The development of the Chinese V de O cleft construction: a constructional approach

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Abstract
This paper addresses the development of the Chinese cleft construction, and how the cleft constructional network was formed and developed in the history of Chinese. In Modern Chinese, two types of copula clefts co-exist and they are [NP SHI (XP) VP DE] (abbreviated as VP de clefts) and [NP SHI (XP) V DE NP] (abbreviated as V de O clefts). Both of the copula clefts cue specificational and contrastive meaning, in which the copula functions as a focus marker marking the immediate post-copula element as a contrastive focus. Adopting the approach of constructionalization, Zhan and Traugott (2015) discussed the emergence of the copula clefts focusing on VP de clefts, yet leaving the development of V de O clefts untouched. Building on Zhan and Traugott (2015), this study focuses on the gradual development over time of V de O clefts as well as its relationship with VP de clefts in the cleft constructional network. It is argued that V de O clefts emerged in the 13th century which was about 300 years later than VP de clefts (occurred in the 10th century). A key factor in their development is the use in Middle Chinese of relative clause in post-copula position. We argue that the emergence of V de O clefts also involved analogization to the extant VP de clefts as well as deferred equatives (Ward 2004), which gave rise to semantic and syntactic neoanalysis. When VP de clefts came into being, the network of the cleft construction simultaneously emerged. Once V de O clefts occurred, they were recruited into the network as a subschema, joining VP de clefts which was adjusted to be the other subschema in the network, resulting in the schematic network being augmented and expanded. This study is a contribution to the developing field of constructionalization by making more explicit the way how nodes are created in a constructional network and how the network is reorganized and expanded.

1. Introduction
There has been a growing body of literature on the historical development of constructional network within the framework of constructionalization. In this paper, we contribute further to constructional perspectives on clefts in Chinese with the focus on the development of the cleft constructional network. It has been acknowledged that there are two types of copula clefts in Modern Chinese, as exemplified in (1) and (2):

(1) 她是昨天到达的
    tā shì zuótiān dàodá Běijīng de
    ‘It was yesterday that she arrived in Beijing.’

(2) 她是昨天到达的北京
    tā shì zuótiān dàodá de Běijīng
she COP yesterday arrive DE Beijing

‘It was yesterday that she arrived in Beijing.’

As shown (1) and (2) are structurally different: (1) exhibits [NP COP (XP) VP DE] (abbreviated as VP de clefts) and (2) has the structure [NP COP (XP) V DE NP] (abbreviated as V de O clefts), though they share a similar semantic structure: they are both specificationals involving the contrastive (exclusive and exhaustive) focus. Contrastive focus signals selection by the speaker of an alternative NP from a set. In clefts the immediate post-copula element, e.g. the adjunct zuotian ‘yesterday’ in (1-2) encodes the contrastive focus and asserts what is different from the presupposition ‘she arrived in Beijing at some time’. Specificational meaning relates a referential NP to a non-referential but restricted set in a member-class relationship (cf. Patten 2012, Zhan and Sun 2013), in clefts the referential NP is the contrastive focus, e.g. the adjunct zuotian ‘yesterday’ in (1-2), and the non-referential but restricted set is encoded in the rest of the sentence, e.g., ‘sometime that she arrived in Beijing.’

Among the literature, it is commonly agreed that the cleft construction is a special type of copular sentence in which the copula shi links a subject NP and a complex nominal predicate (cf. Shen 2008, Zhan and Sun 2013, Long 2013, Zhan and Traugott 2015). From a constructional point of view, the cleft construction is a subschema of the copular construction. In other words, in Modern Chinese the copular schema has two sub-schemas: one is the prototype copula [NP SHI NP] that expresses information focus¹ as in (3); the other is the cleft copula that expresses contrastive focus.

(3) 我是学生
   Wǒ shì xuéshēng
   I COP student
   I am a student.

The cleft construction is non-compositional in which the specificational and contrastive meaning of the whole is not derivable from the individual parts (Zhan and Traugott 2015). In the cleft construction, the post-copula complex nominal predicate can be instantiated as a nominalization marked by the nominalizer de (the VP de cleft) as in (1), or as a head noun modified by a relative clause (abbreviated as RC) marked by the relativizer de (the V de O cleft) as in (2). From a constructional perspective, the two types are two sub-schemas of the cleft construction, and a preliminary constructional taxonomy of the copular construction is depicted in Figure 1:

¹ See Kiss (1998) and Xu (2002) for the difference between informational and contrastive focus. See Li and Thompson (1981) and Zhan and Sun (2013) for further discussion of informational focus in Chinese copular sentences.
Li and Thompson (1981) point out that when an RC modifies a head noun, the head noun can be coreferential with the missing subject or the missing object of the verb in the RC. In this paper, we call an RC with the head noun coreferential with the missing subject of the verb a Subject-RC, see (4a), and the RC with the head noun coreferential with the missing object of the verb an Object-RC as in (4b). Besides, the head noun can refer to some other participants involved in the situation named by the RC, such as an instrument used, the location or time at which the event happens, or the reason for which or the method by which it occurs. Furthermore, an RC can modify an abstract noun which does not refer to any entity, specified or unspecified in the RC, such as shishi ‘fact’, daoli ‘principle’, shi ‘matter’, yijian ‘opinion’, etc. However, in the case of the V de O cleft, the post-copula nominal predicate must be an Object-RC+NP, and the subject of the sentence should be co-referential with the unspecified subject of the verb in the RC (subject-subject co-referentiality), as shown in (4c).

(4)  a. 吃的女孩— Subject-RC+NP  
   chī de nǚhái  
   eat REL girl  
   the girl who eats

b. 吃的零食— Object-RC+NP  
   chī de lǐngshí  
   eat REL snacks  
   the snacks that are eaten

c. 她是吃的零食— V de O cleft  
   tā shì chī de lǐngshí  
   she COP eat REL snacks  
   It is snacks that the girl eats.
There has been a large body of literature on Chinese copula clefts from both synchronic perspectives (cf. Chao 1968, Li and Thomson 1981, Huang 1990, Simpson and Wu 2002, Paul and Whitman 2008, Zhan and Sun 2013) and diachronic perspectives (cf. Xiao and Long 2012, Long 2013, Zhan and Traugott 2015). Zhan and Traugott (2015) investigated the emergence and the development of the VP de clefts adopting a constructional approach, yet leaving V de O clefts untouched. Long (2013) suggests that V de O clefts originate from bi-clausal copular constructions in Early Modern Chinese (960 CE-1900), yet does not explain the emerging mismatch between form and meaning of the V de O cleft. In general, previous works either focus on the function of *shi* and attribute the function of the V de O cleft to *shi* functioning as a focus marker without considering the function of the construction as a whole, or take on V de O or VP de clefts without considering a constructional network with an umbrella schematic construction overarching them and changes within the network.

Building on Zhan and Traugott (2015), this paper takes further on the development of V de O clefts with a focus on the development of the cleft constructional network. It is argued that V de O clefts started to emerge in the 13th century which was about 300 years later than VP de clefts (first occurred in the 10th century). A key factor in their development is the use in Middle Chinese (220-960 CE) of relative clause at the post-copula position.\(^2\) We argue that the emergence of V de O clefts also involved analogization to the extant VP de clefts and deferred equatives (Ward 2004), which gave rise to semantic and syntactic neoanalysis. When VP de clefts came into being, the network of the cleft construction simultaneously emerged. Once V de O clefts occurred, they were recruited into the network as a subschema, joining VP de clefts which was adjusted to be the other subschema in the network, resulting in the schematic network being augmented and expanded.

