

**From phrasal movement to head movement**  
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## 1. Introduction: the diachronic loss of specifiers

### 1.1 Two frequently reported types of syntactic change

- First, Spec-to-head reanalysis (van Gelderen 2018 and references therein)
  - (One step of) Jespersen's cycle arguably involves a negative element located in SpecNegP being reanalyzed as a Neg head (van Gelderen 2004, 2022):

(1) SpecNegP => Neg<sup>o</sup>

[<sub>NegP</sub> nd] [<sub>Neg'</sub> Ø [<sub>VP</sub> ... ]]] (IE/Sanskrit) => [<sub>NegP</sub> *ne* [<sub>VP</sub> ... ]]] (Old English)

- Willis 2007 argues that the C head *fe* in Welsh is originated as a preverbal subject pronoun in SpecCP:

(2) SpecCP => C<sup>o</sup>

[<sub>CP</sub> [ef(e)] [<sub>C'</sub> [<sub>C</sub> *a+verb*] [<sub>TP</sub> ... ]]]] (Middle Welsh) => [<sub>CP</sub> [<sub>C'</sub> [<sub>C</sub> *fe+verb*] [<sub>TP</sub> ... ]]]] (Modern Welsh)

- Spec-to-head is extremely common in the C-domain; many C-elements are historically derived from *wh*-words (Harris & Campbell 1995, Huddleston & Pullum 2002, Walkden 2014).
- The Latin demonstrative *ILLE* generally found in SpecDP loses its first syllable and is interpreted as a D-element in Romance (Giusti 2001; see Greenberg 1963, 1978, Shaul 1986, Raitd 1993, Sohn 1999, among others, for similar changes in other languages):

(3) SpecDP => D<sup>o</sup>

[<sub>DP</sub> [(IL)LE] [<sub>D'</sub> Ø ... ]]] (Latin) => [<sub>DP</sub> (*IL*)*LE* ... ] (Romance)

- Second, the loss of movement (Roberts 1993, 2007, Dadan 2019, among others)
  - The historical loss of *wh*-movement in Chinese and Japanese.
  - Loss of V2 in a number of languages, including English (Roberts & Roussou 2003).
  - While Latin is a multiple *wh*-fronting language (Spevak 2010, Danckaert 2012: 245–250), modern Romance fronts a single *wh*-element (in some, *wh*-in-situ also a possibility), with the exception of Romanian.
- A similarity between the two types a change: The loss of specifiers
  - A specifier gets lost after Spec-to-head; also, losing (phrasal) movement means ceasing to create a specifier.

### 1.2. Theoretical explanations and goals of this paper

- Under the framework of Chomsky 2013, Dadan 2019 argues that head-complement relations are favored over Spec-head relations, the latter requiring an additional step for labeling (Dadan 2019 also discusses the loss of head movement, arguing an {H, YP} vs. {XP, YP} & {X, Y} asymmetry).
- Van Gelderen 2022 argues that the two types of change involve structural economy: (i) Spec-to-head happens because of labeling determinacy; (ii) movement gets lost due to the Late Merge Principle (i.e., merge as late as possible, due to workspace determinacy).
- Bošković 2021 argues for a 'maximize asymmetric relations' preference as a general property of language.

- In this paper I discuss a third and less-reported case of syntactic change, namely phrasal movement may get reanalyzed as head movement. I then discuss its theoretical implications.

## 2. Case I: *li*-construction in Serbo-Croatian

- The Q/focus marker *li* in Serbo-Croatian (SC) is a second-position clitic. As in (2a), its host can be a phonological word *novu* ‘new’. However, (2b) suggests that *li* cannot follow an unambiguous phrasal material:

(4) a. novu li kuću prodaje?  
 new LI house sells  
 ‘is he selling the new house?’

b. \*novu kuću li prodaje?  
 new house LI sells

[SC]

- Bošković 2001 argues that *li* is a defective C head, in that it cannot support a specifier; *novu* in (2a) undergoes head movement and is left-adjoined to *li*.
  - By contrast, *li* in Bulgarian can support a phrasal element freely (5), suggesting that its host *novata kŭšta* is in SpecCP:

(5) novata kŭšta li prodade?  
 new-the house LI sold  
 ‘did he sell the new house?’

