dad felt like it was necessary to tell him to study ...’ [SEA002]
- c. 叫 佢 唔 讀書 就 出 去 搵 工作  
 giu3 keoi5 m4 duk6syu1 zau6 coet1 heoi3 wan2 gung1zok3  
 tell 3sg NEG study then go out go find work  
 ‘to tell him to get a job if he doesn’t study/  
 \*If you can’t manage to tell him to study, go out and get a job.’ [SEA003].

Under this definition, the CRC includes prototypical resultatives in Cantonese, many verb-particle constructions (including resultative, directional and some quantifying particles), some causative constructions, and the comparative construction. Details of each construction will be discussed in Section 3.3. Supplementary Materials discusses constructions that apparently resemble the CRC but are excluded from it.

### 3.2. The General Schema and Basic Properties

The range of constructions considered CRCs under our definition in Section 3.1 exhibit a cluster of shared syntactic and semantic properties, which makes the CRC a useful category for description. This section summarises these properties, which will be elaborated on in Section 3.1. The CRC’s form may be summarised by the following constructional schema, and by Figure 1 (note that the positions of ArgA and ArgN are flexible rather than fixed in their positions within this schema, as will be described later):

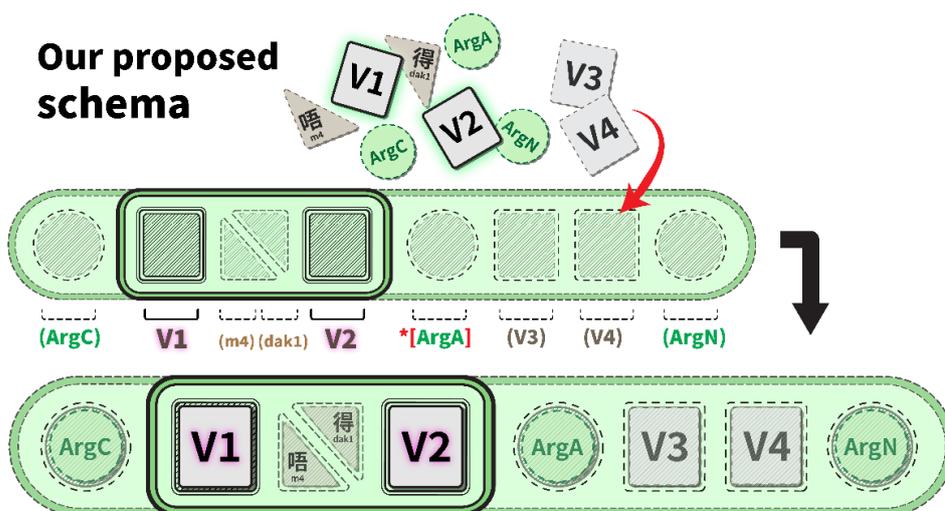
(ArgC) V1 (m4) (dak1) V2 [ArgA]\* (V3) (V4) (ArgN)

- a. ArgC (ArgCause) is the referent most relevant to the cause of the event;
- b. ArgA (ArgAffectee) is the referent most affected by the event, i.e., the affectee;
- c. V2, V3 and V4 are verbs relevant to the result of V1, which is the cause of the event (cf. Y. Li 1995). Note that the numbers, such as most conventions, denote the sequence of appearance;
- d. ArgN (ArgNeither-Cause-Nor-Affectee) is a referent that is non-cause, non-affectee;
- e. Brackets indicate optionality (\*note: [] is used around ArgA because it is rarely absent. See Section 4.4.4 for an example where no arguments are present).

For ‘typical’ resultatives, rough equivalents to V1/V2/ArgC/ArgA are widely used in Western descriptive traditions under different names, such as ‘causer’/‘causee’ and ‘initiator’/‘target of action’ (e.g., Y. Li 1995; Cheng and Huang 1994; Her 2007; C. Li 2013; Lau and Lee 2021).<sup>8</sup> The applicability of these notions to other constructions under the CRC will be justified in Section 3.3. The following examples illustrate the notation:

- (6) 其他 同事 呢, 都係 返 返 埋 去  
 [kei4taa1 tung4si6 ne1], dou1hai6 faan1 faan1 maai4 heoi3  
 [ArgC=ArgA] V1 V2 V3 V4  
 other colleague TOP still return return approach go  
 自己 個 座位 嗰 度  
 [zi6gei1 go3 zo6wai2 go2 dou6]  
 [ArgN]  
 REFL CLF seat DEM place  
 ‘Other colleagues, please do return to your seats anyway ...’ [UD0673].

(7)	阿爺	大家樂	見	唔	倒	我哋	呢
	aa3je4	Daai6gaa1lok6	gin3	m4	dou2	ngo5dei6	ne1
	ArgC		V1	m	V2	ArgA	
	grandpa	Café.de.Coral	see	NEG	DOU	us	SFP
		‘Grandpa could not see us at Café de Coral.’ [UD0234]					
(8)	就	搵	返	嗰	概	出	嚟
	zau6	wan2	faan1	[go2	gyut6]	ceot1	lai4
		V1	V2	[ArgA]		V3	V4
	then	search	return	DEM	CLF	exit	come
		‘then find that piece out!’ [UD0186].					



**Figure 1.** This is a visual representation of our proposed schema as “slotboards”. All elements in our schema are items ‘slotted into’ one ‘slotboard’ (to be further explained in Section 4). Slots and respective items in a solid line denote mandatory items in a CRC, while those in dotted lines are optional. The words 得 *dak1* and 唔 *m4* are the markers for the affirmative and negative potential forms respectively. As depicted in the diagram, the minimal CRC is “V1 V2”, while the maximal CRC is “Arg 1 V1 m4 dak1 V2 ArgA V3 V4 ArgN”. (\*note: [] is used around ArgA because it is rarely absent. See Section 4.4.4 for an example where no arguments are present).

In (6), the other colleagues are both the cause and main affectee of the act of returning. The fact that the colleagues have approached and returned to their own seats is an effect of their act of returning. In (7), the would-be cause is the grandfather, and the affectees ‘us’; however, the negated V2 *dou2* suggests that V1 was unsuccessful, and thus its effect (i.e., ‘our’ location being known to Grandpa) is absent.

Using the above schema and terminology, some formal properties of the construction noted in the literature (e.g., Cheung 1972; Matthews 2006; Matthews and Yip 2011; Wú 2003, 2005; Yiu 2005, 2013; Yue-Hashimoto 2003; Lai 2018) are as follows:

Modification properties:

- a. V1 may take adverbial modifiers or, in directional constructions, aspect markers. Occasionally, V1 may even take additional result verbs before the *dak1/m4* (these are not labelled with numbers to ensure that the first result verb after *dak1/m4* is always labelled identically);
- b. V2 may take aspect markers if V3 and V4 are absent. However, V3/V4 do not, and none of these can be modified by adverbial modifiers.

Word order properties:<sup>9</sup>

- a. ArgC is always placed before the verb;

- b. ArgA may be placed in various positions in the clause. The placement of ArgA depends on information structure, pronominal vs. full noun phrase and possibly other factors. The only positions where it never appears are between V1 and *dak1*, and between *m4* and V2. Moreover, outside of path resultatives, it is rarely between V1 and V2 in non-potential forms, and it is never between V1 and V2 when ArgN is present;<sup>10</sup>
- c. ArgN may also be placed before ArgC or between ArgC and V1, but not between V1 and V2;
- d. ArgC and ArgA may be the same argument; in that case, the ArgC=ArgA must be placed before V1.

In addition, CRCs also have the following semantic properties:

Relational-semantic properties:

- a. The verb series is culturally construed as a coherent event (Matthews 2006; see also Section 5.1);
- b. V2+ are semantically dichotomous: either affirmative or negative, with no degrees;
- c. Because V1 describes a cause and V2 is relevant to the effect of V1, the CRC must describe a dynamic event rather than a state (see Section 3.3 for how certain CRCs describing states are interpreted metaphorically as dynamic). This is unless *m4* or *dak1* are present, i.e., the construction is in the potential form, in which case the construction is stative since it expresses potential (or lack thereof);
- d. V1 semantically orients to ArgC, V2+ semantically orients to ArgA and/or V1, and all verbs semantically orient to ArgN (see Section 4.3).

Of these properties, (b) follows from the fact that V2+ cannot be modified by degree adverbs. CRC-like constructions with degree adverbs modifying V2 lack negative potential forms, in conflict with the definition in Section 3.1 (see Supplementary Materials for examples). (d) will be explained and justified in Section 4.3.

It should be noted that this schema only describes facts that hold for all subconstructions of the CRC and does not aim to account for all facts of subconstructions, such as why particular V1–V2 combinations are only attested in the potential form, i.e., with *dak1* or *m4*, and never outside of it. This is consistent with a network-based constructionist approach (e.g., Diessel 2019; Croft 2007), where constructions of varying abstraction and schematicity are represented, and concrete lower-level constructions can have specific properties and co-occurrence restrictions not observed with the higher-level construction. We leave it to future research to examine the subconstructions and delineate what exactly leads some elements of the construction to co-occur more frequently with others.

The rest of this section will clarify and justify two aspects of our account diverging from virtually all previous ones: the lack of grammatical relations and the addition of ArgN.

### 3.2.1. Lack of Grammatical Relations and Voice Operations

This description departs from virtually all previous accounts in making no reference to traditional grammatical relation-related notions such as subject, object or passivation. While ArgC/ArgA-like categories are widely known and used in many Western accounts, those accounts still map them to subject/object and word order is described in subject/object terms. We reject this approach, presenting word-order properties of ArgC/ArgA directly.

In most previous accounts, the ‘subject’ is preverbal, and the ‘object’ is always described as being placed after V1 and usually after V2. However, when the ‘object’ precedes all the verbs, this is either a ‘pseudo-passive’ (sometimes also known as a ‘middle construction’ in studies on Mandarin, e.g., Xiong 2018), with the ‘object’ becoming the ‘subject’ and ‘subject’ suppressed, or ‘object fronting’ (e.g., Lau and Lee 2015). Some examples are (9–11); by Lau and Lee’s definitions, (9) is pseudo-passive while (11) and (10) are object fronting:

- (9) 中國 製 玻璃 「打 唔 爛」  
 zung1gwok3 zai3 bollei1 daa2 m4 laan6  
 China made glass hit NEG break  
 ‘The China-made glass could not be broken.’ [SEA125].
- (10) 呢 啲 我 搞 掂 啦!  
 ni1 di1 ngo5 gaau2 dim6 laa1  
 DEM CLF 1sg do well SFP  
 ‘Let me finish these up!’ [SEA049].
- (11) 佢 晚餐 食 唔 落  
 keoi5 maan5caan1 sik6 m4 lok6  
 3sg dinner eat NEG down  
 ‘She cannot manage to eat dinner (i.e., doesn’t have the appetite).’ [SEA054].

However, in topic-prominent languages such as Chinese, word order can be adequately described in topic-comment terms without grammatical relations, so there is little motivation for fronting or pseudo-passive processes couched in grammatical relations (LaPolla 1990, 1993, 2009; Li and Thompson 1976). In fact, for certain V1-V2 combinations, especially in potential forms, the ‘pseudo-passive’ can be *more* common than the ‘active’ form. We conducted a mini study of the negative potential form 打唔爛 *daa2 m4 laan6* (hit NEG break, ‘cannot break’). Out of 51 results on Google (excluding duplicates and examples from Cantonese textbooks and linguistic research), only 11 (21.7%) turned out to have ArgCs, explicit or implicit (95% Clopper-Pearson CI: (0.113, 0.353)). It is unnecessarily complicated to posit an underlying two-argument clause from which a single-argument pseudo-passive is then derived.

Our schema and properties above can describe these phenomena without any grammatical relations or syntactic operations. ‘Pseudo-passive’<sup>11</sup> and ‘object fronting’ simply occur when ArgA appears before V1, as opposed to between V1 and V2 (12a) and after V2 (12b), with ‘pseudo-passives’ additionally requiring that ArgC be semantically absent (not just implicit):

- (12) a. 堆 黑 煙 入面 躡-咗  
 deoi1 hak1 jin1 jap6min6 laan1-zo2  
 pile black smoke interior crawl-PFV  
 個 成 身 白 色 嘅 人  
 go3 seng4 san1 baak6 sik1 ge3 jan4  
 CLF whole body white colour ASSOC person  
 出 嚟  
 ceot1 lai4  
 out come  
 ‘From inside the pile of black smoke crawled out a person whose entire body was white.’ [SEA060].
- b. 做 咩 嘢 都 好,  
 zou6 me1 je5 dou1 hou2,  
 do what thing also good  
 都 需要 真心 做 好 佢  
 dou1 seoi1jiu3 zan1sam1 zou6 hou2 keoi5  
 all need sincere do well 3sg  
 ‘Whatever you do, you need to do it well sincerely.’ [SEA053].

Under our account, we may simply state that ArgA precedes the V1 when it is the topic (e.g., (9–10)) or the secondary topic (e.g., (11)), and follows the V1 otherwise (12); no “fronting” operation is needed. An additional advantage of our account is that it predicts the existence of cases where ArgC is absent, but ArgA remains post-V1, which we will show in Section 4.4.1.

One may ask why we do not simply redefine ‘subject’ and ‘object’ as ArgC and ArgA. We return to this question in Section 3.3 when discussing ‘inverted’ resultatives.

## 3.2.2. The ArgN

Our distinction between ArgA (affectee) and ArgN (non-cause, non-affectee) is fully novel; both, most of the time, are traditionally ‘objects’.<sup>12</sup> The ArgN ‘your seats’ in (6) is the goal of a directional verb. More examples are as follows:

- (13) a. 當 你 學 識 釣 魚 後  
dong1 nei5 hok6 sik1 diu3 jyu2 hau6  
ArgC V1 V2 ArgN  
when you learn know hook fish after  
‘once you have learnt to fish’ [SEA047].
- b. 你 中文 學 唔 好,  
nei5 zung1man2 hok6 m4 hou2  
ArgC ArgN V1 m4 V2  
you Chinese learn NEG good  
唔 代表 你 英文 學 唔 到  
m4 doi6biu2 nei5 jing1man4\*2 hok6 m4 dou2  
ArgC ArgN V1 m4 V2  
NEG represent you English learn NEG DOU  
‘Just because you can’t learn Chinese well doesn’t mean you won’t manage to learn English.’ [SEA048].
- c. 找 返 你 三十  
zaau2 faan1 nei5 saam1sap6  
V1 V2 ArgA ArgN  
give change return you thirty  
‘give you thirty dollars back as change’ [UD0050].

Generally, when ArgN is present, ArgA does not appear between the verbs:

- (14) a. 不過 我 用 佢 醫 返 好 隻 手  
bat1gwo3 ngo5 jung6 keoi5 ji1 faan1 hou2 zek3 sau2  
but 1sg use 3sg cure go back well CLF arm  
‘But I used it to cure my arm.’ [SEA155].
- b. \*醫 我 唔 返 隻 手  
ji1 ngo5 m4 faan1 zek3 sau2  
cure 1sg NEG go.back CLF arm  
‘cannot cure my arm’ (unattested regardless of ArgC presence, ArgA and ArgN identity).

The only exception is *gu2 dou2* (‘guess achieve’; Lai 2018):

- (15) 估 佢 唔 到 係 乜水  
gu2 keoi5 m4 dou2 [hai6 mat1seoi2]  
V1 ArgA m4 V2 [ArgN]  
guess 3sg NEG DOU COP who  
‘cannot guess who they are’ [SEA036].

V2-ArgN sequences are often conventionalised sequences with a non-referential ArgN (note that in (16), the CRC is within a relative clause relativised on the ArgA, and hence we have labelled the lexical head as ArgA):

- (16) a. 有 種 講 唔 出 口 嘅 失望  
jau5 zung2 gong2 m4 ceot1 hau2 ge3 sat1mong6  
EXST type say NEG exit mouth ASSOC ArgA  
‘I have an unspeakable disappointment  
(lit. a kind of disappointment that cannot be verbalized out of my mouth).’  
[SEA037].
- b. 聽 完 返 唔 轉 頭  
teng1 jyun4 faan1 m4 zyun3 tau4  
listen finish return NEG turn head  
‘After listening to it, you can’t turn back!’ [SEA038].