The paper is structured as follows: section 2 briefly addresses previous studies on the formation of the V de O cleft. The theoretical framework of the paper is outlined in section 3. Section 4 presents key examples of the development of V de O clefts in the history of Chinese. Section 5 highlights the constructional model of the development of V de O clefts and the mechanisms that enabled them to emerge. Section 6 is the conclusion.

### 2. Previous studies on the formation of the cleft construction

In the cleft construction, the immediate post-copula element encodes the contrastive focus and asserts what is different from the presupposition provided by the rest of the sentence. When adjuncts appear in the immediate post-copula position, they encode a contrastive focus, such as the adjunct *zuotian* ‘yesterday’ in (1-2). When there are no adjuncts involved, the post-copula complex nominal predicate will be either [VP DE] or [V DE NP] as in (5) and (6).

(5) 她是买了电影票的
   Tā shì mǎi de diànyǐng piào de
   She COP buy-PFV movie ticket NOM
   She did buy a movie ticket. / It was the movie ticket that she bought.

(6) a. 她是买的电影票
   Tā shì mǎi de diànyǐng piào
   She COP buy REL movie ticket

\(^2\) Since for a V de O cleft, the post-copula nominal predicate must be an Object RC plus head noun, accordingly this paper discusses the emergence of the V de O cleft focusing on the development of Object RC+NP in a copular sentence in the history of Chinese.
She did buy a movie ticket. / It was the movie ticket that she bought.

b. *她是买了的电影票
   Tā  shì mǎile de diànyīng piào
   She  COP buy-PFV  REL  movie ticket

In (5) and (6a), a nominalization and a head noun modified by an RC respectively occur in the post-copula position. The contrastive focus still lies in the post-copula element; however, since the complex post-copula element involving both the verb and its object, depending on the context the focus could be the verb (the action) or the object (the patient of the action). For instance, when asserting what is outstanding from the presupposition ‘she did something to the movie ticket’, the contrastive focus is the verb *mai ‘buy’, as in ‘she bought the movie ticket, rather than sold, borrowed, rent or stole the ticket’; whereas when dealing with the presupposition ‘she bought something’, the contrastive focus is the NP *diànyǐng piào ‘movie ticket’, as in ‘she bought the movie ticket, rather than clothes, cosmetics, books, etc.’.

Since the two types of cleft constructions denote similar specificational meaning and contrastive focus, many scholars (cf. Chao 1968, Xu 2001, Simpson and Wu 2002, Yuan 2003) maintain that V de O clefts as in (2) derive from VP de clefts as in (1) by moving the sentence final de to the position between the verb (V) and the object (O). However, moving the sentence final de of (5) to the position between V and O leads to (6b) which is ungrammatical. To further scrutinize the differences between VP de and V de O clefts, we can see that VP de can not only co-occur with the perfective marker le as in (5), it is compatible with a modal auxiliary hui ‘will’ denoting a future meaning, an experiential aspectual marker guo or a durative aspectual marker zhe. However, these TAM (tense, aspect and modality) markers are not compatible with V de O clefts, as shown in (7b-9b).

(7) a. 她会买电影票的
   Tā  shì huì mǎi diànyīng piào de
   She  COP will buy movie ticket  NOM
   She WILL BUY a movie ticket. / It is the movie ticket that she will buy.

   b. *她是会买的电影票
   Tā  shì huì mǎi de diànyīng piào
   She  COP will buy REL  movie ticket

(8) a. 她是买过电影票的
   Tā  shì mǎi-guo diànyīng piào de
   She  COP buy-EXP movie ticket  NOM
   She HAS BOUGHT movie tickets. / It is the movie tickets that she has bought.

   b. *她是买过的电影票
   Tā  shì mǎi-guo de diànyīng piào
   She  COP buy-EXP REL  movie ticket

(9) a. 她是穿着红裙子的
Tā shì chuān-zhe hóng qúnzi de
She COP wear-DUR red dress NOM
She IS WEARING a red dress. / It is the red dress that she is wearing

b. *她是穿着的红裙子
Tā shì chuān-zhe de hóng qúnzi
She COP wear-DUR REL red dress

If the derivational account were on the right track, (6b)-(9b), as being derived versions of (5) and (7a)-(9a), should also be grammatical. The fact that they are unacceptable suggests (a) not all VP de clefts have a corresponding V de O form, and (b) VP de clefts are not constrained by TAM restrictions whereas V de O clefts are. In other words, VP de clefts are compatible with future tense, modality, perfective, durative and experiential aspects, but V de O clefts are only used to express realized events or situations (Bohnemeyer and swift 2003). Accordingly, the derivational account obviously cannot account for the emergence of V de O clefts.

A related interesting phenomenon is that even though the object in the complex post-copula element can be focused depending on the context, it cannot be clefted structurally. In other words, in a cleft construction, the object can never be directly following and marked by the copula shi, as in (10a)4. A marked and focused object will result in a pseudo-cleft (cf. Huang 1990, Li and Thompson 1981, Paul and Whitman 2008), as in (10b, c).

(10) a. *她买了是电影票的。
Tā mǎile shì diànyǐng piào de
She buy-PFV COP movie ticket NOM
* It is the movie ticket that she bought.

b. 她买了的是电影票。
Tā mǎile de shì diànyǐng piào
She buy-PFV NOM COP movie ticket
What she bought was a movie ticket.

c. 她买的是电影票。
Tā mǎi de shì diànyǐng piào
She buy NOM COP movie ticket
What she bought was a movie ticket.

Shen (2008: 387) provides a non-derivational account of the V de O cleft based on synchronic data. Following the cognitive linguistic approach theorized by Fauconnier and Turner (2003), Shen claims that the V de O cleft is generated through analogy and compounding, particularly through a process that he calls “analogical blending.” The sentence “belongs to a

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3 Bohnemeyer and swift (2003) argue that if a language has predicates that are formally zero-marked for aspect, but have telicity-dependent aspectual reference, then these predicates come to be aspectually interpreted under an implicature of event realization.

4 A possible explanation is that for VP de clefts, clefting the object results in an unsatisfying nominalization such as ‘diànyǐngpiào de’ in (10a) as normally a nominalization involves [VP/S DE], thus making the sentence impossible. For V de O clefts, clefting the object can only result in the structure [VP/S DE SHI NP] which is exactly the form of a pseudo-cleft.
sentence pattern with its own constructional meaning of ‘subjective identity’ that is an emergent meaning as a result of conceptual blending.” For example:

(11) 他是昨天出的医院

\[
\text{tā} \quad \text{shì} \quad \text{zuótiān} \quad \text{chū} \quad \text{de} \quad \text{yīyuàn}
\]

he COP yesterday leave REL hospital

It was yesterday that he left the hospital.