[Bulgarian]

- The head (4) vs. specifier (5) distinction is further illustrated by sluicing data:

(6) \*novu li kuću—prodaje?  
 new LI house sells

[SC]

(7) novata kŭšta li ~~prodade~~?  
 new-the house LI sold

[Bulgarian]

- Assuming that sluicing must be licensed via Spec-head agreement (Lobeck 1990, Saito & Murasugi 1990), which is lacking in (6) since there is no specifier, the contrast between SC (6) and Bulgarian (7) is accounted for (Bošković 2001).
- Diachronically, it is reasonable to suggest that Bulgarian *li* reflects an earlier stage of SC *li*. First, this usage of *li* is archaic in SC (Bošković 2001); second, Croatian Church Slavonic behaves like Bulgarian regarding *li* (Mihaljević 1997).
  - *Li* in SC used to be able to host a specifier but has lost this ability:

(8) [<sub>CP</sub> XP<sub>i</sub> [<sub>C</sub> *li* [<sub>YP</sub> ... XP<sub>i</sub> ... ]]] => [<sub>CP</sub> X<sub>i</sub>-*li* [<sub>YP</sub> ... X<sub>i</sub> ... ]]

- First, movement as an operation is certainly *not* lost in (8).
- Second, (8) does *not* involve canonical Spec-to-head reanalysis. XP/X in (8) remains a lexical element, which does not undergo reanalysis by itself.
- Thus, it can be safely stated that (8) reflects a change from phrasal movement to head movement.

### 3. Case II: (N)P-fronting in two Southwestern Mandarin varieties

#### 3.1. Definite N(P)-fronting in Zunyi and Shizhu

- This section investigates in detail the DP-internal N(P)-fronting strategies in Shizhu and Zunyi, two understudied varieties of Southwestern Mandarin (SWM).<sup>1</sup>

- In both dialects, the basic nominal order is Num>CL>N, like most other Sinitic languages:

- (9) a. san-zi     bi  
      three-CL   pen  
      ‘three pens’     [Shizhu]
- b. san-zi     bie  
      three-CL   pen  
      ‘three pens’     [Zunyi]

- In both dialects, a noun can be fronted to a DP-initial position (leaving the NP/DP debate aside for the moment), resulting in a definite reading (N(P)-fronting is an areal feature of some SWM varieties spoken in Chongqing and Guizhou; it is unattested in other SWM varieties).

(10) *Zhangsan bought a book and a pen...*

- a. bi (yi-)zi     he     gui  
   pen one-CL very expensive  
   ‘the pen is expensive’     [Shizhu]
- b. bie-zi     hen     gui  
   pen-CL very expensive  
   ‘the pen is expensive’     [Zunyi]

- (10) shows that N-(Num-)CLs *can* be interpreted as definite.

(11) a. ??tai-sang     zo-qi     yanyuan (yi)-go  
      stage-on     sit-ASP     actor     one-CL  
      intended: ‘??on the stage sits the actor’     [Shizhu]

b. ??tai-sang     zo-qi     yanyuan-go  
      stage-on     sit-ASP     actor-CL     [Zunyi]

(12) a. tai-sang     zo-qi     ((yi)-go)     yanyuan  
      stage-on     sit-ASP     one-CL     actor  
      ‘on the stage sits an actor/sit actors’ (✓ bare Ns/Num-CL-Ns)     [Shizhu]

b. tai-sang     zo-qi     ((ye)-go)     yanyuan  
      stage-on     sit-ASP     one-CL     actor     [Zunyi]

- (11) (c.f., (12)) shows that N-(Num-)CLs *cannot* be indefinite: they show definiteness effects when occurring post-verbally in locative inversion contexts.

- Together, N-(Num-)CLs are *always* definite.

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<sup>1</sup> Shizhu data in this study are from my own fieldnotes; the Zunyi data are from descriptive work written in Chinese (Hú 1989; 2010; Yè 2021, among others).

### 3.2. Synchrony: Shizhu NP-raising vs. Zunyi N-to-D

- First, an overt numeral can only occur in Shizhu (13a), but not in Zunyi (13b):<sup>2</sup>

- (13) a. bi ∅/yi-/liang-zi [Shizhu]                      b. bie (\*ye/\*liang)-zi [Zunyi]  
       pen e-/one-/two-CL    pen (\*one/\*two)-CL  
       ‘the pen/the two pens’    ‘the pen’

- Note, however, that even in Shizhu N-(Num-)CLs, an overt numeral normally does *not* occur (in which case the interpretation is singular), though it *can* (in Zunyi N-CLs it strictly *cannot*).
- That is, on the surface, we observe definite N-CL constructions in most cases in both dialects.