The ArgA–ArgN distinction is a matter of pragmatics and construal, and not always predictable from thematic roles. Consider the following pair:

- (17) a. 朋友 話 俾 我 知 水塘 滿 瀉 水  
 pang4jau5 waa6 bei2 ngo5 zi1 seoi2tong4 mun5 se2 seoi2  
 friend tell give me know reservoir be full spill water  
 ‘My friend informed me that the reservoir filled up, causing water to spill.’ [SEA138].
- b. 如果 你 個 浴缸 喺 水 滿 瀉  
 jyu4gwo2 nei5 go3 juk6gong1 di1 seoi2 mun5 se2  
 if you CLF bathtub CLF water full spill  
 ‘If your bathtub’s water fills up (the bathtub) and spills . . . ’ [SEA139].

(17a) is about the environmental impacts of continuous rain, so the affectee is not the water, but the reservoir that can no longer hold any excess water. However, (17b) is taken from a passage on saving water, so the affectee refers to the water that went to waste.

Sometimes, when a human argument is ArgA, the item they possess is ArgN, whereas if an item appears alone, it would be ArgA:

- (18) a. 跑 渣 馬 畀 人 撞 跌-咗 隻 airpod  
 paau2 zaa1 ma5 bei2 jan4 zong6 dit3-zo2 zek3 airpod  
 run Chartered Marathon AGT person bump fall-PFV CLF airpod  
 ‘I was running in the Hong Kong Marathon (sponsored by Standard Chartered) when someone bumped into (me), causing my airpods to drop.’ [SEA145].
- b. 但 老人家 唔 小心 撞 跌-咗 個 痰罐  
 daan6 lou5jan4gaa1 m4 siu2sam1 zong6 dit3-zo2 go3 taam4gun3  
 but elder NEG careful hit fall-PFV CLF spittoon  
 ‘But the elder carelessly knocked down the spittoon.’ [SEA146].

The fact that the space between the two verbs is reserved for ArgAs and disallowed for ArgNs can be seen in the following contrast:

- (19) a. 五十 盒 食 佢 唔 死 仲 奇怪  
 ng5sap6 hap6 sik6 keoi5 m4 sei2 zung6 kei4gwaai3  
 fifty box eat 3sg NEG die even more strange  
 ‘It would be even stranger if fifty boxes aren’t enough to make her die from eating.’ [SEA148]
- b. 唯有 同 個 通粉 say sorry ,  
 wai4jau5 tung4 go3 tung1fan2 say sorry  
 can only to CLF macaroni say sorry  
 因為 食 佢 唔 晒  
 jan1wai6 sik6 keoi5 m4 saai3  
 because eat 3sg NEG all  
 ‘All I could do was to say sorry to the macaroni, because I could not eat it all.’ [SEA147]

In (a), the affectee is the eater since the effect is about death (an ‘inverted resultative’ — see Section 3.3.1). In (b), the affectee is the macaroni, since the V2 quantifies the food (see Section 3.3.4). Never do we find cases such as (19a) where the food is between the verbs, or cases such as (19b) where the eater is.

### 3.3. Subconstructions of the CRC

This section will discuss seven subconstructions of the CRC, particularly with respect to the properties discussed in Section 3.2. Section 3.3.1 will discuss ‘typical’ resultatives with two lexical verbs, focusing on ‘inverted’ constructions, which we account for much more readily than traditional approaches. The rest of the section examines other subconstructions typically not analysed together with CRCs and shows that they are compatible with the definitions and properties in Sections 3.1 and 3.2, which shows the value of our CRC category; it allows us to draw generalisations about a broad class of constructions.

#### 3.3.1. Regular and ‘Inverted’ Resultative Constructions

Prototypical resultatives with two verbs that can stand alone as verbs in monoverbal predicates, such as (1), are part of the CRC. However, one specific type of resultative is rel-

actively challenging to describe in traditional accounts using grammatical relations. Those are traditionally called ‘causative’ (Cheng et al. 1997; Lau and Lee 2015) or ‘inverted’/‘flip-flop’ resultative constructions (e.g., Matthews and Yip 2011, p. 177; Chow 2011, 2012). In either case, the original ‘subject’ of the V1 is typically said to become the ‘object’ of the resultative construction, and the original ‘object’ of the V2 becomes the ‘subject’ of the resultative construction:

- (20) 都係 貪 外國 牌子  
 dou1hai6 taam1 ngoi6gwok3 paai4zi2  
 also greedy foreign country brand  
 冇 咁 易 食 死 人  
 mou5 gam3 ji6 sik6 sei2 jan4  
 NEG so easy smoke die person  
 ‘I’m just taking advantage of the fact that foreign brands don’t smoke people to death so easily.’ [SEA031].

Here, the ‘original subject’ is ‘foreign brands (of electronic cigarettes)’, whereas the ‘original object’ is ‘people’; their roles then flip to become object and subject.

As our account does not assume any grammatical relations associated with particular syntactic positions, we do not need an inversion process.<sup>13</sup> This has multiple advantages over traditional inversion-based approaches, which face several empirical difficulties.

Firstly, ‘inverted’ resultatives have no actual ‘non-inverted’ equivalent. For example, (20) cannot be expressed in an un-inverted way:

- (21) \* 你 食 死-咗 煙  
 nei5 sik6 sei2-zo2 jin1  
 2sg smoke die-PFV tobacco  
 ‘smoke tobacco to death’ [unattested regardless of ArgC].

The idea in (21) can only be expressed with a verb-copying construction, thereby distributing the ‘tobacco’ argument to a regular single-verb clause:

- (22) 食 煙 食 死 你  
 sik6 jin1 sik6 sei2 nei5  
 smoke tobacco smoke die you  
 ‘smoking tobacco, smoking you to death’ [SEA032]

In the above example, the ‘you’ and ‘tobacco’ can at least be the agent and patient arguments of ‘eat’ in monoverbal contexts. There are cases where even this does not work:

- (23) 鉛芯筆 寫 壞 手勢。  
 jyun4sam1bat1 se2 wai6 sau2sai3  
 mechanical pencil write bad gesture  
 ‘Writing with mechanical pencils makes your writing gestures bad.’ [SEA112]

In monoverbal contexts, ‘gesture’ and ‘mechanical pencil’ cannot be the agent and patient arguments of ‘write’ – one is a manner, and the other is an instrument of writing.<sup>14</sup>

In our account, (20) and (23) simply have ArgC (foreign brands, mechanical pencils) as the cause and ArgA (people, gestures) as the affectee, similar to any other causative–resultative construction. There is no requirement that ArgC be agentive or ArgA non-agentive. In addition, (21) is unattested because the tobacco is not affected by the event and hence cannot be ArgA, nor can it be ArgN since death does not semantically orient to it (Section 4.3.3).

Second, when we look at actual discourse examples, we often find cases with no ArgC, either explicit or context-implied, and thus nothing for the ArgA to ‘flip’ with:<sup>15</sup>

- (24) 唔 好 咩 都 想-着 食 好 唔 好?  
 m4 hou2 me1 dou1 soeng2-zoek6 sik6 hou2 m4 hou2  
 NEG good what no matter think-CONT eat good NEG good  
 大哥, 咩 都 食 好 易 食 死 人 㗎。  
 daai6go1 me1 dou1 sik6 hou2 ji6 sik6 sei2 jan4 gaa3  
 big brother what no matter eat very easy eat die person SFP  
 ‘Don’t just think of eating all the time, okay? Dude, if you eat anything and everything, you’ll easily eat yourself to death.’ [SEA030].<sup>16</sup>

These are unproblematic in our account; there is simply a postverbal ArgA with no ArgC. Finally, the traditional account fails to explain the absence of ‘inverted’ constructions such as (25), derived from (13b):

- (25) ~[英文] 學 你 唔 到  
 jing1man4\*2 hok6 nei5 m4 dou2  
 English learn 2sg NEG DOU  
 ‘\*You cannot manage to learn English.’<sup>17</sup>

Under traditional approaches, it is unclear why *jing1man4\*2* ‘English’, an object in sentences such as (13b), cannot be ‘inverted’ to become the subject of the clause. However, in our account, ‘English’ is not a cause in this situation, and hence cannot be ArgC.

One may argue that we may still define our ArgC and ArgA as language-specific, construction-specific ‘Resultative Subject’ and ‘Resultative Object’, thus retaining continuity to traditional categories. However, we believe these labels are misleading, given how divergent they are from the definition of ‘subject’ and ‘object’ in typology and other descriptive traditions. Generally, transitive subjects are more agentive than objects, and common criteria for relative agency (e.g., [Witzlack-Makarevich and Bickel 2013](#)) clearly show that the ArgC is less agentive in ‘inverted’ constructions. ArgC and ArgA do not have agency-related baggage.

### 3.3.2. Most Resultative and Phase Particle Constructions

[Matthews and Yip \(2011, p. 243\)](#) list a number of resultative particles in Cantonese, such as 好 *hou2* ‘completion’ (glossed ‘good’ in this paper), 掂 *dim6* ‘decisively’, 到 *dou2* ‘accomplishment’ (glossed DOU in this paper) and 完 *jun4* ‘to the end’. For [Matthews and Yip \(2011, p. 245\)](#), the possibility of the potential constructions is a defining characteristic of resultative particles, so constructions involving these particles count as CRCs in our definition:

- (26) a. 睇 到 睇 唔 到 唔 係 靠 彩數  
 tai2 dou2 tai2 m4 dou2 m4 hai6 kaau3 coi2sou3  
 see DOU see NEG DOU NEG COP depend luck  
 ‘Whether you can see it or not does not depend on luck.’ [SEA006].  
 b. 睇 得 到 外邊 係 金 黃 色  
 tai2 dak1 dou2 ngoi6bin6 hai6 gam1 wong4 sik1  
 see POT DOU outside COP gold yellow colour  
 ‘I can see that the exterior is golden yellow.’ [SEA007].

The adversative particle 親 *can1*, sometimes regarded as resultative ([Gu and Yip 2004](#)) and sometimes a *sui generis* particle class ([Matthews and Yip 2011](#)), also participates in CRCs:<sup>18</sup>

- (27) a. 餓 佢 唔 親 就 得 啦  
 ngo6 keoi5 m4 can1 zau6 dak1 laa1  
 hungry 3sg NEG ADV then okay SFP  
 ‘As long as he doesn’t go hungry  
 (lit. he’s not so hungry that it hurts him), it’s fine!’ [SEA008].  
 b. 點 會 餓 得 親 啊  
 dim2 wui5 ngo6 dak1 can1 aa3  
 how IRR hungry POT ADV SFP  
 ‘How would one manage to go hungry?’ [SEA009].

Resultative particles not listed by Matthews and Yip include 著 *zoek6* ‘asleep/alight/etc.’, 通 *tung1* ‘get through’, 切 *cit3* ‘on time’, 真 *zan1* ‘to achieve better result’, etc.

Many resultative particles fall in what Chinese structuralists such as Cheung (1972) classify as *phase complements*, which express the degree to which the V1 was actualized rather than the actual result and might *prima facie* constitute exceptions to our statement that V2 is relevant to the result. Some of these are straightforwardly result-expressing if we refine our understanding of the V1. Take 着 *zoek6*:

- (28) 點解 我 飲 完 酒  
 dim2gaai2 ngo5 jam2 jyun4 zau2  
 why 1sg drink finish alcohol  
 會 易 啲 喇 得 着 嘅?  
 wui5 ji6 di1 fan3 dak1 zoek6 ge2  
 IRR easy a bit sleep POT ZOEK SFP  
 ‘Why can I go to sleep more easily after having drunk alcohol?’ [SEA044].

At first, this seems to constitute a counterexample to our claim that V2 is always relevant to the result since *zoek6* tells us that the action of sleeping is ongoing, not effects of sleep such as gaining energy. However, we have evidence that *fan3* in such contexts has a meaning closer to ‘get oneself to sleep’. Consider the following example:

- (29) 又 失眠, 喇 極 都 喇 唔 著  
 jau6 sat1min4 fan3 gik6 dou1 fan3 m4 zoek6  
 again insomnia sleep limit still sleep NEG ZOEK  
 ‘I have insomnia again—no matter how hard I (try to) sleep, I cannot fall asleep.’  
 [SEA045].

The first *fan3* is *not* negated even though the writer never went asleep. Thus, reaching the state of being asleep is still the result of 喇 *fan3*. This is an example of *coercion*: a verb gains a meaning (here, lack of actualisation) by virtue of being in a constructional environment. This is similar to F. Li’s (1997) description of the word 殺 *shā* ‘kill’ in Mandarin, which originally implied the death of the patient in Old Chinese, but was gradually ‘leached’ of this meaning by participating in the CRC 殺死 *shā sǐ*.

Other phase complements denote that the event has reached a phase that produces certain results, such as 到 *dou2* and 成 *seng4* ‘succeed’. Recall that in the constructional schema, we only define V2 to be *related to* the result, not necessarily the result itself; such phase complements are good examples. For example, *dou2* and *seng4* indicate that V1 was successfully performed, which is a precondition for the event’s result to take place:

- (30) 做 唔 成 戀人 做 唔 做 到 朋友?  
 zou6 m4 seng4 lyun2jan4 zou6 m4 zou6 dou2 pang4jau5  
 do NEG succeed lover do NEG do DOU friend  
 ‘If we cannot be lovers, can we be friends?’ [SEA161].

Quite often, V1 is static, in which cases the ‘result’ is a *standard* that the property denoted by the stative verb achieves or not. In these constructions, V1 and V2 satisfy the semantic requirement metaphorically. If we think of the static verb as dynamic, e.g., think of ‘red’ as ‘becoming red’, then the standard expressed by V2 can be conceptualised as the result of this becoming—another example of coercion. We see this in phase complements and even conventional resultatives:

- (31) a. 男朋友 話 我 襯 佢 唔 起  
 naam4pang4jau5 waa6 ngo5 can3 keoi5 m4 hei2  
 boyfriend say 1sg suit 3sg NEG HEI  
 ‘My boyfriend said I was not in his league.’ [SEA046].  
 b. 開心 死 喇!  
 hoi1sam1 sei2 laa5  
 happy die SFP  
 ‘I am so happy I could die!’ [SEA082].

One may ask why *dou2* is seen as a V2, but the affirmative potential form marker *dak1* is not seen as a V2 but is treated as a syntactic marker in the construction. Syntactically, one cannot have a construction that consists of V1 + *m4* + *dak1* but no other V2 (though one could in Middle Chinese), e.g., \*做唔得朋友 *zou6 m4 dak1 pang4jau6* ‘cannot be friends’. Semantically, when *dak1* occurs with a V2, it does not convey the success of the implied end-state of V1 but states V2 as possible. For example, 食得死 *sik6 dak1 sei2* ‘eat DAK die’ means that the ArgC can kill people who eat it. *Dak1* here indicates the possibility of dying, not of completing the process of eating; *dou2* cannot be used this way. Finally, *dak1* implies potentiality, whereas *dou2* does not.

### 3.3.3. The Comparative Construction

The comparative construction in Cantonese, which uses the V2 過 *gwo3* ‘exceed’, also satisfies our CRC definition:

- (32) a. 有 咩 開心 得 過 買 得 抵?  
 jau5 me1 hoi1sam1 dak1 gwo3 maai5 dak1 dai2  
 EXST what happy POT COMP buy DAK good value  
 ‘What can be happier than buying (things) with good value?’ [SEA034].
- b. 點 食 都 開心 唔 過  
 dim2 sik6 dou1 hoi1sam1 m4 gwo3  
 how eat FOC happy NEG COMP  
 同 一 大 班 同事 食  
 tung4 jat1 daai6 baan1 tung4si6 sik6  
 with one big group colleague eat  
 ‘No matter how (we) eat, it can’t be as joyous as eating with a big group of colleagues.’ [SEA035].