Shen suggests that example (11) is derived from the analogical process in (12):

(12) a. 这是昨天出的病人

\[
\text{zhè} \quad \text{shì} \quad \text{zuótiān} \quad \text{chū} \quad \text{de} \quad \text{bìngrén}
\]

this COP yesterday leave REL patient

This is the patient that left yesterday

b. 他是昨天出的病人

\[
\text{tā} \quad \text{shì} \quad \text{zuótiān} \quad \text{chū} \quad \text{de} \quad \text{bìngrén}
\]

he COP yesterday leave REL patient

He is the patient that left yesterday.

c. 这是昨天出的医院 \(\rightarrow\) (11)

\[
\text{zhè} \quad \text{shìzuótiān} \quad \text{chū} \quad \text{de} \quad \text{yīyuàn}
\]

this COP yesterday leave REL hospital

This is the hospital that (he) left yesterday.

(12b) and (12c) are derived from (12a) through a process of analogy, and (11) is generated through the blending of (b) and (c). Therefore, (11) is derived through the process of “analogical blending.” Shen points out that the motivation of “analogical blending” is the speaker wants to convey some new meaning. As for the structure of (11), the motivation is the speaker wants to express subjective recognition. It is a way to show the speaker’s empathy with the hearer. Although the pragmatic implicature of conveying new meaning as a motivation and analogy as a mechanism are relevant in enabling a new construction, Shen’s analysis on the formation of the \(V\ de\ O\ cleft\) is not demonstrated through diachronic data, and accordingly should be purely understood as an introspective inference rather than a solid evolutionary pathway.

Long (2013), using diachronic data, proposes that \(V\ de\ O\ clefts\) originate from bi-clausal copular constructions in Early Modern Chinese with the interaction between the word order (RC before head noun) and the adjacency effect commonly observed in the focus clefts of SVO languages. The adjacency effect is locally constrained by the presupposition effect of the RC to produce a special head noun focus cleft. However, Long neglects the fact that in a \(V\ de\ O\ cleft\), not only the head noun can be the contrastive focus, in some contexts, the verb in the RC can be the focus as well. Furthermore, Long does not explain how and why the mismatch between copular form and contrastive meaning of a \(V\ de\ O\ cleft\) is emerged.

Zhan and Traugott (2015) provide a constructional account on the development of the \(VP\ de\ cleft\), and suggest that the rise emerged in the 10th century as the outcome of a sequence of changes to individual constructions starting in Old Chinese (771 BCE-220 CE). The precursors and enablers of the development of the \(VP\ de\ cleft\) involve the crystallization of \(shi\) as a standard
copula in early Middle Chinese, and then the emergence of the nominalization [VP de] in late Middle Chinese, followed by the development of the combination of the copula with the nominalization, i.e. of the sequence [NP SHI VP DE]. Then, the non-referential but restricted set was no longer encoded in the post-copula nominalization but in the sentence to introduce the immediate post-copula element as the contrastive referential member of the set. Simultaneously, the focal point shifted from the post-copula nominalization to the immediate post-copula element, the contrastive focus emerged and accordingly the VP de cleft came into being. However, they do not touch upon the emergence and development of the V de O cleft.

Based on the above discussion, we would maintain that the previous works either base their conclusions on incomplete data, focus on the function of shi as a focus marker without considering the function of the construction as a whole, or take on V de O or VP de clefts without considering a constructional network and changes within the network. In the following discussions, before providing a constructional account of the development of the V de O cleft, we will first briefly outline the theoretical concepts that this paper draws on.

3. Some basic concepts of the framework
Our approach is historical and constructionalist. Some fundamentals of the framework of constructionalization (Traugott and Trousdale 2013) and multiple sources are outlined in this section.

3.1 Constructionalization and constructional changes
There are different interpretations of the field of historical construction grammar (cf. Barðdal et al. 2015, Fried 2008). In the present paper Traugott and Trousdale’s (2013) proposal is adopted. Constructions are defined as a symbolic, conventionalized pairing of form and meaning (cf. Croft 2001, Goldberg 2006, Bybee 2010). Traugott and Trousdale (2013:22) define constructionalization as the conventionalization of a new construction in a language, i.e. the creation of conventionalized formnew-meaningnew pairs, a new node in the constructional network. The process of constructionalization consists of “neoanalysis of morphosyntactic form and semantic/pragmatic meaning” (p. 22). A distinction has been made between constructionalization and constructional changes (e.g. Traugott and Trousdale 2013, Hüning and Booij 2014, and from a different perspective, see Smirnova 2015). A constructional change is “a change affecting one internal dimension of a construction. It does not involve the creation of a new node.” (Traugott and Trousdale 2013:26). In other words, constructional changes are any changes to a construction that affect either the form or the meaning of a construction, but do not result in the creation of a formnew-meaningnew pair. This definition captures the fact that small local changes may enable the emergence of a new pattern and that other small changes follow (see also De Smet 2016, Petré 2014). The small local changes that precede and follow constructionalization are respectively pre- and post-constructionalization constructional changes. The distinction answers the question what steps enable new constructions to come into being and what steps follow afterwards. It assumes that a formnew-meaningnew change, a constructionalization, is identifiable in coarse-grained analysis and thus consistent with thinking in grammaticalization about contexts for change (Smirnova 2015).

Cognitive Construction Grammar posits constructions at various levels of abstraction, from individual, substantive micro-constructions to more abstract schemas. Likewise,

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5 A construction in this paper is illustrated as [Form]*[Meaning] adopted from Booij (2010).
6 This distinction is debatable, see Börjars et al. (2015) and Hilpert (2018).
constructionalization concerns the rise of both individual micro-constructions and of general patterns and schemas. Constructional levels (schemas, subschemas, micro-constructions and constructs) are of importance at various stages of the constructionalization process. While constructs are the locus of change, they can be innovations only. Over time patterns may emerge leading to conventionalization and constructionalization of a construction type (a micro-construction), and sets of micro-constructions may be organized into schemas and subschemas. It is only when innovations are replicated and become conventionalized that they can be considered “changes” (Weinreich, Labov, and Herzog 1968).

3.2 Multiple sources
Since construction grammar concerns contentful/lexical as well as procedural/grammatical constructions, constructionalization embraces change in these domains. The range of work on constructionalization is therefore very different from that on grammaticalization, which for the most part has focused on individual changes in the light of unidirectionality, and thus exclusively concerned with the development of procedural expressions.

Most researches in grammaticalization generally focus on just one source construction, conceptualizing straight lines between a construction and a single historical ancestor. This linear and unidirectional view has been widely accepted in the grammaticalization tradition (Givón 1979, Lehmann 2002). Unlike this tradition Van de Velde et al. (2013) tries to provide a framework for the analysis of the widespread phenomenon of language changes resulting not just from one, but from multiple source constructions. It proposes that change often seems to involve multiple source constructions on a macro-level or on a micro-level. At the macro-level, multiple source constructions involve blending of clearly distinct lineages, each of which is an independent source for a linguistic construction. At the micro-level, innovation can take place within what is historically a single lineage, but under the influence of different uses of the same item. (Van de Velde et al 2013: 473-474) The multiple source constructions are examined with respect to developments at the levels of phonology, semantics and morphosyntax.