- Second, only in a Shizhu N-(Num-)CL (14a), but not in a Zunyi N-CL (14b), can an adjective occur. (14a) implies there is a unique white coat (there can be coats in other colors in the context):

- (14) a. be-di yifu (yi-)jian                      b. \*bae-di yife-jian  
       white-DE coat (one-)CL    white-DE coat-CL [Zunyi]  
       ‘the white coat’ [Shizhu]

- Third, though in both Shizhu and Zunyi, a possessive can co-occur with N(P)-fronting, the constructions receive different interpretations in the two languages:

- (15) a. ngo-di yifu (yi-)jian bi la-jian yifu hao-kan  
       1P-DE coat (one-)CL compare that-CL coat good-looking  
       ‘my coat looks better than that coat’ [Shizhu]
- b. #ngo-di yife-jian bi a-jian yife hao-kan  
       1P-DE coat-CL compare that-CL coat good-looking  
       ‘#the coat, which is mine, looks better than that coat’ [Zunyi]

- (15a) is natural: there is one unique coat belonging to the speaker; (15b), however, is infelicitous (there is nothing wrong with the possessed N-CL by itself)—the Zunyi N-CL with a DP-initial possessive in (15b) only implies (i) that there is one unique coat in the context, *and* (ii) that the coat belongs to the speaker, i.e., the possessive receives a non-restrictive reading.
- Still, in terms of truth conditions, one observes that the distribution of the possessed N-(Num-)CL in the two languages overlaps (Shizhu Poss-N-(Num-)CLs can be used in situations wherever Zunyi Poss-N-CLs can, but not vice versa).

<sup>2</sup> To express ‘the pens’, one can use the so-called plural classifier *-xi* in both dialects (in fact most SWM varieties allow (ib), though they lack N(P)-fronting in general):

- (i) a. bi (yi-)xi    b. bie (\*ye)-xi  
       pen one-CL<sub>PL</sub>    pen (\*one)-CL<sub>PL</sub> [Zunyi]  
       ‘the pens’ [Shizhu]

*-Xi* behaves quite differently from other classifiers, and I will put it aside.

- Summary:

(16)

	N-CL	N-Num-CL	Adj-N-CL	Poss-N-CL
Shizhu	✓	✓	✓	✓ <sup>a</sup>
Zunyi	✓	✗	✗	✓ <sup>a</sup>

<sup>a</sup> With semantic nuance.

- I assume (17) to be the nominal structure shared by Sinitic languages, where the numeral and the classifier are separate heads (c.f., Tang 1990; see fn. 3).

(17) [DP D [NumP Numeral [CLP Classifier [NP Noun ]]]]

- Shizhu *bi (yi-)zi* ‘pen (one-)CL’ and Zunyi *bie-zi* ‘pen-CL’ are derived in the following ways, respectively, where DP is projected by a null definite D head:

(18) a. [DP [NP *bi* ]<sub>i</sub> [NumP (*yi-*) [CLP *-zi* [NP *bi* ]<sub>i</sub> ]]] [NP-raising; for Shizhu (10a)]

b. [DP *bie-zi* ]<sub>i</sub> [NumP *bie-zi* ]<sub>i</sub> [CLP *bie-zi* ]<sub>i</sub> [NP *bie* ]<sub>i</sub> ]]] [head movement of N; for Zunyi (10b)]

- In Shizhu (18a), the NP moves to a position higher than NumP/CLP that is related to definiteness, labeled as SpecDP (see Simpson & Syed 2016; Syed & Simpson 2017 for a similar account of definite NP-fronting in Bangla).
- In Zunyi (18b), the N moves to CL<sup>o</sup> and m-merges with the classifier, and then the N-CL cluster moves to Num<sup>o</sup> and to D<sup>o</sup> (the underlined steps are string-vacuous, and are dispensable if the DP hypothesis is *not* adopted).<sup>3</sup>
- Now we are ready to capture the difference between Zunyi and Shizhu (16):
  - First (13), an overt numeral in Zunyi would block the head movement of N or the N-CL cluster (18b). The movement can neither (i) skip the numeral, due to the head movement constraint, nor (ii) carry it: one would then expect an N>CL>Num order, which violates a PF constraint that (overt) numerals are always prefixal in Chinese (i.e., a numeral must form a prosodic constituent with a following classifier). The PF-well-formed N>Num>CL is also not derivable in Zunyi since the noun first merges with the classifier. By contrast, in Shizhu (18a), nothing prevents the NP from undergoing phrasal movement to SpecDP.
  - Second (14), only NP-raising, rather than N-to-D, can carry an adjective. I assume the adjective is NP-adjoined (see below); it can move with the noun only in (14a/19) but not in (14b).