The comparative construction can be seen as a special case of the resultative, again with the V1 coerced from stative to dynamic. This is a metaphorical extension of *gwo3* ‘pass’ as a directional particle; however, the comparative construction patterns with non-directional resultatives syntactically (V1s cannot take aspect markers, and ArgA does not fall between V1 and V2 outside potential forms).

### 3.3.4. Some Quantifying Particle Constructions

Two of Matthews and Yip’s (2011, p. 243) quantifying particles, 晒 *saai3* ‘all’ and 埋 *maai4* ‘also’, participate in CRCs. Examples with *saai3* are shown below:

- (33) a. 點解 啲 tasks 做 極 都 做 唔 晒?  
 dim2gaai2 di1 taas1 zou6 gik6 dou1 zou6 m4 saai3  
 why CLF task do extreme also do NEG all  
 ‘Why can’t I finish all the tasks no matter how much I do them?’ [SEA010].
- b. 唔 會 話 一 個 人  
 m4 wui5 waa6 jat1 go3 jan4  
 NEG IRR say one CLF person  
 做 得 晒 所有 野 既  
 zou6 dak1 saai3 so2jau5 je5 ge3  
 do POT all all thing SFP  
 ‘It’s not like one person can finish all the stuff.’ [SEA011].

Other V2s include 夠 *gau3* ‘enough’, 足 *zuk1* ‘enough’ and 齊 *cai4* ‘complete’.

These quantifying particles may quantify different elements of a sentence but are, in all cases, relevant to the result. For example, when it quantifies an argument, that argument is always the affected ArgA, such as ‘tasks’ in (33a). When it quantifies the V1, this quantification gives information about the result. An example is (34), again with the metaphorical extension mentioned for resultatives and comparatives:

- (34) 兩 個 仔 都 似 晒 阿媽  
 loeng5 go3 zai2 dou1 ci5 saai3 aa3maa1  
 two CLF son all resemble all mother  
 ‘Both sons look completely like their mother.’ [SEA126] (cf. Wong 2008, (21)).

Thus, quantifying results are result-related either way.

### 3.3.5. Some Causatives

Causatives in Matthews and Yip’s (2011) sense have V1s roughly translating to ‘cause’ or ‘make’ in English.<sup>19</sup> Some causatives involving 整 *zing2* and 搞 *gaau2* fall into this category:

- (35) a. 老豆 咁 高 冇 都 整 得 喊  
 lou5dau6 gam3 gou1 le1fou2 dou1 zing2 dak1 haam3  
 dad so high level even CAUS POT cry  
 ‘You could even make someone as high-level (i.e., hard to touch) as your Dad cry?’ [SEA020].
- b. 無論 歌 定 戲 都 整 唔 喊 我  
 mou4leon6 go1 ding6 hei3 dou1 zing2 m4 haam3 ngo5  
 no matter song or film also CAUS NEG cry 1sg  
 ‘Neither songs nor films can make me cry.’ [SEA021].

Other causatives take a full clausal complement rather than a V2 and do not fall into the CRC (Supplementary Materials).

### 3.3.6. Some Manner Constructions

Some manner ‘complements’ have both potential forms and qualify as CRCs, generally when the manner can be characterised as the goal of the V1:

- (36) a. 感覺 點 用 力 都 跑 唔 快  
 gam2gok3 dim2 jung6 lik6 dou1 paau2 m4 faai3  
 feel how use force still run NEG fast  
 ‘I feel that no matter how much energy I use, I still can’t run quickly.’ [SEA126].
- b. 你 跳 唔 齊 跳 唔 靚  
 nei5 tiu3 m4 cai4 tiu3 m4 leng3  
 2sg jump NEG in sync jump NEG pretty  
 就 無 得 出道  
 zau6 mou5 dai1 ceot1dou6  
 then NEG can debut  
 ‘You can’t debut if you can’t dance in sync and beautifully’. [SEA127].

Here, ‘fast’ is the writer’s goal when running, and ‘in sync’ and ‘pretty’ are the dancers’ goals when dancing. The lack of such manners can be conceptualised as the failed realisation of the desired result. The same construction in (36a) is unattested with 煮 *zyu2*, presumably because speed is seldom seen as a desired outcome of cooking.

### 3.3.7. Most Directional Particle Constructions

Cantonese verbs may be accompanied by up to three directional particles. The inventory of directional particles is in Table 1 (Cheung 1972; Yiu 2005, 2013).

**Table 1.** Directional particle paradigms in Cantonese.

a. Return	b. Location-Oriented	c. Speaker-Oriented
返 faan1 'return'	上 soeng5 'ascend' 落 lok6 'descend' 出 ceot1 'exit' 入 jap6 'enter' 開 hoi1 'depart' 埋 maai4 'approach' 過 gwo3 'pass' 起 hei2 'rise' 到 dou3 'arrive'	嚟 lai4 'come' 去 heoi3 'go'

Here are some examples:

- (37) a. 會 唔 會 走 得 返 埋 一齊?  
wui5 m4 wui5 zau2 dak1 faan1 maai4 jat1cai4  
IRR NEG IRR walk POT return approach together  
'Will they be able to get back together?' (i.e., be a couple again) [SEA013].
- b. 心痛 得 喫 唔 落 去  
sam1tung3 dak1 jaak3 m4 lok6 heoi3  
heart POT eat NEG descend go  
bleed  
'My heart bled so much that I could not continue eating.'  
(Context: The meal cost over \$100.) [SEA014].

Though Yiu (2013) writes that the combination 返起嚟 faan1 hei2 lai4 (return rise come) has no potential form, we do find examples on the Internet:

- (38) 治療 中 企 得 返 起 嚟  
zi6liu4 zung1 kei5 dak1 faan1 hei5 lai6  
therapy duration stand POT return rise come  
'to be able to stand back up during therapy [SEA012].

We thus still consider constructions with faan1 hei2 lai4 to be CRCs.

Directional particles, such as those in (37a), though literally indicating direction (the celebrities metaphorically approaching each other), are strongly indicative of the resultant end state—the two celebrities becoming a couple again, and hence still highly relevant to the result. As Yiu (2013) shows, this is the case for physical directions as well. She gives the following example:

- (39) 嗰 啲 嘢 放 落 檯 上  
go2 di1 je5 fong3 lok6 toi2 soeng6  
that CL thing put descend table on  
'to drop those things down on the table' (O'Melia 1941, cited by Yiu (2013, p. 171)).

Notice that although lok6 'descend' is still used, the ArgN is the destination of descent.

Formally, directional particle constructions constitute a clear subclass of the CRC, as they differ in at least three respects mentioned in Section 3.2: aspect marker placement, ArgA placement and ArgN appearance. Nevertheless, there is still good reason to treat it with other CRCs under one construction. For example, under accounts that treat the directionals as modifiers to the verbal structure, it is unclear how to account for examples such as the following:

- (40) 响 香料 爆-咗 响 味 出 嚟  
di1 hoeng1liu2 baau3-zo2 di1 mei6 ceot1 lai4  
CLF spice burst-PFV CLF aroma go out come  
'Some aroma came out as the spice burst.' [SEA144].

In the absence of directionals, 爆 *baau3* ‘burst’ generally takes the thing that burst as its sole argument, so it is not clear what the spices are doing. However, if we consider this a CRC, this can be easily explained; the spice is the ArgC, and the aroma is the ArgA.

### 3.4. Interim Conclusion

This section gave a clear description of the sense and extension of the causative–resultative construction. The CRC label is shown to be useful because its members share numerous semantic and syntactic properties. Furthermore, directional and non-directional CRCs may be seen as two major subgroups under the CRC, since directional CRCs have clearly distinctive properties within CRCs. The next section will zero in on one aspect of our schema, the holistic approach to argument structure, which is a departure from most Western approaches, and elaborate on the semantic relationships briefly touched on in Section 4.2.

## 4. The Holistic Approach to Argument Structure

As mentioned above, most Western approaches approach ‘regular’ resultatives with two lexical verbs, such as those discussed in Section 3.3, compositionally. Clauses or argument structures of individual verbs are thought to combine to form the entire construction’s argument structure:

(41)	佢	剪	短-咗	頭髮
	koei5	zin2	dyun2-zo2	tau4faat3
	3sg	cut	short-PFV	hair

‘He cut his hair short’ (Lau and Lee 2021).

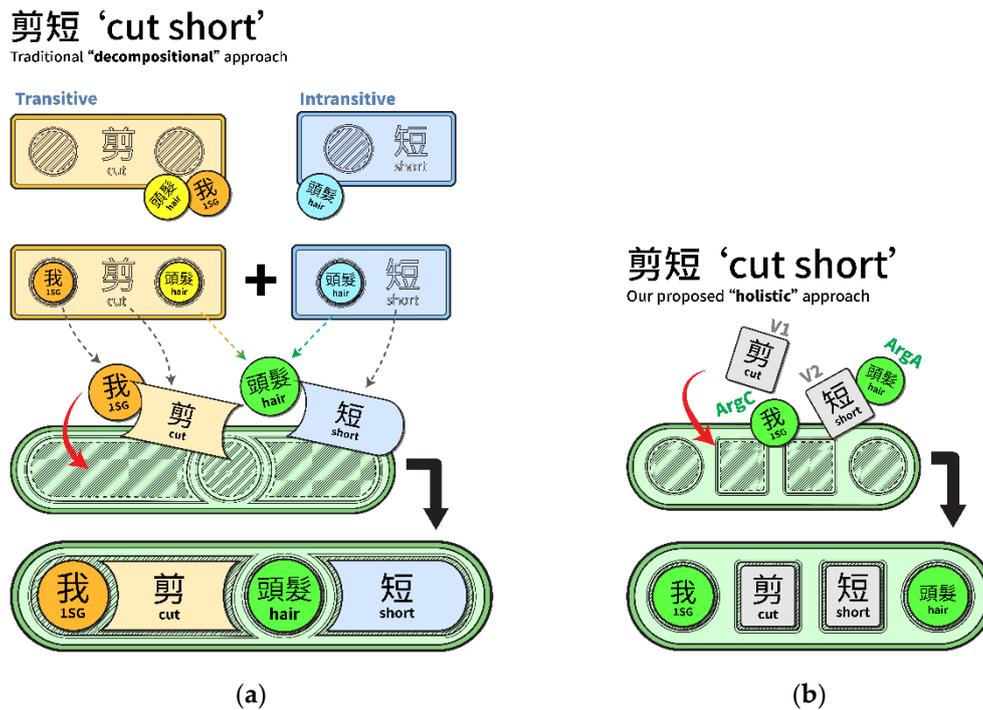
Lau and Lee (2021) break this construction down as follows:

NP <sub>1</sub>	+	V <sub>1</sub>	+	NP <sub>2</sub>
佢		剪		頭髮
3sg		cut		hair
+				
NP <sub>2</sub>	+	V <sub>2</sub>		
頭髮		短-咗		
hair		short-PFV		

This approach of decomposing the construction into two monoverbal constructions works well where the following properties coincide:

1. A verb is attracted to the V1 slot of the CRC as well as the sole V slot of either a simple transitive or an intransitive construction (not both). Moreover, one or both of the arguments of the CRC are attracted to this verb in both the CRC and the (in)transitive construction, and the semantic relation between the verb and the arguments is the same in the CRC and in the (in)transitive construction;
2. The above also applies to the V2 slot;
3. The CRC has no arguments other than those in 1–2;
4. The V1 and V2 have the same meaning in the CRC as in monoverbal clauses.

However, there are empirically many CRCs in Cantonese that do not fulfil these criteria (to be illustrated in Sections 4.1.1–4.1.4). In contrast, we adopt a holistic approach with no composition (or decomposition). This section will first discuss various empirical difficulties with the decompositional approach (Section 4.1), explain how our approach dispels these problems (Section 4.2), and then explain how our account can explain and extend previous findings about CRCs couched in decompositional terms (Sections 4.3 and 4.4). Figure 2a,b show a side-by-side comparison of the decompositional and holistic approaches as slotboards, and how different CRCs are respectively analysed in the two approaches.



**Figure 2.** (a) The decompositional argument structure is expressed as slotting different pieces into ‘slotboards’: a CRC is semantically complete when all the slots on the ‘slotboard’ are filled with the correct pieces. The CRC 我剪短頭髮 ‘I cut my hair short’, drawing from example (41), is decomposed into two separate argument structures of the individual verbs. Hence an orange ‘slotboard’ with the transitive V1 剪 *zin2* ‘cut’ and a blue one with the intransitive 短 *dyun2* ‘short’ are assembled with their respective arguments. On the CRC level, they are combined into a green ‘slotboard’ that accommodates the arguments and verbs in their presupposed argument positions, though not necessarily reflective of the final word order; (b) in our holistic approach, all elements belong to the CRC level, and the only distinctions between the elements are verbs vs. arguments.

4.1. Problems with the Decompositional Approach

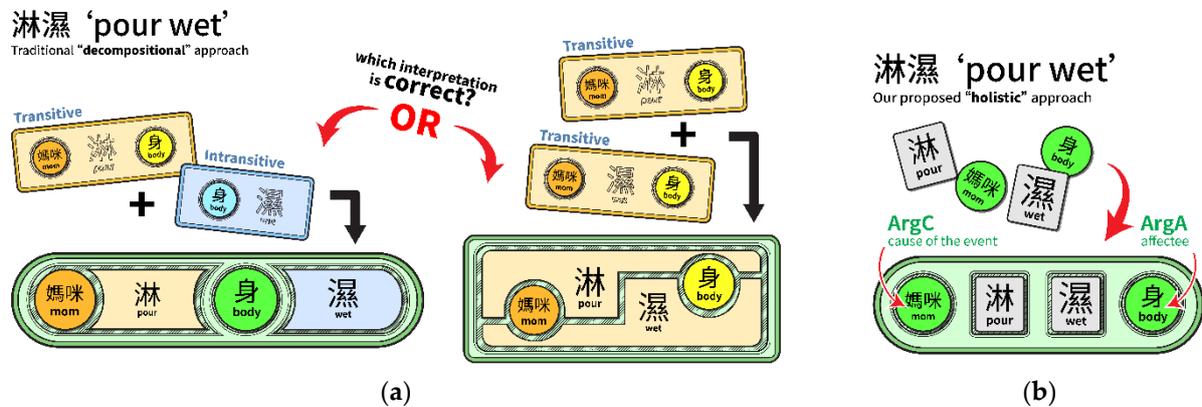
4.1.1. Ambitransitive Verbs

Cantonese has many *ambitransitive verbs*, which may take one or two arguments. When they are involved in CRCs, it is indeterminate whether the ‘pre-composition’ clause contains one or two arguments. For example, consider 濕 *sap1* ‘wet’:

- (42) a. 媽咪 同 我地 兩 個 淋 濕-咗 個 身 先  
 maa1mi4 tung4 ngo5dei6 loeng5 go3 lam4 sap1-zo2 go3 san1 sin1  
 mummy BEN 1pl two CLF soak wet-PFV CLF body first  
 ‘Mummy drenched both of our bodies first.’ [SEA074].
- b. 書包 濕-咗, 個 身 濕-咗 一 半  
 syu1baau1 sap1-zo2 go3 san1 sap1-zo2 jat1 bun3  
 bookbag wet-PFV CLF body wet-PFV one half  
 ‘The bookbag got wet, and my body was half wet.’ [SEA075].
- c. 無幾耐, 呢 個 傻佬 已經 濕-咗 身 喇  
 mou5gei2noi1 ni1 go3 so4lou2 ji5ging2 sap1-zo2 san1 laa3  
 before long DEM CLF fool already wet-PFV body SFP  
 ‘Before long, this fool had already wet his body.’ [SEA076].