4. The rise of the V de O cleft
This paper makes use of the historical data from the searchable Internet version of the CCL Classical Chinese corpus (Zhan et al. 2003). The periodization for written Chinese adopted in the paper is as follows (Sun 1996):

- Old Chinese: 771 BCE to 220 CE
- Middle Chinese: 220 CE to 960
- Early Modern Chinese: 960 to 1900
- Modern Chinese: 1900 to present

In this section, we start with precursors and enablers of the development of the V de O cleft: first the conventionalization of the copular construction in early Middle Chinese (sub-section 4.1), second the emergence of the [Object-RC NP] in late Middle Chinese, followed by the development of the combination of the copula with [Object-RC NP], i.e. of the sequence [NP SHI Object-RC NP], also in late Middle Chinese (sub-section 4.2). The subsequent emergence in Early Modern Chinese of V de O cleft is the topic of sub-section 4.3.

4.1 The copular construction in early Middle Chinese
In early Old Chinese, *shi* was used as a demonstrative pronoun, and later developed into a copula around 400 BCE. By the 5th century CE *shi* was generalized as the default copula verb (Zhan and Traugott 2019). In the early Middle Chinese book, *Shishuoxinyu* (the 5th century CE), there are 66 attested copular sentences and most of them exhibit the structure [NP1 SHI NP2], as in (13):

(13) a. 此三人并是高才
    cǐ sānrén bìng shì gāocái
    this three people totally COP high talent
    All these three people are of great talent.

    *Shishuoxinyu* (432-444 CE)

b. 我是李府君亲
    wǒ shì lǐfǔjūn-qīn
    I COP Lifujun relative
    I am one of Lifunjun’s relatives.

    *Shishuxinyu* (432-444 CE)

The attested copular sentences like (13) encode predicate informational focus: the subject encodes referential given information, usually a topic, and the post-copula predicate as a whole is the informational focus indicating non-referential new information. Both predicational and specificational meanings came to be conventionally associated with the copular construction as it emerged, depending on whether the post-copula NP was descriptive (predicational) or identifying (specificational) (Blom and Daalder 1977, Declerck 1988, Zhan and Sun 2013). (13a) is a predicational copular sentence with the post-copula predicate attributing a property ‘high talent’ to the subject ‘these three people.’ (13b) is a specificational sentence, in which the non-referential but restricted set ‘one of Lifunjun’s relatives’ is instantiated by the unique referential member of the set, the subject ‘I.’ In other words, such clauses involve a “value-variable” relation (Higgins 1979): ‘I’ instantiates the value of the variable ‘one of Lifunjun’s relatives.’ Predicational and specificational copulas formed subschemas of the prototype copula early on. It should be noted that both examples in (13) encode information focus but not contrastive focus (Zhan and Traugott 2015).

4.2 [Object-RC NP] in late Middle Chinese

In this sub-section we argue that crucial to the development of the V de O cleft is the prior development of Object-RC marked by the relativizer *de* with the form [Object-RC NP]. The earliest examples of [Object-RC NP] appeared in the five dynasties (707-960) with very low frequency. Example (14) is among the earliest occurrences of [Object-RC NP] in the history of
Chinese\textsuperscript{7}. It is an NP with the head noun ‘thing’ modified by an Object-RC marked by the relativizer $di$\textsuperscript{8}, and the head noun is co-referential with the missing object of the verb ‘obtain’.

(14) 庄严得底物
zhuāngyán dé dǐ wù
solemnly obtain REL thing
the thing that is obtained solemnly

Zhengzhou linji huizhao chanshi yulu (880 CE)

In Middle Chinese, the particle $di$ has several functions. It may be a relativizer as in (14), though it may also be an associative (or genitive) as in (15a) or a nominalizer as in (15b).\textsuperscript{9}

(15) a. 水底浪
shuǐ dǐ làng
water ASSOC wave
the waves in the water

Dunhuang bianwen (ca.900 CE)

b. 定知韩帽底, 仪容似大哥
dìng zhī wéimào dǐ, yíróng sì dàgē
must know hat NOM, appearance like big brother
(You) must know the hatted one; he looks like (your) big brother.

Chaoye jianzai (700 CE)

How exactly the different functions of $di$ emerged has been extensively debated among linguists, yet no consensus has been reached. Lü (1984) suggests that all the functions of $di$ developed from the Old Chinese nominalizer $zhe$, whereas Wang (1958) argues, based on the phonological similarity, that the Old Chinese attributive particle $zhi$ was the origin of $di$. There are other accounts proposed for the different origins of the distinct functions of $di$ (cf. Mei 1988, Jiang 1999, Cao 1999), however most scholars agree that the relativizer $di$ is, in one way or another, related to the Old Chinese $zhi$ as in (16a). In (16a) the head noun you ‘the reason’ is modified by an RC zui wo zhi ‘that (you) convict me’ marked by the relativizer $zhi$. In Old Chinese, $zhi$ is

\begin{itemize}
\item \textsuperscript{7}In the same text, other types of RCs are also attested, such as [Subject-RC NP] in i) and RC denoting method in ii);
\item i) 听法底人
tīng fǎ dǐ rén
listen to Buddhist doctrine REL people
the people who listen to Buddhist doctrine
\item ii) 出人底路
chū rén dǐ lù
go out people REL way
the way that leads people out
\end{itemize}

Zhengzhou linji huizhao chanshi yulu (880 CE)

\begin{itemize}
\item \textsuperscript{8}底 dǐ is a variant of de in Middle Chinese.
\item \textsuperscript{9}The commonalities and distinctions between relativization and nominalization have been a hot topic among Chinese linguists, as relativization and nominalization are marked by the same linguistic element de, and both denote attributive meaning. In this paper, we treat [VP/S DE headNP] as relativization, and [NP/VP/S DE] as nominalization.
\end{itemize}
multifunctional. It was used as a relativizer (16a), a third person pronoun (16b), an associative (or genitive) (16c), a motion verb (16d), and a particle (16e):

(16)  a. 罪我之由
zuì wǒ zhī yóu
correct I REL reason
the reason that (you) correct me

b. 废之
fèi zhī
dispose it
get rid of it

c. 子之子为何
zǐ zhī zǐ wéi hé
you ASSOC son COP what
‘your son is what?’

d. 项伯乃夜驰之沛公军
Xiàngbó nǎi yè chí zhī Pèigōng jūn
Xiangbo then night ride go Peigong troop
Xiangbo then rode his horse and went to Peigong’s troop at night.

e. 子曰：予之不仁也!
Zǐ yuē: Yǔ zhī bù rén yě!
Confucius say you PTCL not benevolent PTCL
Confucius said, “You are not benevolent!”

In early Middle Chinese, when *shi* had been constructionalized and frozen as the standard copula, [RC*zhī* NP] occurred sporadically in the predicate position of a copular sentence, as in (17):

(17) 南山是开创卜居之处也
Nánshān shì kāichuàng bǔjū zhī chù yě
Nanshan COP create residence REL place PTCL
Nanshan is the place to create a residence.

Example (17) is the first occurrence of [NP SHI RC*zhī* NP] attested in CCL Classical Chinese corpus, in which the head noun *chu* ‘the place’ refers to the location involved in the situation named by the RC *kaichuang buju zhi* ‘to create the residence’ marked by the relativizer *zhī*. Example (17) appears to be a specificational copular sentence, in which the non-referential but restricted set ‘a place to create a residence’ is instantiated by the unique referential member of the
set, the subject ‘Nanshan’. Later in the 9th century, Object-RCzhī was also recruited in the post-copula position, as in (18)10.