In (42a), 淋 *lam4* is transitive, so in the decompositional approach, it must be that 媽咪 *maa1mi4* ‘mummy’ is its ‘subject’ and 個身 *go3 san1* ‘the bodies’ is its ‘object’. However, the ambitransitive *sap1* is less clear. It may be intransitive with 個身 *go3 san1* as its ‘subject’ (cf. 42b), or transitive with *maa1mi4* ‘mum’ as its ‘subject’ and *go3 san1* ‘the bodies’ as its ‘object’ (cf. 42c). Most accounts assume that *sap1* is intransitive (e.g., Matthews

2006; Lau and Lee 2021), but without arguing against the alternative.<sup>20</sup> On the other hand, the (ambi)transitivity of V2 *sap1* does not interfere with our holistic account; the non-verb elements are simply arguments of the entire CRC construction. Figure 3 shows another side-by-side comparison of both approaches.



**Figure 3.** (a) In the decompositional approach, the ambitransitive V2 濕 *sap1* ‘wet’ gives rise to two possible analyses of argument structure. While both green ‘slotboards’ are complete in the end, the question of which is the correct interpretation (or rather, which interpretation to take) is unresolved; (b) in our holistic approach, the ambitransitivity of 濕 *sap1* does not pose any challenges as it is simply another element in the final CRC slotboard.

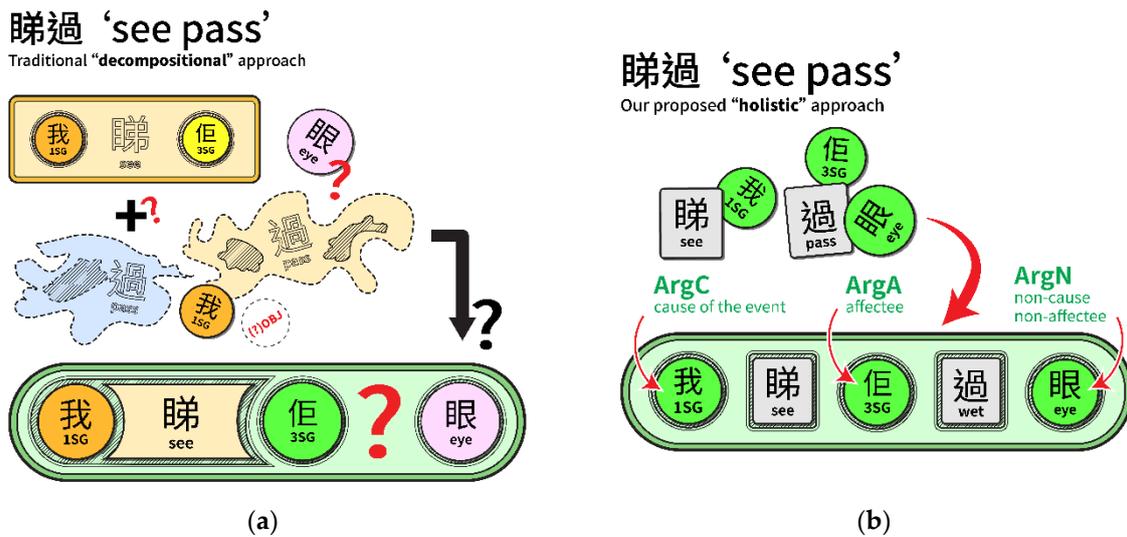
In our approach, the ambitransitive nature of this and other verbs is unproblematic because it is unnecessary to ‘pick and choose’ the transitivity of the V2.

#### 4.1.2. Idiomatic Constructions with No Corresponding Simple Clauses

In (43), two idiomatic constructions are presented with V1 睇 *tai2* and ArgN 眼 *ngaan5*, meaning that ArgC harbours some resentment towards ArgA.<sup>21</sup> No second clause may be separated with the V2 as the verb:

- (43) a. 有 好 多 事 我 都 睇 佢 唔 過 眼。  
 jau5 hou2 do1 si6 ngo5 dou1 tai2 keoi5 m4 gwo3 ngaan5  
 EXST very many matter 1sg all see 3sg NEG pass eye  
 ‘there are many matters on which I could not bear to see her.’  
 (‘Many matters’ is a hanging topic). [SEA058].
- b. 點 會 睇 得 佢 順 眼 直頭 想 即時 處決  
 dim2 wui5 tai2 dak1 keoi5 seon6 ngaan5 zik6tau4 soeng2 zik1si4 cyu5kyut3  
 how IRR look POT 3sg be along eye in fact want at once execute  
 ‘How would I bear looking at it? In fact, I would want to execute it at once.’  
 (humorous sentence on ugly fingernails). [SEA059].
- c. ~\* 佢 過 / 順 眼  
 keoi5 gwo3 / seon6 ngaan5  
 3sg pass / be along eye [unattested, meaning unclear]

Again, complications arising from the treatment of V2 in the decompositional approach become irrelevant when considering the arguments at the holistic CRC level, as seen in Figure 4.



**Figure 4.** (a) The V2 過 *gwo3* ‘pass’ is semantically fragmented when separated as a monoverbal clause, arriving at no meaningful analysis. The role of ArgN ‘eye’ in this analysis is also unclear; (b) all the elements are unambiguously slotted into our holistic approach slotboard without a need to interpret V1 睇 *tai2* and V2 過 *gwo3* separately.

There are also some idiomatic constructions where one of the verbs has a metaphorical meaning restricted to the CRC. Similar cases have been noted in SVC typology, where a verb has a different meaning inside and outside of biverbal clauses (e.g., [Enfield 2009](#); [Lovstrand 2021](#), pp. 9–10). Consider the following:

- (44) 嗰 度 係 私人 地方, 告 佢 唔 入 嘅 啲  
 go2 dou6 hai6 si1jan4 dei6fong1 gou3 keoi5 m4 jap6 ge3 wo3  
 DEM place COP private place sue 3sg NEG enter SFP SFP  
 ‘That’s a private place—you can’t sue him successfully!’ [SEA061].

Though one can say 佢唔入 *keoi5 m4 jap6* ‘he does not enter’, this does not mean ‘he cannot be sued successfully.’ Another example is as follows:

- (45) 但係 最終 你 都 係 走 唔 甩  
 daan6hai6 zeoi3zung1 nei5 dou1 hai6 zau2 m4 lat1  
 but eventually 2sg still COP run NEG loose  
 ‘But eventually you can’t escape.’ [SEA095].

In monoverbal clauses, 甩 *lat1* ‘loose’ either refers to an inanimate object (e.g., chips of paint) coming loose in intransitive clauses, or dumping a romantic partner in transitive ones. It cannot refer to *people* being free in intransitive clauses. We searched for 佢甩咗 *keoi5 lat1-zo2* (3sg loose-PFV) online, and there were no examples where the ‘loose’ thing was animate, despite the third-person pronoun *keoi5* skewing animate in Cantonese, especially outside of ‘objects’ ([Matthews and Yip 2011](#), p. 95).

A particularly extreme example is (46). This special phrase means that ArgC cannot do anything to affect ArgA, with minimal semantic contribution from the lexemes in the two verbal slots:

- (46) 連 阿sir 都 奈 佢 唔 何  
 lin4 aa3soe4 dou1 noi6 keoi5 m4 ho4  
 even male police officer also NOI 3sg NEG HO  
 ‘Even the male police officers could not do anything about him.’ [SEA072].

Here, 奈 *noi6* and 何 *ho4* have no meaning on their own. This construction is derived from an Old Chinese construction, where 奈何 on its own means ‘what can we do’, and when included in negative constructions with two arguments, the meaning is similar to

the Cantonese CRC. The potential form was not yet developed in Old Chinese, and the negation would come before the 奈:

- (47) 無 奈 秦 何 矣  
 NEG.EXST NOI Qin HO SFP  
 ‘They (Hán) will not be able to do anything about Qín.’  
 (lit. ‘There will be nothing that Hán can do about Qín.’) (*Zhàn Guó Cè* 4.10).

This original construction was seemingly forced into the mould of the Cantonese CRC, with the 奈 *noi6* taken to mean any generic action, and the 何 *ho4* any generic desired result. This coercion can be elegantly described with our holistic CRC schema, which does not require that *noi6* and *ho4* be usable in monoverbal constructions.

#### 4.1.3. Semantic Dependence between Verbs

Some more schematic and productive constructions are not idiomatic, but because the interpretation of the two verbs is very interdependent, they cannot be readily separated, even though the V1 and V2 can both normally appear in single-verb constructions. The causative construction (Section 3.3.5) is a good example, but this problem appears in ‘typical’ resultatives too.

Consider the construction with the V2 齊 *cai4*. It can be paired with different verbs and optionally the quantifying 晒 *saai3* as V3; the resultant meaning is that the action performed by V1 was performed on *all* of the ArgA (a–b):

- (48) a. 今 次 仲 唔  
 gam1 ci3 zung6 m4  
 this time still NEG  
 食 齊 晒 啲 口味?  
 sik6 cai4 saai3 di1 hau2mei6  
 eat complete all CLF flavour  
 ‘Won’t you taste all the flavours this time?’ (i.e., They finally get to taste all the flavours this time round). [SEA064].
- b. 今年 先 識 自動自覺 做 齊 啲 功課  
 gam1nin4\*2 sin1 sik1 zi6dung6zi6gok3 zou6 cai4 di1 gung1fo3  
 this year only know self-consciously do complete DEM homework  
 ‘Only this year did he start completing all his homework self-consciously.’ [SEA062]
- c. 當 佢哋 嘅 食物 齊 晒  
 dong1 keoi5dei6 ge3 sik6mat6 cai4 saai3  
 when 3pl ASSOC food complete all  
 ‘When all of their food was there (i.e., was served).’ [SEA065].
- d. 佢 係 齊 晒 六 粒 石 喎  
 keoi5 hai6 cai4 saai3 luk6 lap1 sek6 wo3  
 3sg COP complete all six CLF stone SFP  
 ‘But he (Thanos) has all six (stones).’ [SEA156].

Although 齊 *cai4* can be used as a V1 with no verb before it and with *saai3* as V2, as in (48c), the meaning is not consistent with a story where sentences such as (48ab) contain such a clause, because *cai4* only indicates that the ArgA *all exists*, not that an action was performed on all of ArgA. In the intransitive (48c), it is not that an action (say, eating) was completed on all of the food; rather, the sentence means that all the food exists (i.e., was served). Similarly, in the transitive (48d), it only means that Thanos has all six stones in his possession and cannot mean that he performed some action on all six stones.<sup>22</sup> Thus, we cannot say that sentences such as (a–b) contain a clause with *cai4* independent of the V1s 食 *sik6* and 做 *zou6*.

A similar argument may be applied to 完 *jun4*:

- (49) a. 食 完 生果 成日 唔 舒服?  
 sik6 jyun4 saang1gwo2 seng4jat6 m4 syu1fuk6  
 eat finish fruit always NEG comfortable  
 'Always feeling unwell after eating fruit?' [SEA066].
- b. ~\* 生果 完  
 saang1gwo2 jyun4  
 fruit finish  
 'The fruit has been eaten (lit. the fruit is over)' [unattested].

One may classify these V2s as particles, declare them non-verbal, and exclude them from consideration. Yet there are also cases where the interpretation of V1 depends on V2. Consider the verb 放 *fong3* 'put':

- (50) 成 程 車 都 要 屈-住  
 seng4 cing4 ce1 dou1 jiu3 wat1-zyu6  
 whole CLF car all need bend-CONT  
 / 放 歪 對 腳  
 waak6ze2 fong3 me2 deoi3 goek3  
 or put in unnatural position CLF leg  
 '(They) had to keep bending their legs or putting them in an unnatural position throughout the ride.' [SEA077].

While 放 *fong3* can be used in a single-verb construction, it is unnatural to use it in such a construction without *some* specification of manner or position, whether that specification comes from a V2 or not. We looked up the phrase '放對腳' (put CLF foot) in Google, and in all of the cases, there is a manner or position specified.<sup>23</sup> Thus, we cannot extract a monocausal *fong3* clause from this CRC.

Another example, also observed in Igbo (Lord 1975), is with the verb 打 *daa2* 'hit', which does not apply to inanimate objects outside of CRCs:

- (51) 媽媽 唔 小心 打 爛-咗 隻 碟。  
 maa4maa1 m4 siu2sam1 daa2 laan6-zo2 zek3 dip2  
 mum NEG careful hit break-PFV CLF plate  
 'Mum carelessly hit and broke the plate.' [SEA154].

In monoverbal constructions, *daa2* 'hit' does not apply to plates; the only examples we found on the Internet of 打隻碟 *daa2 zek3 dip2* 'hit CLF plate' were about burning CDs.

#### 4.1.4. Missing and 'Wrong' Arguments

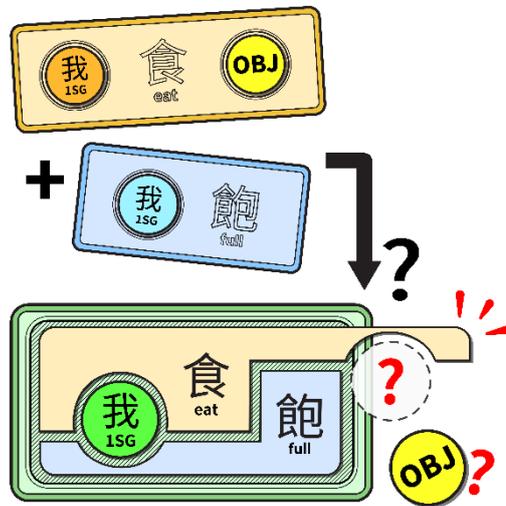
There are also problems with 'missing' arguments. Consider the following example:

- (52) 食 飽 先 有 力 減 肥  
 sik6 baau2 sin1 jau5 lik6 gaam2 fei4  
 eat full only have strength reduce fat  
 'I don't have the strength to lose weight until I have eaten myself full!' [SEA092].

In (52), there is no specific food implied. Yet in Cantonese, 食 *sik6* 'eat' is strictly transitive (Matthews 2006). Even if no specific patient is explicitly present, there must be a contextually inferable one. So, the V1 is 'missing' a patient in the decompositional approach. Again, this issue can be dealt with by taking the holistic approach, as shown in Figure 5.

# 食飽 ‘eat full’

Traditional “decompositional” approach



(a)

# 食飽 ‘eat full’

Our proposed “holistic” approach



(b)

**Figure 5.** (a) The transitive V1 食 *sik6* ‘eat’ calls for a patient, ‘missing’ in the final CRC slotboard. (b) This ‘missing argument’ problem can be completely avoided in the holistic approach, where the argument structure of the CRC does not have to be the sum of individual verbs’ argument structures.

Sometimes, V2s may have no arguments at all:

- (53)      電話                      打                      唔                      通  
 din6waa2                      daa2                      m4                      tung1  
 phone                      hit                      NEG                      come through  
 ‘The telephone (number) could not be reached.’ [SEA151].

In monoverbal clauses, 通 *tung1* takes a channel (e.g., intestines, pipes) as its argument, but there is nothing channel-like in this example.

Missing arguments are not unknown in SVC literature (e.g., Lord 1975, pp. 33–34; Aikhenvald and Dixon 2006, p. 13), and decompositional approaches can allow for argument ‘suppression’ (e.g., Her 2007), so decompositional accounts are not *incompatible* with missing arguments. However, they still handle these phenomena less elegantly than our holistic approach with no suppression.

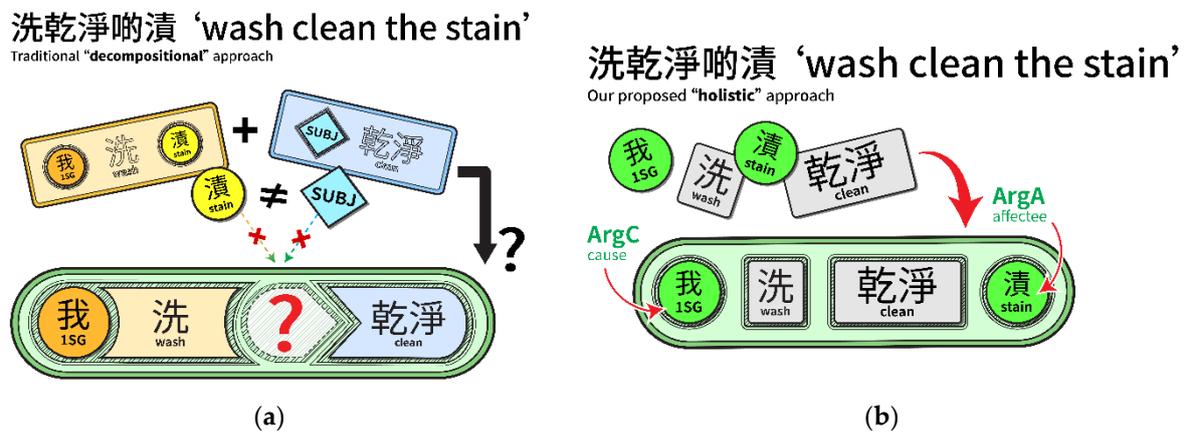
‘Wrong’ arguments pose the biggest problem for decompositional approaches. Consider the following example:

- (54)      人生              都              無              意義              啦,  
 jan4sang1      dou1              mou5              ji3ji6              laa1,  
 life              FOC              NEG.EXST      meaning              SFP  
 咪              食              煙              食              死              佢              囉  
 mai6              sik6              jin1              sik6              sei2              keoi5              lo1  
 so              smoke              tobacco              smoke              die              3sg              SFP  
 ‘Since life is meaningless anyway, let me smoke it to death.’ [SEA033].

Here, the ArgA refers to the speaker’s life, not the speaker themselves, as it is in the third person. However, in Cantonese, humans, not lives, are the argument of 死 *sei2* ‘die’. Alternatively, consider the following pair:

- (55) a. 夏天 洗 乾淨 塊 面 好 重要  
 haa6tin1 sai2 gon1zeng6 faai3 min6 hou2 zung6jiu3  
 summer wash clean CLF face very important  
 'In summer it is important to wash your face clean.' [SEA067].
- b. 請教 點樣 可以 洗 乾淨 啲 橙 汁 漬  
 cing2gaau3 dim2joeng2 ho2ji5 sai2 gon1zeng6 di1 caang2 zap1 zik1  
 HON how can wash clean CLF orange juice stain  
 'May I be enlightened as to how to wash the orange juice stain clean?' [SEA068].

Example (55a) is straightforward: We wash our face, and our face becomes clean, hence 面 *min6* 'face' is simultaneously the patient of 洗 *sai2* 'wash' and sole argument of 乾淨 *gon1zeng6* 'clean'. However, in (b), an 'orange juice stain' does not become clean after washing—it simply disappears! The theme of 'clean' is still whatever surface was washed—which is not mentioned at all. This mismatch poses another difficulty for the decompositional approach, where both verbs are expected to share at least one argument, as reflected in Figure 6a. Similarly, our approach provides an uncomplicated resolution to the decompositional approach's conundrums without compromising the semantic integrity of the construction, as shown in Figure 6b.



**Figure 6.** (a) In the decompositional approach, 洗 *sai2* 'wash' takes 漬 *zik1* '(orange juice) stain' as the patient, while 乾淨 *gon1zeng6* 'clean' does *not* take 'stain' as the theme, leading to an argument mismatch/missing argument. (b) The argument issue is once again straightforwardly resolved with the holistic approach, where 'stain' is treated as an ArgA.

In (56), the stamps are not what become 'full'; the stamp card is:

- (56) 儲 滿 3 個 印花  
 cou5 mun5 saam1 go3 jan3faa1  
 collect full three CLF stamp  
 'Once you've collected three stamps ...' [SEA158].

Perhaps the most convincing evidence is when two constructions differ minimally semantically, but the decompositional analysis works in one case but not the other. Any attempt to 'save' the composite approach by excluding problematic constructions from the resultative would have to argue, inelegantly, that the two sentences are different constructions. Consider (57):

- (57) a. 擰 實 個 蓋  
ning2 sat6 go3 goi3  
screw tight CLF lid  
'screw the lid tight' [SEA069].
- b. 即係 唔 洗 綁 實 個 人  
zek1hai6 m4 sai2 bong2 sat6 go3 jan4  
that is NEG need tie tight CLF person  
'that is, you don't need to tie the person tight' [SEA070].
- c. 唔該 睇 實 個 細路 啦!  
m4goi1 tai2 sat6 go3 sai3lou6 laa1  
please watch tight CLF kid SFP  
'Please watch the kid tight!' [SEA071].

Example (57a) can be straightforwardly analysed in decompositional terms: the lid is the patient of 擰 *ning2* 'screw' and sole argument of 實 *sat6* 'tight'. However, this analysis would be strange for (57b), since people cannot be tight (only tied tightly), and impossible for (57c), where being watched does not render the child 'tighter'. However, the three are semantically very similar; all involve constraints on ArgA's movement.

Similarly, in the example below, *his bad stuff* can be an argument of 爆 *baau3* 'expose', but *him* cannot:

- (58) a. 一於 就 督 爆 佢 啲 衰 野  
jat1jyu1 zau6 duk1 baau3 keoi5 di1 sei1 je5  
let me then rat out expose 3sg CLF bad thing  
同 佢 離 婚  
tung4 keoi5 lei4 fan1  
with him leave marriage  
'Then let me expose his bad stuff and divorce him.' [SEA140].
- b. 不過 我 自己 都 唔 會 督 爆 佢  
bat1gwo3 ngo5 zi6gei1 dou1 m4 wui5 duk1 baau3 keoi5  
but 1sg REFL also NEG will rat out expose 3sg  
'But I won't rat him out myself either.' [SEA141].

A more metaphorical version is as follows:

- (59) a. 一早 睇 穿 你 啲 手法 啦 老屈 成 性  
jat1zou2 tai2 cyun1 nei5 di1 sau2faat3 laa1 lou5wat1 sing4 sing3  
long ago see pierce you CLF method SFP slander become nature  
'I have seen through your methods long ago, you chronic slanderer.' [SEA142].
- b. 瀟 姐 一早 睇 穿 你 啲 衰 嘢  
siu1 ze1 jat1zou2 tai2 cyun1 nei5 di1 sei1 je5  
Siu Sister long ago see pierce you CLF bad thing  
'Sister Siu has seen through you and found out about your bad stuff long ago.' [SEA143]

One can see *through* the methods in (59a), but not the 'bad things' in (59b); they are what one sees *after* seeing through someone's façade!

#### 4.2. Interim Conclusion of the Holistic Approach

Our holistic approach offers an uncomplicated and elegant way to account for CRC while preserving the semantic structures of the construction. Of course, numerous CRCs remain amenable to the decompositional analysis, since: (1) the transitivity of the verbs is unambiguous; (2) the semantic structure of the verbs is complete and the same, whether analysed independently or integrated as a CRC; and (3) the argument structure of the individual verbs are compatible and remain the same when pieced together. However, under our holistic approach, *all* the aforementioned constructions that do not adhere to these properties can be straightforwardly described with the CRC schema. Arguments for our holistic approach thus far can be summarised as follows:

1. The CRCs covered in Section 4.1 all have an ArgA construable as *affectee*, even if they are ‘arguments’ of neither verb. Quite often, affectee status can be further supported by constructions such as the disposal construction with 將 *zoeng1*:<sup>24</sup>

(60) a.	用	洗潔精	就	可以	將	啲	污跡	洗	乾淨		
	jung6	sai2git3zing1	zau6	ho2ji5	zoeng1	di1	wu1zik1	sai2	gon1zeng6		
	use	washing liquid	then	can	DISP	CLF	stain	wash	clean		
		‘You can wash the stains clean just with dishwashing liquid.’ (cf. 48b). [SEA130].									
b.	我	將	佢地	集	齊	響	屋企	再	影	相	啦。
	ngo5	zoeng1	keoi5dei6	zaap6	cai4	hoeng2	uk1kei2	zoi3	jing2	soeng2	laa1.
	1sg	DISP	3pl	collect	complete	be at	home	again	take	picture	SFP
		‘I’ll collect them all at home and take a picture again.’ [SEA131].									

2. In all of the examples, V2 is construed as relevant to V1’s result, sometimes resulting in a verb meaning distinct from the meaning in monoverbal clauses, e.g., 齊 *cai4* ‘complete’ described above.

By removing the requirement that resultatives be decomposable into individual clauses, our approach also allows particles with no independent existence in monoverbal sentences, such as the quantifying 晒 *saai3* or adversative 親 *can1*, to be included in the CRC; the lack of a corresponding monoverbal construction is no reason to exclude them.

Nevertheless, some valid generalisations about CRC phenomena have been made in the literature before, couched in decompositional terms. The next two sections will explain how we account for them. Section 4.3 will explain *semantic orientation*, mentioned without explanation in Section 3.2, and Section 4.4 will give a valency typology under our approach.

#### 4.3. Semantic Orientation: An Alternative to Argument Linking

In most contemporary Western approaches to typical Chinese resultatives assuming a decompositional or hybrid holistic-decompositional approach, verbs possess an inherent set of grammatical or thematic roles, and descriptions of resultatives focus on how these roles are mapped onto the construction-level grammatical and/or thematic relations, i.e., *argument linking* or *argument realisation*. This applies to generativists/formalists (e.g., Cheng and Huang 1994; Cheng et al. 1997; Her 2004; C. Li 2007, 2013; Lau and Lee 2015, 2021), constructionists/functionalist (e.g., Matthews 2006; Huang 2007; Fong 2018; Liu 2020), and mixed approaches (Chow 2011, 2012; Lee and Ackerman 2011).

A sceptic may claim that, by dispensing of single verb-level argument structures, our account fails to exclude logically possible examples such as (61):

(61)	~* 我	撞	爛-咗	啲	水
	ngo5	zong6	laan6-zo2	di1	seoi2
	1sg	bump into	break-PFV	CLF	water
		‘Intended: I bumped into and broke the teapot) and the water (spilled).’			
		[Unattested regardless of ArgC, classifier presence, and aspect marker presence]			

Although the water is affected by teapot breaking, it is not permissible in this construction. In the traditional argument linking approach, this example would be excluded because ‘water’ cannot be an argument of ‘break’. While we will not be adopting argument linking in our approach, we still need a mechanism to express the relationship between individual verbs (e.g., break) and arguments (e.g., water), and in particular, why certain combinations such as (61) are not permissible. To resolve this query, we suggest that *semantic orientation analysis*, an alternative approach developed in China, is a better fit since it can account for facts about the semantic relationship between different elements of the CRC without requiring the CRC to be decomposed into component argument structures.

Similar to argument linking, semantic orientation grew out of Fillmore’s Case Grammar (Ai 2022). It describes semantic relationships between elements of a sentence that are not necessarily directly syntactically dependent. For example, in the English sentence, “They have all gone”, “all” is semantically oriented towards “they”, despite syntactically modifying “gone”.

An element is typically said to be semantically oriented to another element if it explains or illuminates it in some way. We define semantic orientation more explicitly as follows: if a verb is *semantically oriented* towards an argument or another verb, then the situation evoked by the verb must logically involve the role played by said argument or other verb. Taking (55b) as an example, V2 describes something becoming clean. This implies there must have been some dirtiness before that is now gone—in this case, the orange juice stains—even though the stains are not normally an argument of ‘clean’.

Semantic orientation analysis has been extensively applied to Mandarin CRCs (e.g., Kāng 2008; Zhāng 2008; Liú 2022), but we depart from these accounts somewhat. Since these accounts assume V1 as the head, arguments of the CRC are assumed arguments of V1, and semantic orientation analysis applies only towards V2. Descriptions of V2’s semantic orientation are thus couched in terms of which arguments (or non-arguments) of V1 they orient towards. By contrast, our approach does not assume V1 as the head. Thus, we extend semantic orientation analysis to V1 too. We make three generalisations:

1. V1s must be semantically oriented towards ArgCs;
2. V2s must be semantically oriented towards ArgAs when ArgA is present; otherwise, they must be semantically oriented towards V1;
3. Where an ArgN is present, outside of directional constructions and certain non-referential ArgNs, all verbs must be semantically oriented towards the ArgN.

The following sections explain how these generalisations apply in different situations, including to account for patterns previously described compositionally.

#### 4.3.1. Generalisation 1: On V1 Orienting to ArgC

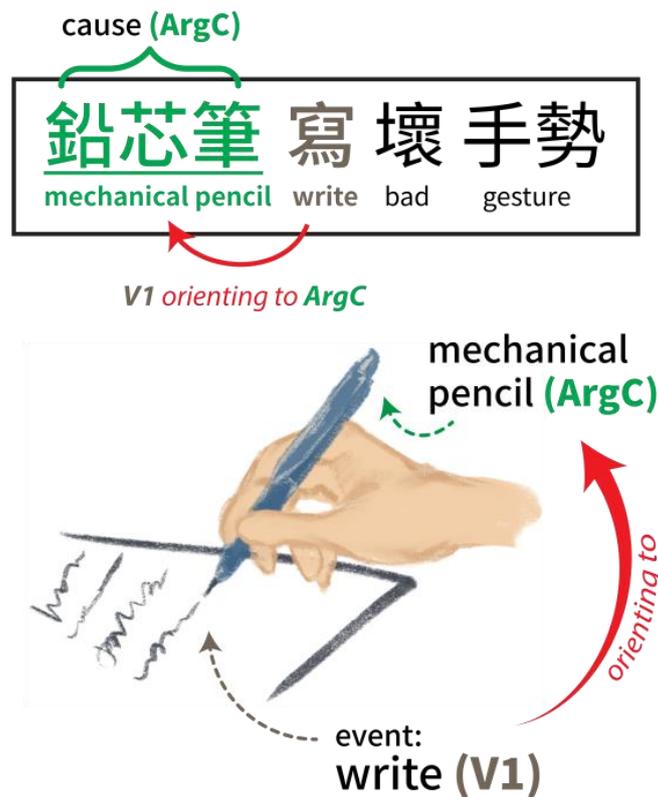
The requirement for V1 to be semantically oriented towards ArgCs explains Cheng and Huang’s (1994) observation for Mandarin, which is also valid for Cantonese, that non-‘inverted’ two-argument resultatives cannot be interpreted as having indirect causers as ArgCs. For example, in the following example, the zero ArgC cannot be interpreted as causing someone else to cry on the tissue:

(62)	喊	濕-咗	幾多	包	紙巾?
	haam3	sap1-zo2	gei2do1	baau1	zi2gan1
	cry	wet-PFV	how many	packet	tissue
	‘How many packets of tissue did (he) wet by crying? /				
	*How many packets of tissue did he cause to be wet be crying?’ [SEA112].				

The use of semantic orientation instead of clausal decomposition easily explains cases such as the following, where the ArgC ‘mechanical pencil’ is not usually an argument of V1 ‘write’ in monoverbal contexts:

(63)	鉛芯筆	寫	壞	手勢。
	jyun4sam1bat1	se2	wai6	sau2sai3
	mechanical pencil	write	bad	gesture
	‘Writing with mechanical pencils makes your writing gestures bad.’ [SEA153].			

Since writing necessarily involves a writing implement, ‘write’ semantically orients to ‘mechanical pencil’. This is advantageous over traditional inversion-based accounts, where ‘gesture’ and ‘mechanical pencil’ cannot normally be the two arguments of ‘write’ (see Figure 7).



**Figure 7.** Writing necessarily involves an instrument, the role played by the mechanical pencil. Thus ‘write’ can orient to the mechanical pencil, and the mechanical pencil can be the ArgC under our account.