(18) 当菩萨顶悬七宝伞盖，是施之物。
Dāng púsà dǐng xuán qībǎo sǎngài, shì shī zhī wù.
When the Buddha top hangs the seven-treasure umbrella; (it) is the thing that is bestowed.

Rutangqiufa xunlixingji (847)

In (18), the head noun wù ‘the thing’ is modified by the RC shī zhī ‘that is bestowed’ and co-referential with the missing object of the verb shī ‘to bestow’. It is specificational: the non-referential but restricted set ‘the thing that is bestowed’ is instantiated by the unique referential member of the set, the implicit subject ‘the seven-treasure umbrella’.

The data examined show that the early examples of [NP SHI RCzhī NP] are specificational, and do not denote contrastive. It is not entirely clear at this point how contrastive focus that is associated with the Modern Chinese V de O clefts was systematically signaled in Middle Chinese. Around 800 CE, de came gradually to be used instead of zhī in RCs. The other uses of zhī also declined; in contemporary Standard Chinese it is considered an archaism. In sum, the relativizer zhī was used very frequently in Old Chinese, and has been attested in the post-copula nominal predicate since the 4th century. As we will show in the next sub-section, in the 9th century, an Object-RCde marked by the relativizer de (hereafter Object-RC) begins to be attested sporadically in the predicate position of copula sentences, a crucial step in the development of the V de O cleft.

4.3 The emergence of the V de O cleft
In what follows we argue that the emergence of the V de O cleft involved two steps. First, the expansion of the post-copula slot to include Object-RC+NP in addition to regular NPs and the structure [NP SHI Object-RC NP] emerged (sub-section 4.3.1); second, the emergence of the standard V de O cleft (sub-section 4.3.2).

4.3.1 The emergence of [NP SHI Object-RC NP]
As shown above the earliest [Object-RC NP] are attested around 880 CE in a Buddhist text. In the same text, [Object-RC NP] is found appearing at the post-copula position in copular sentences like [NP SHI RCzhī NP]. An earliest example of [NP SHI Object-RC NP] attested in CCL Classical Chinese corpus is given in (19)11:

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10 The recruitment of Subject-RC into the post-copula position was around 800 CE (see i), which is earlier than that of Object-RC.

i) 甲叔母乙便是执操之人
Jiāshú Mǔyǐ biàn shì zhí cāo zhī rén
Jiashu and Muyi are the people who uphold morals.

Tongdian (801)

11 In the same text, [NP SHI Subject-RC NP] is also attested, for example:

i) 此三种身是尔即今目前听法底人。
Cǐ sān zhǒng shēn shì ěr jíjīn mùqián tīng fǎ dī rén
These three types of body are your people who listen to Buddhist doctrines now.

Zhengzhou linji huizhao chanshi yulu (880 CE)
(19) 渠且不是修底物
Qú qiě bù shì xiū dǐ wù
they just not COP practice REL thing
They are just not the thing that is practiced.

Zhengzhou linji huizhao chanshi yulu (880 CE)

Here an object-RC *xiu di* ‘that is practiced’ marked by relativizer *di* modifying the head noun *wu* ‘thing’ occurs in the predicate position of the copular sentence, and may have been developed on analogy with patterns like that in (18) with *zhi*. Semantically, although it is a negative copular sentence, like (18), (19) is specification in that the post-copula [Object-RC NP] conveys a restricted non-referential set *xiu di wu* ‘the thing that is practiced’ and the definite referential subject *qu* ‘it’ instantiates its referent. (19) is produced by Master Huizhao who is against different kinds of heresies and believes these heresies are not the things that one should practice. From the context, the copula with the [Object-RC NP] does not encode any contrastive meaning, and it had not yet developed into a V de O cleft. Since 880 CE, more and more [RC NP] including [Object-RC NP] are found in copular sentences, and in *Zhuziyulei* (the 13th century), a Southern Song (1127-1279) classic, for example (20) is found:

(20)  I. 志是公然主张要做底事，
Zhì shì gōngrán zhǔzhāng yào zuò dǐ shì,
Will COP openly advocate want do REL thing
II. 意是私地潜行间发处。
yì shì sīdì qiánxíng jiān fā chù.
purpose COP secretly sneakily occasionally happen part
Will is the thing that one openly advocates to do, whereas purpose is the part that happens secretly, sneakily and occasionally.

*Zhuzi yulei* (the 13th century)

In (20), Master Zhu Xi talks about the difference between *zhi* ‘will’ and *yi* ‘purpose’. Both sentences in (20) are copular sentences, and (20I) exhibits the structure [NP SHI Object-RC NP]. Semantically, (20I) is specification as the [Object-RC NP] ‘the thing that one openly advocates to do’ indicates a non-referential set that is instantiated by the subject *zhi* ‘will’. Pragmatically, the two sentences in (20) contrast with each other in that ‘will’ is the thing that is openly advocated, while ‘purpose’ is the thing that happens secretly. Here the adverbial adjunct *gongran* ‘openly’ in (20I) contrasts with the adverb *sidi* ‘secretly’ in (20II). As mentioned above, although (20I) can be analyzed as a regular specification copular sentence, since it occurs in a contrastive context, it can also be inferred to involve a presupposition ‘in what manner one advocates his/her will’ observed by the post-copula adverbial adjunct *gongran* ‘openly’, which is the focus contrasting with *sidi* ‘secretly’ in (20II). Therefore, pragmatically speaking, (20I) expresses the focal contrastive meaning, exclusiveness and exhaustiveness, as ‘openly’ is the only manner that is adopted to advocate ‘will’.

With this pragmatic inference, (20I) can be considered as the structure [NP SHI Object-RC NP] with the immediate post-copula element *gongran* ‘openly’ as the contrastive focus. However, this is simply inference, and (20I) is clearly not yet a standard V de O cleft, because in (20I) the inferred contrastive focus is purely based on the context and accordingly not yet semanticized.
And more importantly its subject NP is co-referential with the missing object of the RC as well as its head noun (subject-object co-referentiality), whereas for a standard V de O cleft, the subject should be co-referential with the missing subject of the RC (subject-subject co-referentiality).

Below we will argue that (19) and (20I) serve as examples of the precursors of the standard V de O cleft. In (19) an Object-RC was recruited into the predicate position of the copular construction and the new structure [NP SHI Object-RC NP] started to be used. (20I), appearing in a contrastive context, makes the inference of contrastive focus possible, which may suggest that the V de O cleft might be on the way. Since constructionalization requires a form-meaning pairing, the emergence of (19) and (20I) is simply a constructional form change from the regular copular construction; they represent micro-steps in the pre-constructionalization of the V de O cleft. They are crucial for the later development.

### 4.3.2 The emergence of the V de O cleft

The first example known to us of a V de O cleft appears in (21).

(21) I. 天下人总是参得底禅,
    Tiānxià rén zǒng shì cān dé dǐ chán,
    Under heaven people always COP practice obtain REL Chan
    II. 某是悟得底
        mǒu shì wù dé dǐ
        I COP enlighten obtain NOM
    It is through practice that people under heaven always obtain (the state of Chan); it is through enlightenment that I obtain (it).’