4.3.2. Generalisation 2: On V2 Orienting to ArgA (and V1)

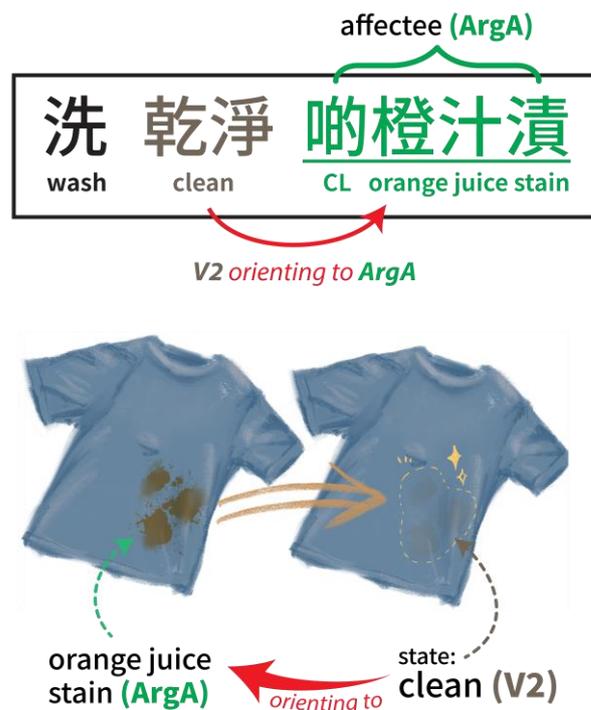
As mentioned above, V2s of CRCs still orient towards the ArgAs, even when those ArgAs are not arguments of the V2 in monoverbal contexts. Consider (64) again:

- (64) 請教 點樣 可以 洗 乾淨 啲 橙 汁 漬  
 cing2gaau3 dim2joeng2 ho2ji5 sai2 gon1zeng6 di1 caang2 zap1 zik1  
 HON how can wash clean CLF orange juice stain  
 ‘May I be enlightened as to how to wash the orange juice stains clean?’ [SEA068].

V2 describes something becoming clean. This implies there must have been some dirtiness before that is now gone—in this case, the orange juice stains—even though the stains are not normally an argument of ‘clean’ (see Figure 8).

By abandoning grammatical relations, our account is much simpler than previous semantic orientation accounts of Mandarin (e.g., Kāng 2008; Zhāng 2008; Liú 2022), which typically describe three to six types of orientation. ‘Subjects’ and ‘objects’ that V2 orient to are both ArgAs in our account, though such ‘subjects’ are also simultaneously ArgCs while ‘objects’ are not. Non-‘subject’, non-‘object’ arguments are also ArgAs:

- (65) a. 朱 智賢 出 街 跑 步 仆 損 手 腳  
 zyu1 zi3jin4 ceot1 gaai1 paau2 bou6 puk1 syun2 sau2 goek3  
 Chu Chi yin go out street run step fall injure arm leg  
 ‘Ashley Chu went out to the streets to run and fell and injured her limbs.’ [SEA132].  
 [Part of subject].
- b. 大家 行 爛-咗 幾 多 對 鞋  
 daai6gaa1 haang4 laan6-zo2 gei2 do1 deoi3 haai4  
 everyone walk break-PFV how many pair show  
 ‘How many pairs of shoes has everyone ripped by walking?’ [SEA129] [Quasi-instrument].
- c. 喺 店 內 既 牆身 寫 滿-咗  
 hai2 dim3 noi6 ge3 coeng4san1 se2 mun5-zo2  
 be at shop inside ASSOC wall surface write full-PFV  
 一 堆 奇怪 既 日文  
 jat1 deoi1 kei4gwaai3 ge3 jat6man2  
 one CLF strange ASSOC Japanese  
 ‘The wall surface in the shop was filled with a pile of strange Japanese writing.’ [SEA133] [Location].



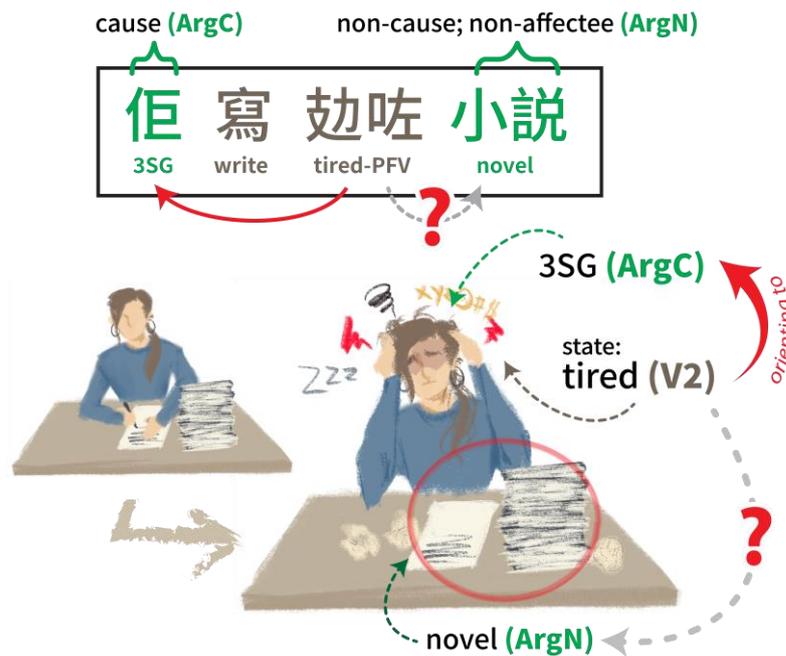
**Figure 8.** Cleaning necessarily involves some source of dirtiness that previously existed, which in this case is the stain. Thus, the verb can semantically orient to the stain.

Zhāng or Liú would classify ‘limbs’, ‘how many pairs of shoes’ and ‘the wall surface in the shop’ as non-subject, non-object arguments that V2 orient to; for us, they are all ArgAs.

Phase, quantifying and comparative V2s are oriented towards both V1 and ArgA. For example, in (28), successfully falling asleep implies that a person (ArgA) has gone (V1) to sleep, and the different examples of 嘢 *saai3* ‘all’ all involve some situation (V1) applying to all of something or group of things (ArgA). Manner V2s are always oriented towards V1, and also towards ArgA when it is present (see example (66) and Figure 9):

- (66) 好好地 跳 靚 隻 舞 咪 算 囉  
 hou2.dei6.dei6 tiu3 leng3 zek3 mou5 mai6 syun3 lo1  
 well jump pretty CLF dance then count SFP  
 ‘If only he would just (stay in their lane and) dance nicely!’ [SEA134].





**Figure 10.** A novel does not clearly play any role necessitated by a state of tiredness. Thus, ‘tired’ cannot semantically orient to ‘novel’, explaining why (67) is odd in our account.

In some cases, V2 only tenuously invokes ArgN. For example, 飽 *baau2* ‘full’ may invoke ‘food’, but one might also feel full for other reasons without food (e.g., illness). If ArgN does appear in these cases, it involves generic, non-referential ArgNs. In the following, (a) is attested, but (b) is unattested because 啲飯 *di1 faan6* ‘rice’ is referential.<sup>25</sup>

- (68) a. 食 飽-咗 飯, 我 今日 cosplay , 勝 新太郎!  
 sik6 baau2-zo2 faan6 ngo5 gam1jat6 kos1plei1 sing3 san1taai3long4  
 eat full-PFV rice 1sg today cosplay Katsu Shintarou  
 ‘Having eaten, I will now cosplay as Katsu Shintarou!’ [SEA102].
- b. ~\*食 飽-咗 啲 飯  
 sik6 baau2-zo2 di1 faan6  
 eat full-PFV CLF rice  
 ‘I ate some rice and got full’ [unattested].

These cases may suggest that semantic orientation is gradient, and weaker orientations, such as *full-rice*, place more restrictions on the information status of the ArgN. Note that *eat-full-rice* (and *drink-drunk-alcohol*) are well-known sources of exceptions in other varieties of Chinese such as Mandarin (Cheng and Huang 1994; Shi 2002) and Southern Min (Lin 2015).

#### 4.3.4. Marrying Semantic Orientation to the Decompositional Approach?

A sceptic may argue that the decompositional approach can simply be *modified* by introducing argument structures where the relation is one of semantic orientation, rather than the usual argument-structural relationship. This allows us to retain the decompositional approach while accounting for most, perhaps all, of the examples in Section 4.1. However, we believe this account is far less elegant and plausible.

Firstly, the main advantage of the traditional decompositional account is that individual CRCs are built up by existing argument structures that are used elsewhere in the grammar (i.e., in monoverbal clauses), reducing the inventory of signs needed in the language. Yet in the modified decompositional account, the semantic orientation-based argument structures for individual verbs would be akin to cranberry morphemes, since they do not appear alone, but must be in a CRC, just as the morpheme *cran-* is restricted to the context *\_\_berry* in English. However, this is much less justified in the CRC context than for *cran-*.

Firstly, examples such as (63) would have to be composed by putting two cranberries together (since 壞 *wai6* is usually not used predicatively with 手勢 *sau2sai3* ‘gesture’). More generally, while there is no clearly plausible alternative for *cran-*, the holistic approach can describe CRCs without resorting to syntactic cranberries, making it a more elegant option.

Secondly, many of the component argument structures would be semantically weird in such a modified decompositional account, making it less plausible. For example, one of the component argument structures of (50) would consist of the verb ‘put’, plus a person and their legs. Such an argument structure is not clearly meaningful, since ‘put’ inherently requires a position. For these reasons, we believe the holistic account is preferable to this modified decompositional account.

#### 4.4. Valency Patterns

Previous decompositional accounts, especially [Lau and Lee \(2021\)](#), established typologies of resultatives according to the argument structures of the individual verbs and entire construction. Our holistic approach can also produce an argument structure typology. It collapses some of L&L’s categories by doing away with individual argument structures, while successfully covering rarer argument structure types missed by other approaches.

Table 2 shows the possible argument structures of CRCs: six common types and two rare types. For cross-reference, these are compared to L&L’s typology.

**Table 2.** Our valency typology of Cantonese CRCs, compared to L&L’s. ✓ indicates that an argument is present. \* indicates situations where ArgC and ArgA are the same argument.

Type	ArgC	ArgA	ArgN	L&L Type
I		✓		Type 1 Pseudo-passive of Type 3 [Pseudo-passive of Type 6]
II		✓*		Type 1
III	✓	✓		Type 2 Type 3 [Type 6] <sup>26</sup>
IV		✓	✓	Type 4 Pseudo-passive of Type 5
V		✓*	✓	Type 4
VI	✓	✓	✓	Type 5
VII				/
VIII	✓			/

We now describe each of the types in detail.

##### 4.4.1. Types I (ArgA Only) and IV (ArgA + ArgN)

This includes all cases where the sole argument is an affected party that is *not* the cause. This includes constructions typically described as shared-subject constructions with two intransitives (a), as well as ‘pseudo-passives’ with no ArgN (b):

- (69) a. 小編                    開心                    死                    喇!!!  
 siu2pin1                    hoi1sam1   sei2                    laa3  
 editor.HUM                    happy                    die                    SFP  
 ‘I (the editor) am so happy I could die!!!’ [SEA082]
- b. Hall                    啲                    野食                    食                    晒                    未                    啊?  
 ho1                    di1                    je5sik6                    sik6                    saai3                    mei6                    aa3  
 hall                    DEM                    food                    eat                    all                    NEG.PERF                    SFP  
 ‘Has all the food in the hall been eaten yet?’ [SEA081].

The constructions in (69) have preverbal ArgAs. Unlike traditional pseudo-passive analyses, however, our Type I also accounts for cases with postverbal ArgA, which are missed in analyses such as L&L’s:

- (70) a. 開心 死 我 喇 ...  
 hoi1sam1 sei2 ngo5 laa3  
 happy die me SFP  
 ‘I am so happy I could die ...’ [SEA083].
- b. 落 雨 濕 濕 個 袋  
 lok6 jyu5 dap6 sap1 go3 doi2  
 fall rain hit wet CLF bag  
 都 唔 好 濕 濕 自己  
 dou1 m4 hou2 dap6 sap1 zi6gei1  
 even if NEG good hit wet self’  
 ‘When raining, better your bag gets (hit) wet than you get (hit) wet.’ [SEA078].<sup>27</sup>
- c. 唔該 Ethan 爸爸 揸 機,  
 m4goi1 Ethan baa4baa1 zaa1 gei1  
 ask Ethan dad hold camera  
 呢 幅 相 見 唔 到 佢 喇  
 ni1 fuk1 soeng2 gin3 m4 dou2 keoi5 laa3  
 DEM CLF photo see NEG DOU 3sg SFP  
 ‘I asked Ethan’s dad to hold the camera, so (one) cannot see him in this photo.’ [SEA157].

Example (24) was another example of Type I where ArgA is in a postverbal position; note that in the example, V1 is the volitional verb 食 sik6 ‘eat’, but because the listener is not construed as the intentional causer of the V2 死 sei2 ‘die’, they are simply ArgA, not ArgC.

Type IV is similar, but with an additional ArgN:

- (71) 條 數 喇 錢 入-咗 落 別人 個 袋 裏面  
 tiu4 sou3 di1 cin2 jap6-zo2 lok6 bit6jan4 go3 doi2 lei5min6  
 CLF sum DEM money enter-PFV go down other CLF bag inside  
 ‘The money involved went down someone else’s pocket.’ [SEA085].

Some CRCs involve a preverbal argument that is the possessor of the postverbal argument. The preverbal argument is clearly not a cause. It may be analysed two ways: it can be construed as a hanging topic, in which case the postverbal argument is ArgA and the construction is Type I, or it may be construed as an ArgA, in which case the postverbal argument is ArgN and the construction is Type IV. Consider the following example:

- (72) 屋企人 係 好 想 佢 醫 好 個 病  
 uk1kei2jan4 hai6 hou2 soeng2 keoi5 ji1 hou2 go3 beng6  
 family member COP very want 3sg cure good CLF illness  
 ‘His family members want him to get well from the illness.’ [SEA079].

#### 4.4.2. Types II (ArgC=ArgA Only) and V (ArgC=ArgA + ArgN)

This includes all CRCs where ArgC=ArgA, both without ArgNs (60a, Type II) and with them (60b, Type V):

- (73) a. 我 食 飽 喇, 你哋 慢慢 食。  
 ngo5 sik6 baau2 laa3 nei5dei6 maan6maan1 sik6  
 1sg eat full SFP 2pl slowly eat  
 ‘I’m full; you guys take your time to eat!’ [SEA089].
- b. 我 學 識-咗 好 多 嘢  
 ngo5 hok6 sik1-zo2 hou2 do1 je5  
 1sg learn know-PFV very many thing  
 ‘I have learnt very many things.’ [SEA088].

Yiu’s (2013) self-agentive directional complements may also fall into either Type II (a) or V (b):

- (74) a. 開 船 後, 我 行-咗 出 去 影 相。  
 hoi1 syun4 hau6 ngo5 haang4-zo2 ceot1 heoi3 jing2 soeng2  
 open ship after 1sg walk-PFV go out go take picture  
 ‘After the ship took off, I walked out to take pictures.’ [SEA090].
- b. 然後 我 行-咗 入 去 中央 公園  
 jin4hau6 ngo5 haang4-zo2 jap6 heoi3 zung1joeng1 gung1jyun2  
 and then 1sg walk-PFV enter go Central Park  
 ‘And then I walked into Central Park.’ [SEA091].

Other particle constructions can also fall into this category; (75) exemplifies a resultative particle construction:

- (75) 想 逃走 都 逃走 唔 到  
 soeng2 tou4zau2 dou1 tou4zau2 m4 dou2  
 want escape also escape NEG DOU  
 ‘Even if I wanted to escape, I could not.’ [SEA096].

#### 4.4.3. Types III (ArgC + ArgA) and VI (ArgC + ArgA + ArgN)

This includes all sentences where the cause and affectee are different arguments. For example, this includes Lau and Lee’s (2015) cross-referential accusatives (a) and causatives (b), and Yiu’s (2013) agentive directional complements (c):

- (76) a. 幻覺 嚟 嘅 啫, 嚇 我 唔 到 嘅!  
 waan6gok3 lai4 ge3 ze1 haak3 ngo5 m4 dou2 ge3  
 illusion come SFP SFP scare 1sg NEG DOU SFP  
 ‘It’s just an illusion—it can’t scare me!’ [SEA094].
- b. 睇 M club, 陸 永 笑 死 我!  
 tai2 em1 kab1 luk6 wing5 siu3 sei2 ngo5  
 watch M Club Luk Wing laugh die me  
 ‘Watching the M Club, Billy Luk made me laugh to death!’ [SEA096].
- c. 放-咗 個 袋 入 locker 度  
 fong3-zo2 go3 doi2 jap6 lok1kaa2 dou6  
 put-PFV CLF bag enter locker place  
 ‘I put the bag in the locker.’ [SEA116].