*Wudeng Huiyuan* (the 13th century)

The context of (21) is about a little monk: one day when the little monk is meditating, he suddenly feels enlightened; he instantly gets up and goes to see the abbot; then he says to the abbot that it is through practice that people always obtain the state of Chan, though it is through enlightenment that he himself obtains it. (21I) has the structure [NP SHI Object-RC NP] with an Object-RC+NP, in which the first of the serial verbs can ‘to practice’ indicates the method of obtaining the state of Chan. The subject of the sentence, i.e. tianxiaren ‘people under heaven’ in (21I) is co-referential with the implicit subject of the verb in the Object-RC (subject-subject co-referentiality). (21II) has the structure [NP SHI VP DE] with the nominalization [V V DE], in which the first of the serial verbs wu indicates the method. Both sentences express specification and contrastive meaning with the following two reasons. First, the two topics ‘people under heaven’ and ‘I’ are in contrast. Second, the immediate post-copula expression can ‘through practice’ satisfies the presupposition ‘through some method people under heaven obtain the state of Chan’ and it also serves as the referential member of the non-referential but restricted set ‘some method through which people under heaven obtain the state of Chan’ in (21I). In contrast, wù ‘through enlightenment’ satisfies the presupposition ‘though some method I obtain the state of Chan’ and serves as the referential member of the non-referential but restricted set ‘some method though which I obtain the state of Chan’ in (21II). Can and wu are the contrastive foci, marked by the copula shi. Here, the contrastive meaning is semanticized, and accordingly even in non-contrastive contexts, the contrastive foci still hold.

Below we will show that in (21I) the V de O cleft started to emerge. From (20I) to (21I), we observe both the co-referentiality change from subject-object to subject-subject co-referentiality,
and the change of information structure from inferred contrastive to semanticized contrastive focus. This process may be enabled by neoanalysis induced by pragmatic inference (see section 5.2.1). Moreover, in (21) the newly emerged V de O cleft parallels with (21III) which is an example of the extant VP de cleft, and therefore it is possible that the emergence of the V de O cleft may be also influenced by the pre-existing VP de cleft. Zhan and Traugott (2015) suggest that the VP de cleft started to emerge in the 10th century and was conventionalized in the 13th century. Accordingly, we think that other than neoanalysis, the mechanism of analogization may also have enabled the development of the V de O cleft (see section 5.2).

Nevertheless, (21I) appears to be an innovation, because it is the only example of the V de O cleft found from the 13th century texts in the CCL corpus. In the 14th century, the V de O cleft was used more frequently: according to Jin (2017), there are 23 V de O clefts attested in Quan Yuanqu (The Complete Works of Yuanqu), among which three are given below as examples:

(22)  a. 孩儿既是这等起的病
Hái’ér jì shì zhèděng qǐ de bìng
Kid since such get REL disease
Since it is such (causes) that the kid got the disease, …

b. 俺主人在你寺里做的事
Ǎn zhǔrén zài nǐ sì-lǐ zuò de shì
My master at your temple-in do REL thing
It is in your temple that my master did the thing.

c. 敢是你合的毒药么?
Gǎn shì nǐ hé de dúyào me?
possibly COP you mix REL toxicant Q
Is it possibly you who mixed the toxicant?

Quan Yuanqu (the 14th century)

All the three examples in (22) are V de O clefts. In (22a) the subject hai’er is co-referential with the subject of the verb in the Object-RC (subject-subject co-referentiality), and the post-copula adjunct zhèděng ‘such (causes)’ is the contrastive focus satisfying the presupposition ‘the kid got the disease due to something’ and the referential member of the non-referential but restricted set ‘the causes why the kid got the disease’. It is a standard example of the V de O cleft. There are also further developments of the V de O cleft attested in Quan Yuanqu. For example, in (22b) the copula shì was implicit12, and in (22c) the subject of the sentence was unspecified13 whereas the subject of the verb in the RC was explicit, which is the element immediately following shì and thus the contrastive focus of the V de O cleft. The fact that the V de O cleft was used frequently and further developed in the 14th century suggests that it had been constructionalized and conventionalized at this period.

In this section we have discussed the development of the V de O cleft and its precursors and enablers. In the next section, a constructional account of the development will be provided.

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12 It is attested that copulas may be dropped in some interactive contexts in many languages.
13 Chinese is a language that permits an independent clause to lack an explicit subject.
5. A constructional account of the development of the V de O cleft
In this section, we will provide a construction model of the development of the V de O cleft (in sub-section 5.1) followed by the discussion of the mechanisms that enabled the emergence of the V de O cleft construction (in sub-section 5.2). The constructional network is provided in sub-section 5.3.

5.1 Modeling the development of the V de O cleft construction
As discussed in section 3, the textual record shows the gradual development over time of the V de O cleft and the change can be represented as:

Copular construction  the V de O cleft
[NP SHI NP] *[specificational]  [NP SHI Object-RC NP] *[specificational + contrastive]

This is a procedural constructionalization as it arose gradually micro-step by micro-step (cf. Traugott and Trousdale 2013) and involves changes in cueing of information structure. Specifically, the constructionalization of the V de O cleft involves the following main steps:

(a) Development of a copular construction with SHI. By early Middle Chinese, the standard copula already typically had the form [NP1 SHI NP2], and its semantics was predicational, e.g., (13a), or specificational, e.g., (13b). Post-copula NPs in specificational copular sentences expressed non-referential but restricted set meaning.

(b) Syntactic expansion: development in early Middle Chinese of Object-RCZHI involving use of zhi in the predicate position of a copular sentence, e.g., (18).

(c) Host-class expansion: recruitment in late Middle Chinese of de as a relativizer in post-copula contexts. The encoded meaning of [Object-RC NP] expressed a non-referential but restricted set, e.g., (19), (20i). As indicated in (a), this meaning was a component of specificational copular sentences. However, in specificational copulas, this non-referential but restricted set was characteristic only of complex NPs in post-copula position, and it was not structurally marked by any morpheme. At this point, the subject of the copular sentence is co-referential with the object of the verb in the RC as well as the head noun.

(d) Semantic-pragmatic expansion: a contrastive focus emerged in copulas with post-copula [Object-RC NP] and became constructionalized and conventionalized independently of contrastive contexts. The contrastive focus settled in the immediate post-copula element marked by shi serving as the referential member and the non-referential but restricted set was presented by the rest of the sentence, no longer by the post-copula complex NP. At this point, the subject of the V de O cleft is co-referential with the subject of the verb in the RC (subject-subject co-referentiality), e.g., (21i), (22).

These steps are summarized as follows:

a. [NP SHI NP] *[specificational] (e.g., (13b))

b. [NP SHI Object-RCZHI NP] *[specificational] (e.g., (18))
c. \([\text{NP SHI Object-RC NP}] \ast \text{[specificational]} \) (e.g., (19, 20I)) →

d. \([\text{NP SHI Object-RC NP}] \ast \text{[specificational + contrastive]} \) (e.g., (21I, 22))

Each step of the process was a constructional change, as it involved either form change (b, c), or meaning change (d). The result of the sequence of micro-steps is a form \(new\)-meaning \(new\) construction (constructionalization): The \(V \ de \ O\) cleft construction.

5.2 The factors enabling the emergence of the \(V \ de \ O\) cleft

Below we turn to consideration of the mechanisms involved in the constructionalization of the \(V \ de \ O\) cleft. Regarding mechanisms of change, two have been recognized as being crucially important in the field of morphosyntax: reanalysis, also called neoanalysis (cf. Andersen 2001, Traugott and Trousdale 2013), and analogy (cf. Meillet 1958[1912], Harris and Campbell 1995). Neoanalysis refers to the hearer (possibly speaker too) analyzing a structure in a different way from the input; it involves change in the status of implicatures associated with lexemes. Analogy, by contrast, refers to the attraction of extant forms to already existing constructions (cf. Fischer 2007). With a constructional approach, analogy involves analogical thinking as one of the motivations and analogization as one of the mechanisms that brings about a new fit to an extant pattern. (Traugott and Trousdale 2013:37-38)

Mechanisms of change are hypotheses about how one mental representation of a given expression can give rise to a different one. While analogization involves pattern match and results in greater similarity, neoanalysis involves differentiation. They are two sides of the same coin. When a pattern is used in a way more similar to that of another one (analogization) some of its former characteristics are changed or lost; this is neoanalysis. In this sense, all analogizations are neoanalyses (cf. Kiparsky 2012, Traugott and Trousdale 2013). In this sub-section, we examine the mechanisms (neoanalysis in 5.2.1 and analogization in 5.2.2) that enabled the development of the \(V \ de \ O\) cleft.

5.2.1 Neoanalysis

As mentioned in the above discussion, we argue that the development pathway of the \(V \ de \ O\) cleft is: \([\text{NP SHI NP}] \ast \text{[specification]} \) → \([\text{NP SHI Object-RC NP}] \ast \text{[specification + contrastive]} \). The key factor is the recruitment of an Object-RC in post-copula position in late Middle Chinese. At this point, neoanalysis did not occur, as a non-referential but restricted set encoded by the post-copula \([\text{Object-RC NP}]\) was still instantiated by the subject of the sentence. Moreover, the subject of the sentence was still co-referential with the object of the verb in the RC as well as the head NP. This was still a regular specification copular sentence.

Neoanalysis occurred in (21I) and (22), when the subject of the sentence was no longer co-referential with the object of the verb in the RC as well as the head NP, but co-referential with the subject of the verb in the RC. Furthermore, a non-referential but restricted set was no longer encoded by the post-copula \([\text{Object-RC NP}]\) but by the whole sentence with its referential member settled in the immediate post-copula element. The information structure changed and the immediate post-copula element became the exhaustive and exclusive contrastive focus marked by the copula \(shi\), observing the presupposition encoded by the rest of the sentence.

The process of neoanalysis may have been enabled by pragmatic inferencing, which allows the possibility that speakers design their utterances pragmatically and “invite” interpretations and
hearers infer and interpret. (20I) is a regular copular sentence with the structure [NP SHI Object-RC NP] in a contrastive context. With this context, it can be inferred pragmatically to involve the presupposition ‘in what manner one advocates his/her will’ satisfied by the post-copula adverbial adjunct *gongran* ‘openly’, which is the focus contrasting with *sidi* ‘secretly’ in (20II). The pragmatic inference came to be salient among a group of speakers and was semanticized, that is, it became encoded such that [NP SHI Object-RC NP] was used in non-contrastive contexts such as (22).

5.2.2 Analogization

As mentioned above, analogization is a mechanism that brings about a new fit to an extant pattern. In 4.3.2, we mentioned that the constructionalization of the V de O cleft may have been analogized to the extant VP de cleft ([NP SHI VP DE] * [specificational + contrastive]) emerged in the 10th century and was conventionalized in the 13th century (Zhan and Traugott 2015).

As argued in 4.3.2, (21I) appears to be the first example of the V de O cleft in the CCL Classical Chinese corpus. It occurs in a Buddhist text and is an innovation. However, reading through the classical data we see (21) is in fact a re-written version of a sentence as in (23) from an earlier Buddhist text. The whole story about the little monk obtains the state of Chan through enlightenment is an adapted version from the earlier Buddhist text.

(23) I. 天下人总是学得底,
   tiānxiàrén zǒng shì xué dé dǐ
   people under heaven always COP study obtain DE
II. 某甲是悟得底
   mǒujiǎ shì wù dé dǐ
   SG1 COP enlighten obtain DE
   It is through study that people under heaven always obtain (the state of Chan); it is through enlightenment that I obtain (it).

   Chanlin senbao zhuan (禅林僧宝传 1100 CE)

Comparing (21) with (23), we see that (21II) and (23II) are almost identical, both of which are VP de clefts. (21I) and (23I) are similar but different: (23I) is a VP de cleft with the structure [NP SHI VP DE], and the referent of the nominalization [VP DE], the state of Chan, is referred to but not instantiated. The contrastive focus is the immediate post-copula element *xue* ‘through study’ indicating the method of obtaining the state of Chan and it satisfies the presupposition ‘through some method people under heaven obtain the state of Chan’. In the new version (21I), the post-copula nominalization [VP DE] was replaced by an [Object-RC NP], and *xue* ‘through study’ was replaced by *can* ‘through practice’. If we take a closer look at the two constructions, as listed below, we will see that they have partially identical forms (NP, SHI, DE).

   [NP SHI XP DE] * [specificational + contrastive]
   [NP SHI Object-RC NP] * [specificational + contrastive]

By hypothesis this enabled analogization to take place and resulted in the similar meaning. We suggest that the pre-existing VP de cleft is the important exemplar relevant to the development of V de O cleft construction. In addition, although some changes were made to the original text, as
a re-written version, the writer of (21I) naturally kept the specificational and contrastive meaning of the original (23I), which may also be relevant for the innovation of a V de O cleft in (21I).

However, as mentioned in section 2, VP de clefts are not constrained by TAM (tense, aspect and modality) restrictions whereas V de O clefts are. In Zhuzi yulei (the 13th century) it is attested that VP de clefts co-occurred with the aspectual marker le \textsuperscript{14}. If the V de O cleft was analogized to the extant VP de cleft, it would naturally take on the properties that VP de clefts had and be able to co-occur with TAM markers. The fact that the V de O cleft is incompatible with these grammatical categories shows that other than the VP de cleft, its occurrence might have been influenced by other constructions. We argue that the deferred reference copula, also called the deferred equative \textsuperscript{15} (Ward 2004), is another important exemplar relevant to the development of V de O cleft.

The deferred equatives are special copular sentences with the structure [NP1 SHI NP2] in Chinese, as illustrated in (24):

(24) 我是米饭

Wǒ shì mǐfàn
I COP rice
I am the rice.