Many cases that do not fit into the clause concatenation paradigm because ArgA cannot be construed as an argument of V2, such as (54, 55b, 57bc), also belong here, as do resultative particle constructions with affected Ps and comparative constructions:

- (77) 頭先 又 搵 唔 到 門匙。  
 tau4sin1 jau6 wan2 m4 dou2 mun4si4  
 just now also find NEG DOU door key  
 ‘I could not find my door key just now either.’ [SEA097].

Even in these types, the causer *referent* can be an affectee; ArgC (causer) and ArgA (affectee) can be **separate, coreferential forms**, e.g. ArgA being reflexive (a), or a possessee of ArgC (in which case ArgC is also affected by the situation) (b):

- (78) a. 最近 太 過於 博, 死 博 爛 博,  
 zeoi3gan6 taai3 gwo3jyu1 bok3 sei2 bok3 laan6 bok3  
 recently too excessively work hard die work hard broken work hard  
 最後 病 親 自己  
 zeoi3hau6 beng6 can1 zi6gei1  
 finally sick ADV self  
 ‘Recently, I have been working too hard, working far too hard, finally making myself sick.’ [SEA084].
- b. 唔係 真係 要 食 飽 個 肚  
 m4hai6 zan1hai6 jiu3 sik6 baau2 go3 tou5  
 NEG.COP really want eat full CLF stomach  
 ‘I do not really want to eat my stomach full.’ [SEA093].

#### 4.4.4. Types VII (No Arguments) and VIII (ArgC Only)

Type VII refers to constructions with no arguments at all, largely ignored in the literature:

(79)	光	返	喇
	gwong1	faan1	laa3
	bright	return	SFP

‘it’s bright again’ [SEA029].

Type VIII also lacks ArgA and ArgN, but does have an ArgC, which is an implicit first-person:

(80)	感覺	點	用	力	都	跑	唔	快
	gam2gok3	dim2	jung6	lik6	dou1	paau2	m4	faai3
	feel	how	use	force	still	run	NEG	fast

‘I feel that no matter how much energy I use, I still can’t run quickly.’ [SEA128].

#### 4.5. Interim Conclusion

In Section 4, we have shown that Western descriptions of CRC argument structure as the composition of the argument structures of individual verbs are often untrue for the Cantonese CRC, motivating our holistic approach where only the entire construction, not individual verbs, has arguments. The relationship between individual verbs and arguments is instead in terms of semantic orientation, which successfully accounts for phenomena previously described in decompositional terms. Our approach also results in a typology of CRC valences encompassing structures not captured by previous typologies.

### 5. Typological Implications

Although our discussion so far focuses on Cantonese, we believe similar ideas can apply to other Chinese varieties. Section 5.1 extends our framework to Cantonese–Mandarin comparison and Section 5.2 describes how it might be useful for comparing with other Chinese varieties. Section 5.3 examines the methodological implications of our two main points for worldwide typology, and Section 5.4 examines theoretical implications for diachronic typology and grammaticalisation.

#### 5.1. Cantonese–Mandarin Comparison

Recall that for L&L, in CRCs with two arguments, an argument that is the *target of activity* role but not the *locus of affect* can only be the postverbal argument (traditional ‘object’) when V2 is transitive:

(81)	* 佢	寫	劫-咗	小說
	keoi5	se2	gui6-zo2	siu2 syut3
	3sg	write	tired-PFV	novel

‘He got tired from writing novels.’ (=L&L’s (19b)).

For us, (81) is explained by ‘tired’ not orienting semantically to ‘novel’.

L&L contrast their generalisation on Cantonese with Mandarin, where one can have an identical initiator and affectee, a separate target of action argument, and intransitive V2 simultaneously:

(82)	我	寫	累-了	小說
	Wǒ	xiě	lèi-le	xiǎoshuō
	1sg	write	tired-PFV	novel

‘I got tired writing the book.’ (Mandarin, =L&L’s (19a)).

For Mandarin, we modify our semantic orientation restriction. Only V2 needs to be semantically oriented towards ArgN; V1 does not.

L&L mention two other differences with Mandarin; however, we believe those are mistaken. They write that, unlike Mandarin, Cantonese does not allow (a) ‘inverted’ resultatives and (b) structures where both Vs are intransitive and the initiator and affectee are distinct (also noted by [Chow 2012](#)). The first generalisation is inconsistent with well-

documented examples in the literature (Matthews and Yip 2011; Chow 2012) and this paper (e.g., Section 3.3.1). The second claim is invalidated by examples such as these:

- (83) 你            無視            我            喊            紅-咗            雙            眼  
 nei5            mou4si6      ngo5            haam3            hung4-zo2      soeng1            ngaan5  
 2sg            neglect        1sg            cry            red-PFV            pair            eye  
 ‘You neglected my crying my eyes red.’ [SEA042].

However, this leaves open the question of why the Cantonese examples that L&L contrasted with acceptable Mandarin equivalents in support of (b) are unacceptable. We believe Lau and Lee’s earlier (2015) account, based on semantics rather than argument structure and applying it to all argument structure types, was more appropriate. L&L use Washio’s (1997) distinction between ‘strong’ and ‘weak’ resultatives to explain the unacceptability of these constructions in Cantonese (whose cognate-for-cognate equivalents are possible in Mandarin):

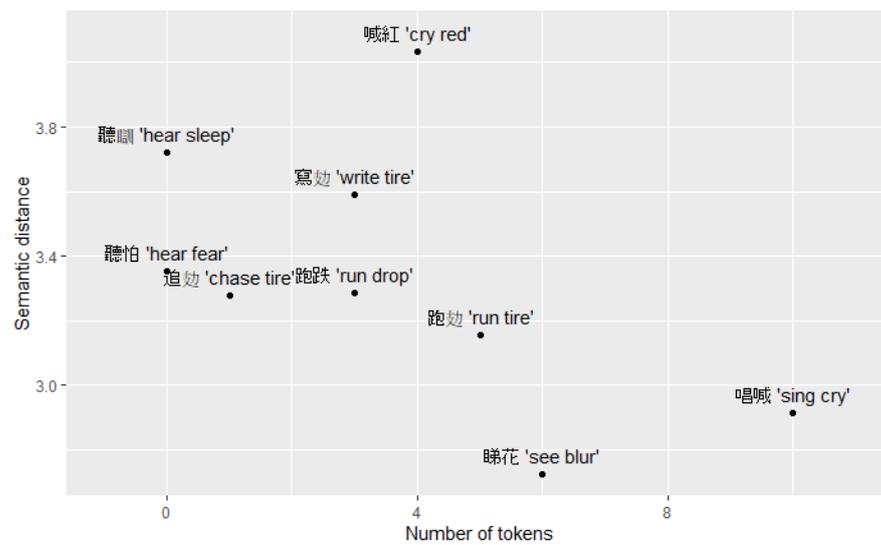
- (84) a. \* 我            跑            跌-咗            張            車飛  
 ngo5            paau2            dit3-zo2            zoeng1            ce1fei1  
 1sg            run            fall-ASP            CLF            ticket  
 ‘I ran, dropping my ticket.’ (=L&L’s (2)).  
 b. \* 佢            對            眼            喊            紅-咗  
 keoi5            deoi3            ngaan5            haam3            hung4-zo2  
 3sg            pair            eye            cry            red-PFV  
 ‘He cried his eyes red.’ (=L&L’s (15c)).

They claim that Mandarin has both ‘strong’ resultatives, where the meaning of V1 and V2 are completely independent, and ‘weak’ resultatives, where the V2 is the purpose or conventional result of V1. Cantonese lacks the latter, explaining (84). Yet most ‘strong’ V1–V2 combinations that L&L deem impossible are attested on the Internet. We searched for examples of all nine strong resultatives L&L deemed impossible in Cantonese, adding the perfective marker -zo2 to ensure examples are in Cantonese, and found examples of seven of these. One example was (83), as are the following:

- (85) a. 我            反而            係            覺得            個            男            嘅            追            乸-咗  
 ngo5            faan2ji4            hai6            gok3dak1            go3            naam4            ge3            zeoi1            gui6-zo2  
 1sg            on the contrary      COP            feel            CLF            male            ASSOC            chase            tired-PFV  
 ‘I, on the contrary, feel that the male got tired of chasing women.’ [SEA040].  
 b. 真係            驚            隻            碟            俾            我            睇            花-咗  
 zan1hai6            geng1            zek3            dip2            bei2            ngo5            tai2            faa1-zo2  
 really            fear            CLF            disc            AGT            1sg            watch            scratched-PFV  
 ‘I really fear I’m watching so much that the disc gets scratched.’ [SEA041].

Rather than dichotomising between strong and weak resultatives, we believe these combinatorial restrictions are gradient collocational patterns, not structural ungrammaticality. Since semantics and usage frequencies affect collocational strength, when V2 is not the purpose or conventional result of V1, verbs are more likely to be collocated. The acceptability of Mandarin CRCs, then, is simply *less* sensitive to such effects than Cantonese, i.e., unusual V1–V2 fit less easily into Cantonese CRCs than Mandarin ones.

As a preliminary investigation of this hypothesis, for each of L&L’s ‘strong’ resultatives, we obtained, as a proxy for semantics, FastText word vectors (Grave et al. 2018) for the translational equivalents of the two verbs in Mandarin, then calculated their Euclidean distance. Figure 11 relates the number of tokens on Google search with semantic distance.<sup>28</sup> This very small sample shows suggestive though inconclusive evidence that frequency is negatively correlated with semantic distance (Spearman’s rho = -0.622, p = 0.0738). We leave it to later work to investigate this issue with more rigorous measurements.



**Figure 11.** The *x*-axis is the number of tokens found for each of the V1–V2 combinations that L&L claimed as impossible. The *y*-axis is the semantic distance, as calculated by FastText word vectors using Mandarin translational equivalents as a proxy for meaning. A potential negative correlation is visible from the graph.

5.2. Potential Contributions to Dialectological Comparison

As mentioned in Section 2, most Sinitic dialectologists implicitly follow a holistic argument structure approach, albeit slightly different from ours, and many have some notion roughly corresponding to our CRC, especially when investigating potential forms. However, our ArgC–ArgA–ArgN reframing of the CRC template still diverges significantly from current typology practice retaining notions such as subject and object, and can potentially be fruitful in dialectological research.

For example, much comparative research in Sinitic typology examines the positions of the object relative to the verbs and potential form markers (Wú 2003, 2005; Lín 2006). The traditional ‘object’ corresponds to a postverbal ArgA or an ArgN in our framework. Most typological work cites examples with arguments corresponding to our ArgC and ArgA, with few ArgNs. Nevertheless, the few examples of ArgN cited in the literature may shed light on the difference between Cantonese and other varieties.

Even within the Yuè family, there is significant variation in word order. For example, Kwok (2010) discusses the Nánning variety, which is much more permissive of arguments between V1 and V2. It is not limited to the potential form and is frequent even with full NP objects. Strikingly, this applies to both ArgAs and ArgNs:

- (86) a. 食 飯 飽 去 啊!  
 sik6 faan6 beu2 hyu3 aa1  
 eat rice full go SFP  
 ‘Eat yourself full with rice, then go!’ (Nánning, =Kwok’s (8)).
- b. \*你 食 佢 唔 飽  
 nei5 sik6 keoi5 m4 baau2  
 2sg eat 3sg NEG full  
 Intended: ‘You couldn’t get full by eating it.’ (Cantonese).

As shown in (14), (86b) is not possible in Cantonese, even if *rice* were replaced by a pronoun and the whole construction became potential. The possibility of ArgN between V1 and V2 is thus another difference between Cantonese and Nánning.

Shèng and Zhū (2020, p. 313) cite a variety of examples with ArgNs in the Shàoxìng Wú. However, one difference with Cantonese is that even when ArgNs are present, ArgAs can be between V1 and V2 (a), which is largely unattested in Cantonese (b), as mentioned in Section 3.2:

- (87) a. 个 苹果 我 想 喫 伽 患  
 koh4 bin1ku2 ngo2 shian2 chieh4 noh4 waen3  
 CLF apple 1sg want eat you COMPL  
 ‘I want to eat up your apple.’ (Shàoxìng, =Shèng and Zhū’s (15)).
- b. \*我 食 你 唔 到 個 蘋果  
 ngo5 sik6 nei5 m4 dou2 go3 ping4guo2  
 1sg eat 2sg NEG achieve CLF apple  
 ‘I can’t eat your apple.’ [Unattested regardless of ArgC and ArgN].

Because most comparative dialectological work in Chinese is framed in subject-object terms and uses mainly ArgA objects in examples, the extent of diversity regarding non-cause, non-affectee elements is currently unclear. We hope that future work will shed more light on this diversity by investigating ArgN-type objects in addition to ArgA.

### 5.3. Methodological Implications on Worldwide Typology

#### 5.3.1. The Need for Explicitly Defining Constructional Levels

The existence of the schematically abstract causative–resultative construction poses serious challenges to worldwide typology. As mentioned above, typologists typically assume that each variety has a finite, enumerable set of serial verb constructions. In practice, constructions such as those listed in the headers of Section 3.3—resultative, comparative, causative, etc.—are assumed to be the relevant ‘constructions’ (e.g., Aikhenvald and Dixon 2006; Matthews 2006; Luke and Bodomo 2000). However, as construction grammarians have long argued (e.g., Diessel 2019; Croft 2007), ‘constructions’ are arranged into numerous levels of abstraction, from maximally concrete to highly abstract. How do we know that the level traditionally investigated is the ‘right’ one?

This has important consequences. For example, Matthews (2006), following Aikhenvald and Dixon (2006), states that the Cantonese causative SVC is asymmetric (with one of the verbs coming from a closed class) and the cause-effect SVC is symmetric (with both of the verbs coming from an open class). Yet, if we look at the CRC level, it is just symmetric. If we look at the directional vs. non-directional CRC level, then the directionals remain asymmetric, but the CRCs are still all symmetric. In the future, we hope typology can better specify the level of abstraction desired in analysis to ensure better comparability between languages investigated.

#### 5.3.2. Rethinking Argument-Sharing Typology

The problems with the decompositional approach pose serious problems to typology, especially in approaches that do not separate language description and comparison. For example, Aikhenvald and Dixon (2006) set up several types of SVCs, giving both semantic and syntactic (in terms of component argument structure) characterisations. Those relevant to CRCs are shown in Table 3.

**Table 3.** Aikhenvald and Dixon’s SVC categories relevant to Cantonese CRC.

Type	Shared Argument	Component Transitivity	Corresponds to Our Subconstruction
Cause-effect Causative	O of V1 = S/A of V2	V1-transitive, V2-intransitive or occasionally transitive	Typical resultatives Causatives
Event-argument	/	One V transitive/intransitive, Other V intransitive	Manner constructions
Resultative	/	Both intransitive	Typical resultatives

Even without the results of this paper, this schema is highly problematic. For example, our Type IV CRCs (ArgA + ArgN) such as (13ab) are semantically cause-effect, but ‘share’ both A and O, rather than the O of V1 being the A of V2. However, even if the table were expanded to include every combination of individual argument structures possible,



struction, they become members of a closed class, *creating* asymmetric SVCs. Thus, rather than asymmetric SVCs favouring grammaticalisation, it is grammaticalisation that leads to asymmetric SVCs. The asymmetric causative CRC, then, was formed with the (symmetric) CRC as the starting point and came into being as the causer verb became a semantically light constructional marker.<sup>29</sup>

As this grammaticalisation process progresses, some verbs take on meanings much more abstract and general than their lexical sources, which the literature has typically referred to as (resultative, phase, directional, etc.) ‘particles’. The tail end of this process can result in the construction dropping out of the CRC altogether. For example, consider the directional V2 返 *faan1* ‘result’, which has been grammaticalised into a stance marker (Chor 2013) and is no longer indicative of the result:

(89)	沖	返	個	靚	涼
	cung1	faan1	go3	leng3	loeng4
	flush	return	CLF	pretty	shower

‘Let me take a nice shower.’ (Chor 2013).