Ward (2004) proposes an account for deferred equatives like (24) based on the notion of pragmatic mapping: a contextually licensed mapping operation between (sets of) discourse entities. He suggests that the use of a deferred equative requires the presence of a contextually licensed open proposition whose instantiation encodes the mapping between entities, both of which remain accessible to varying degrees within the discourse model. In deferred equatives, the two NPs are not themselves coreferential; rather, the equative encodes the mapping between members of distinct sets of discourse entities. For instance, in (24) ‘I’ and ‘rice’ are not coreferential, but indicate the mapped set members, which are explicitly represented with the copula linking the two set members rather than literally equating them. Here the meaning of shi is extended from ‘be’ to ‘map onto’. An open proposition is a presupposition, a proposition with one or more underspecified elements, corresponding to the aspect of information structure that constitutes back-grounded or presupposed information. So, in (24) the open proposition is ‘NP1 maps onto NP2 where NP1 is a member of the set -customers-, and NP2 is a member of the set -orders-.’

Another very important point for pragmatic mapping to operate in the case of deferred equatives is discourse entities must be participants of a realized event or situation. For example, (24) is only possible when the ordered rice has been done and the speaker as the customer addresses to a server holding tray full of dinner orders at a restaurant. Moreover, the mapping is between two entities, which are independent existence and incompatible with temporal and modal (TAM) concepts even though they are participants of a realized event. Therefore, in deferred equatives, when the two

\textsuperscript{14} For example:

鬼便是气之屈，便是已散了底

Guǐ biàn shì qì zhī qū, biàn shì yǐ sàn-le dǐ
ghost then SHI air ASSOC crook, then COP already scatter-ASP DE
Gods are just the stretch of air; this always exists. Ghosts are just the crook of air; (it) has already scattered.’

\textsuperscript{15} The term ‘equative’ here is debatable because as shown in (24) and others, ‘I’ and ‘rice’ indicate the mapped set members. Accordingly, ‘deferred specificational’ might be another option of the term.
NPs are modified, the modifiers accordingly are constrained to be incompatible with temporal and modal markers (TAM markers). For example, in (25) only (a, b) are acceptable.

(25) a. 我是白色的米饭
    Wǒ shì báisè de mǐfàn
    I COP white ASSOC rice
    I am the white rice.

b. 我是有蛋的米饭
    Wǒ shì yǒu dàn de mǐfàn
    I COP have egg REL rice
    I am the rice with egg.

c. * 我是会有蛋的米饭
    Wǒ shì huì yǒu dàn de mǐfàn
    I COP will have egg REL rice

d. * 我是有了蛋的米饭
    Wǒ shì yǒu-le dàn de mǐfàn
    I COP have-PFV egg REL rice

In a Northern Song (960-1127) text, such deferred equatives are attested as in (26):

(26) I. 相公是无寸底字, 
    Xiānggōng shì wú cùn dǐ dào zì, 
    Young master COP not have Cun REL Dao character
II. 小子是有寸底字 
    xiǎozi shì yǒu cùn dǐ dào zì 
    I COP have Cun REL Dao character
    Young master’s name is the character Dao without a radical Cun, but my name is the character Dao with a radical Cun.

    Jiu Wudaishi (974)

The speaker of (26) was talking about young master’s and his own names which have the same sound but different characters. Both sentences are deferred equatives with the post-copula NP modified by an RC. The two deferred equatives are in a contrastive context: ‘young master’ vs. ‘I’ and ‘the character Dao without a radical Cun’ vs. ‘the character Dao with a radical Cun’, and they share a common open proposition: ‘NP1 maps onto NP2 where NP1 is a member of the set -names-, and NP2 is a member of the set -characters-.’ This open proposition is satisfied by the immediate post-copula adjuncts ‘without Cun’ and ‘with Cun’, respectively. This reminds us the structure and meaning of the V de O cleft which also exhibits certain presupposition observed by immediate post-copula element, and if we take a closer look at the V de O cleft and deferred equative constructions such as (26):
We can see that they have partially identical forms (NP, SHI, (RC), NP). By hypothesis this enabled analogization to take place and resulted in the similar meaning. We argue that the pre-existing deferred equative is another important exemplar relevant to the development of the V de O cleft construction. First, an important change in the process of the emergence of the V de O cleft is that the subject of the copular sentence stopped to be co-referential with the object of the verb in the RC as well as the head noun, and started to be co-referential with the subject of the verb in the RC, which means the subject was not referential with the predicate NP. The analogization to the deferred equative made the change possible. Second, as shown in section 1, one important grammatical property is that V de O clefts exhibit TAM restrictions, and this property is by hypothesis influenced by the deferred equative. Third, as mentioned in section 1 V de O clefts are only used to express the past. The analogization to the deferred equative again made this possible, as the entities of a deferred equative must be participants of a realized event or situation.

5.3 The network of the Chinese cleft construction
As mentioned in section 3.2 the framework of constructionalization makes it possible for language changes to result from multiple sources. In the above two sub-sections we argued that the emergence of the V de O cleft might have involved more than one mechanism: neoanalysis and analogization. Accordingly, it might have involved more than one source as shown in Figure 2:

Regular specificalional copular sentences with an Object RC (9th c.-) changed into V de O clefts enabled by neoanalysis and the pre-existing VP de clefts and deferred equatives were the exemplars for the V de O cleft to be analogized to.

As discussed in section 1, VP de and V de O cleft are two sub-schemas of the network of the cleft construction. As special specificational copular sentences, when VP de clefts came into being, the cleft construction emerged and it simultaneously created a node in the network of the copular construction. Once V de O clefts occurred, they were recruited into the cleft schema as a subschema, joining VP de clefts which was adjusted to be the other subschema under the cleft

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16 Equatives are special specificationals, in which the subject and the predicate are semantically referential and encode a one to one class membership. Zhan and Sun (2013) treat equative as a sub-class of specificational relationship.
schema, resulting in the schematic network being augmented and expanded. Figure 3 describes the development of the copular and cleft network.

![Diagram of the copular and cleft network]

Figure 3: Development of the copular and cleft network

6. Conclusion
This paper has addressed the constructionalization processes of the V de O cleft in the history of Chinese. We argued that the constructionalization of the V de O cleft involved the recruitment of an Object RC plus head noun to the predicate position of the specificational copular construction, which gives rise initially to pragmatic modulation and later to semantic and syntactic neoanalysis.

We argued that the emergence of V de O clefts involved more than one mechanism with multiple input. It involved neoanalysis motivated by pragmatic inference from the regular specificational copular sentences with an Object-RC + NP as the predicate. It also involved analogization to the pre-existing VP de clefts and deferred equatives. Specifically, the presupposed proposition and the contrastive focus may have been influenced by the VP de cleft, while the subject-subject coreferentiality, incompatibility with TAM markers and expression of the past may have been affected by the deferred equative.

When VP de clefts came into being, the network of the cleft construction simultaneously emerged. Once V de O clefts occurred, they were recruited into the network as a subschema, joining VP de clefts which was adjusted to be the other subschema in the network, resulting in the schematic network being augmented and expanded. The study is a contribution to the developing field of constructionalization in the sense that: (a) it has made more explicit the way in which individual constructional changes contribute sequentially to procedural constructionalization; and (b) it has manifested the way how nodes are created in a constructional network and how the network is reorganized and expanded.

Data Availability Statement

All the classical data used in this study are openly available from the searchable Internet version of the CCL (Center for Chinese Linguistics at Peking University) Chinese Corpora created and managed by Peking University (Zhan et al. 2003) at [http://ccl.pku.edu.cn:8080/ccl_corpus](http://ccl.pku.edu.cn:8080/ccl_corpus).
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