Expressions using this sense of *faan1* no longer have potential forms, and so are not CRCs.

#### 5.4.2. Semantic Orientation as Potential Initiator of the Grammaticalisation of Verbal Particles

Our holistic approach to argument structure also sheds light on the mechanisms involved in some grammaticalisation pathways whereby asymmetric SVCs are created. Since the V2 only has to be semantically oriented towards ArgA and does not need to have a predicate-argument relationship with it, the V2 can appear with more types of ArgAs, widening the range of contexts the V2 appears in and therefore favouring its grammaticalisation (cf. Himmelmann 2004) as a verbal particle relevant to the result of V1. This section will focus on Mandarin, where examples where ArgA is not an argument of V2 are also easily found, and historical texts are easily available.

Consider Mandarin 光 *guāng* ‘bare’ (J. Wáng 2010), which has been grammaticalised into a quantifying particle meaning all of ArgA was removed. Before grammaticalisation, we see uses where *guāng* as V2 clearly means ‘bare’:

(90)	誠	恐	他	吃	光-了	世界
	chéng	kǒng	tā	chī	guāng-le	shìjiè
	honest	fear	3sg	eat	bare-PFV	world

‘She sincerely feared that it would eat the world bare.’ [*Sānbào Tàijiàn Xīyángjì* 43].

Later, bridging constructions such as the following began to arise:

(91)	怎的	把	一	盤	肉	包子	通	吃	光-了
	zěnde	bǎ	yī	pán	ròu	bāozǐ	tōng	chī	guāng-le
	how	DISP	one	tray	meat	bun	all	eat	bare-PFV

‘How did he eat a whole tray of met buns bare?’ [*Sūn Páng Dòuzhì Yǎnyì* 20].

Here, if the classifier (i.e., tray) is seen as the head of ArgA, then it is an argument of *bare*. However, in our approach, CRCs allow V2s to only semantically orient towards ArgAs, and *meat* satisfies this condition. So, if *meat* is treated as the head of ArgA, it still fits into the construction.

This process eventually gave rise to constructions with only the latter interpretation, i.e., the present quantifying use, which is now most common, and can no longer be decomposed into two clauses with *guāng* meaning ‘bare’:

(92)	如果	蟲子	把	樹葉	都	吃	光-了
	rúguǒ	chóngzǐ	bǎ	shùyè	dōu	chī	guāng-le
	if	bugs	DISP	leaf	all	eat	all-PFV

‘If bugs eat up all the leaves ...’ [SEA149].

Mandarin constructions with V2s such as 破 *pò* ‘break’, 穿 *chuān* ‘pierce’, or 透 *tòu* ‘pass through’ followed a similar path. They are often used metaphorically when the ArgC

sees *through* some incorrect or deceptive thing, e.g., a façade or illusion. One frequent collocation is 看破 *kàn pò* ‘look break’, frequently used when the ArgC has seen through the empty and transient nature of worldly matters:

- (93) 把 興 亡 看 破  
 bǎ xīng wáng kàn pò  
 DISP prosperity vanquishment look break  
 ‘(I) saw through prosperity and vanquishment (i.e., am no longer bothered by them).’ [Jīnzhānzǐ, Sì Shí Huái Gǔ Qiū Cí from *Běn Táng Jí*].

Such worldly matters are generally the implied affectee even when there is no affectee made explicit. In these examples, the affectee is unproblematically an argument of ‘break,’ since they were demolished in the eyes of the ArgC. Quoting nun and Buddhistologist Fat Yan, ‘In Buddhism we always say *kàn pò*—what are we ‘breaking’? Our wrong concepts.’<sup>30</sup>

Again, as the construction developed, ArgAs began appearing that cannot be direct arguments of ‘break’ in monoverbal clauses. Sometimes, the affectee may be the *person* putting up a façade or act:

- (94) 我 已 三 五 日 前 看 破 他 了  
 wǒ yǐ sān wǔ rì qián kàn pò tā le  
 1sg already three five day before see break 3sg ASP  
 ‘I have already seen through him three to five days ago.’ [*Sānbǎo Tàijiàn Xīyángjì* 82]

Alternatively, the affectee may be the truth revealed *after* breaking through the illusion. Consider (95):

- (95) 如 曾 點 卻 被 他 超然 看 破 這 意思  
 rú zēng diǎn què bèi tā chāorán kàn pò zhè yìsi  
 like Zēng Diǎn but AGT 3sg transcendently see break this meaning  
 ‘Yet as for Zēng Diǎn, he transcendently realised this meaning.’ [*Zhūzǐ Yǔlèi* 40].

Here, the meaning is not what is ‘broken’—rather, what ‘broke’ was the reasons (discussed in the preceding context) that make the meaning *difficult* to understand. Z. Wáng (2016)’s example (40) resembles this, though he did not appear to notice that the ArgA was not actually broken.

Thus, by virtue of the fact that ArgAs do not have to be ‘arguments’ of V2 in monoverbal predicates, V2s such as *pò* seem to be grammaticalising into a resultative particle, indicating that the preceding verb results in dispelling an illusion, rather than necessarily ‘breaking’.

In the Dājīnggǎng variety of Southwestern Mandarin, 破 [p<sup>h</sup>o] has been further grammaticalised into a general completive marker, and this change may have involved similar processes. [p<sup>h</sup>o] is not restricted to situations that involve breaking, literally or metaphorically, but can be used in any situation where something disappears, diminishes or is destroyed, or even changes state (Chén and Zhōng 2021). An example where the affectee is destroyed is as follows:

- (96) 他 把 我 作业 烧 破 哒。  
 3sg DISP 1sg homework burn break ASP  
 ‘He burnt up my homework.’ (Chén and Zhōng 2021, p. 103).

A change-of-state example is as follows:

- (97) 我 要 去 把 衣服 洗 破。  
 1sg want go DISP clothes wash break  
 ‘I want to go wash up the clothes.’ (Chén and Zhōng 2021, p. 103).

The jump from examples such as (96) to change-of-state examples such as (97) may be motivated by the same principle. The clothes did not diminish or get damaged, but rather the stains on them disappeared. However, the clothes remain *affected* by the stain’s disappearance.

## 6. Conclusions

In this paper, we provide a new account of the Cantonese causative–resultative construction, a broadly defined notion covering a variety of constructions with a range of similarities across syntactic and semantic domains. Though our account is constructionist-inspired, we dispense with traditional notions common to most previous accounts, such as subject, object, pseudo-passives and inversion. Instead, we directly describe the order of ArgC (cause), ArgA (affectee) and ArgN (non-cause non-affectee) without recourse to these notions. Thus, our analysis falls in line with framework-free grammatical theory (Haspelmath 2009), assuming no a priori syntactic categories, in response to criticism (e.g., Stern 2019) that construction grammar still relies excessively on traditional categories.

We also show that the decompositional approach to resultative argument structure is empirically untenable, compared to our holistic account, where arguments belong only to the whole construction, and where the relationships between individual verbs and referents are expressed with semantic orientation instead of traditional predicate–argument terminology. This clearly shows that when two historically distinct clauses are combined, the resulting construction can become crystallised as a construction *per se* rather than derivative of the biclausal source, even when neither of the verbs is clearly grammaticalised; and that, *pace* Foley and Olson (1985), this process is *not* limited to constructions where the two verbs are contiguous: the verbs in Cantonese CRCs are separable by potential markers and ArgAs.

Finally, as a personal remark, although our paper, of course, benefited greatly from existing theoretical knowledge, we could not have arrived at our conclusions without starting our investigation by observing interesting phenomena in natural language use, which led us to document a host of phenomena that appear erratic in traditional approaches. We believe a bottom-up, observational approach can enrich traditional theoretical approaches and take us further.

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## Abbreviations

ADV	adversative particle
AGT	agent marker
ASSOC	associative marker
BEN	benefactive coverb
CAUS	causative verb

CLF	classifier
COMP	comparative particle
COMPL	completive
CONT	continuous
COP	copula
DISP	disposal marker
DME	demonstrative
DOU	achievement particle 到
EXST	existential verb
FOC	focus
HEI	phase particle 起 hei2
HO	form 何 ho4
IRR	irrealis
NEG	negation marker
NOI	form 奈 noi6
PERF	perfect
PFV	perfective
POT	potential marker
REFL	reflexive
SFP	sentence-final particle
sg	singular
ZOEK	particle 著 zoeK6

## Notes

- <sup>1</sup> As native speakers, we have sometimes found decontextualised examples in previous work strange-sounding.
- <sup>2</sup> Most of the data in this paper comes from Hong Kong Cantonese, which is overrepresented on the Internet; however, we also include examples from other regions, especially Mainland China.
- <sup>3</sup> [Slobin \(2004\)](#) is an exception in the Talmyan tradition that better resembles the serial verb tradition described in Section 2.4.
- <sup>4</sup> In the literature, thematic role-based accounts are called ‘morphological’ or ‘lexical’; grammatical relation-based accounts are ‘syntactic’.
- <sup>5</sup> This definition includes constructions with *only* potential forms and no non-potential forms. The definition is not new; it is often used as a test for the ‘complement’ in Chinese linguistics (e.g., [Chor 2018](#), p. 40; [Thompson 1973](#)).
- <sup>6</sup> This is unlike Mandarin, where the negative potential form may seem discardable.
- <sup>7</sup> In all examples in this paper, the portions of the causative–resultative construction, *excluding* all preverbal elements, will be in boldface, except where the entire sentence belongs to the causative–resultative or where the CRC is otherwise clear.
- <sup>8</sup> Some authors use ‘causer’/‘causee’. We prefer cause/affectee since ArgCs are frequently non-agentive.
- <sup>9</sup> These properties are applied to most CRCs, but some positions—in particular ArgAs between *m4* and *dak4*—are subject to a large number of lexical and semantic restrictions ([Yue-Hashimoto 2003](#); [Lai 2018](#)).
- <sup>10</sup> Traditionally, it is said that only pronouns may be between in non-directional CRCs (e.g., [Yue-Hashimoto 1993](#); [Kwok 2010](#)). However, occasional exceptions do exist; see [Lai \(2018\)](#).
- <sup>11</sup> The analysis in [C. Li \(2013, p. 106\)](#) also implicitly does away with pseudo-passivation; however, he still maps the ArgA to the subject position, whereas we reject the subject position altogether.
- <sup>12</sup> [Cheung \(1972, p. 133\)](#) is one structuralist account that makes a distinction like our ArgA-ArgN. He frames the distinction in constituent-structural terms. For Cheung, in the case of ArgA, the V1 and V2 (which he calls a complement) form one predicator constituent, of which ArgA is an ‘object’. In the case of ArgN, V2 and ArgN form a complement, which modifies the V1, which is the head. Cheung does not offer a clear explanation of this distinction. In our constructionist framework, constituency is viewed as an emergent phenomenon, and we can explain Cheung’s intuition about constituency in terms of contiguity and semantic dependence. [Langacker \(1997\)](#) notes that the intuition behind constituency can be captured as follows: a constituent is an expression that is (a) contiguous and (b) connected by ‘valence links’ (i.e., strong conceptual connections). Since ArgN is typically a participant of and adjacent to V2, V2-ArgN can be considered a classical constituent. ArgA often appears in places not adjacent to the verbs, whereas the verbs are strongly conceptually connected and, in Cheung’s examples, contiguous and thus constitute a constituent too. Our description is thus compatible with and provides a semantic basis for Cheung’s account.
- <sup>13</sup> Our account is similar to [Liu’s \(2020\)](#) Mandarin analysis but without the layer of grammatical relations.
- <sup>14</sup> In Cantonese, ‘mechanical pencil’ can be an argument of ‘write’, but the agent, in that case, would still be a person—not the bad gesture as in the ‘inversion’ analysis.

- 15 Lee and Ackerman's (2011) explanation does not work for Cantonese, as it requires that 'eat' be ambitransitive, which is not the case for Cantonese (Matthews 2006).
- 16 Because of the half-written, half-spoken style of this sentence, it includes the Mandarin chunk 想着 soeng2-zoek6; the Cantonese equivalent is 掛住 gwaa3-zyu6.
- 17 The sentence may be interpreted as 'English does not manage to imitate you', in which case it would not be an inverted construction. However, this only makes sense if *jing1man4* 'English' is an entity capable of learning and hence the agent, such as Tsai Ing-wen, the current leader of Taiwan.
- 18 Matthews and Yip distinguish verb-particle constructions from the usual resultative on the grounds that some of the particles do not appear alone as verbs. Although we regard resultative verb-particle constructions as belonging to the causative–resultative construction, we note that this does not conflict with their classification of resultative particles as a separate part of speech from verbs, since the V2 slot of the resultative construction may be filled by particles. As an analogy, argument positions in Chinese can always be occupied by verbs with no derivation. We do note, however, that the possibility of the potential construction means V2 particles can be negated, which is a verb-like property. Thus, it is reasonable to continue calling the V2 slot of the causative–resultative construction 'V2', with the understanding that this includes verbal particles.
- 19 The word 'causative' is used in at least two other ways in the literature on Cantonese. Some authors use it to refer to what other authors called 'inverted' resultatives, as mentioned above. Others use it to refer to almost all the constructions we consider CRCs, except perhaps for those involving particles (K. Li 2002).
- 20 Some early accounts of Chinese resultatives assumed that V2 is always intransitive (e.g., Thompson 1973; Méi 1991). However, given clear evidence to the contrary (Lau and Lee 2021, or our examples like (11ab)), this does not constitute evidence against analysing 濕 sap1 'wet' as transitive.
- 21 Note that this construction only appears in the potential forms. This is likely because the idiom expresses a stative meaning, whereas the CRC must be dynamic since it involves a cause and result.
- 22 The only example we could find of 齊 cai4 may be being used intransitively to refer to a specific action being completed is as follows: 認真做 功課 齊 jing6zan1 zou6 gung1fo3 cai4 'serious do homework complete' ('Do seriously, homework complete.' [SEA063]) However, it comes from a half-Cantonese half-Mandarin slogan and sounds rather awkward: The clause seemed to be worded in this strange way because the slogan had to be broken down into three-syllable intonation units. Moreover, it can still be interpreted as existence if the intended meaning is that the child brings all the homework to school, rather than doing all the homework.
- 23 There were several examples where there was no manner or position explicitly specified. However, this is a special construction used on the Internet to refer to the act of posting something on the current discussion board: those examples were talking about posting pictures of legs or feet onto the discussion board. Thus, there was still an implicit location.
- 24 The *bei2* 畀 'passive' construction is harder to interpret this way, since, unlike Mandarin *bèi* 被-constructions, it has other meanings, such as causatives, that do not imply affectedness on the pre-verbal argument's part.
- 25 'Rice' cannot be an ArgC since it is postverbal.
- 26 Type 6 is the 'inverted' construction; Lau and Lee claim these do not exist in Cantonese and only use Type 6 for Mandarin, but as we have seen above, this is not true.
- 27 The sentence was taken from an advertisement for a waterproof bag; rain was never mentioned in the context before this sentence. Thus, it cannot be taken as an implicit ArgC. Furthermore, the 'rain' in the example itself is nonreferential.
- 28 These are manually counted tokens, not Google hits, as Google turns up many duplicates.
- 29 Aikhenvald (2018) seems to move closer to Bisang's position, with a section on the simultaneous grammaticalisation of V2s and the formation of asymmetric SVCs, though it is still not clear whether she accepts that the asymmetric SVCs start from symmetric ones.
- 30 <https://www.youtube.com/watch?v=u9c2MeOuSiY> (accessed on 3 February 2023).

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