(19) [DP [NP [AdjP *be-di* ] *yifu* ]<sub>i</sub> [NumP (*yi-*) [CLP *jian* [NP [AdjP *be-di* ] *yifu* ]<sub>i</sub> ]]]

<sup>3</sup> One may be concerned with the NP/DP debate (Bošković 2008 et seq.) and does not take it for granted that DP (always) projects in Chinese. Zunyi N-CLs may simply be CLPs, with N being moved and adjoined to CL:

(i) [CLP *bie-zi* ]<sub>i</sub> [NP *bie* ]<sub>i</sub> ]]]  
 (i) resembles definite bare classifier constructions (i.e., definite CL-NPs) attested in many other Sinitic languages, such as Cantonese and Wu (Cheng & Sybesma 2005; Li & Bisang 2012; Huang 2015), with the order between CL and N being different. Whether D is projected in Sinitic bare classifier constructions and whether they involve CL-to-D movement are ongoing debated questions (see Cheng & Sybesma 1999, 2012; Wu & Bodomo 2009; Li 2013 for discussion). What is important to the current study is that N must move in the Zunyi N-CL in order to derive the correct order; the exact landing site of this movement is another independent issue.

- Third (15), the contrast crucially shows that the uniqueness/exhaustivity presupposition induced by D is satisfied by the possessive plus the noun in Shizhu (15a), but only by the noun in Zunyi (15b). I argue in (15a), the possessive is NP-adjoined and raises together with the noun, while the pre-N-CL possessive can only be DP-adjoined in (15b), as in (20) (DPs in border satisfy the uniqueness presupposition):

- (20) a.  $[\boxed{\text{DP}} [\text{NP POSS-N}]_i \text{D}^\circ \dots \text{NP}_i ]]$  [Shizhu]  
 b.  $[\text{DP POSS-} [\boxed{\text{DP}} \text{N-CL-D}^\circ [\text{NumP} \dots]]]$  [Zunyi]

- The contrast between (20a) and (20b) is unsurprising, given that adjuncts can be inserted acyclically (Lebeaux 1988; Chomsky 1993).

### 3.3. Adjectives vs. possessives: a digression

- I assumed that (i) Chinese adjectives can *only* be adjoined to NP, and (ii) possessives are either NP- or DP-adjoined. Below is some independent evidence.
- Partee 2006 observes that Mandarin possessives do *not* induce an exhaustivity presupposition. Her data are from ‘standard’ Chinese (another Mandarin variety), but the same holds for Shizhu and Zunyi, and for SWM in general (the following transcriptions reflect the phonology of Shizhu):

- (21) a. zhangsan-di san-jian maoyi  
 Zhangsan-DE three-CL sweater  
*lit.* ‘Zhangsan’s three sweaters’ (Note the English translation *does* induce EP.)
- b. san-jian zhangsan-di maoyi  
 three-CL Zhangsan-DE sweater  
 ‘three sweaters of Zhangsan’s’

- Neither (21a) nor (21b) implies that Zhangsan has exactly three sweaters. I interpret this fact by saying that the possessive is an NP-adjunct in (21b) and a DP-adjunct in (21a), i.e., it is *always* an adjunct ((21b) is simply indefinite).
- By contrast, the Saxon genitive in English is often argued to be located in SpecDP:  $[\text{DP } \textit{John's} [\text{FP} [\text{NP } \textit{book} ]]]$ , and as a matter of fact, it induces EP.

- (22)  $[\text{DP DP-adjunct} [\text{DP DP-Spec D}^\circ [\dots \text{NP} ]]]$

↑ ↑  
*The domain where the DP gets interpreted as definite (and where EP is induced)*

- There are also two surface positions for adjectives in Southwestern Mandarin:

- (23) a. hong-di san-jian maoyi  
 red-DE three-CL sweater
- b. san-jian hong-di maoyi  
 three-CL red-DE sweater  
 ‘three red sweaters’

- However, contrary to high possessives (21a), the high adjective in (23a) *does* induce EP: it implies that there are exactly three red sweaters in the context ((23b) is indefinite and thus has no such a presupposition).

- This suggests that adjectives in SWM cannot be DP-adjoined; they are *always* adjoined to NP. In (23a), the NP-adjoined adjective raises to SpecDP.
- That is, whenever an adjective occurs before the numeral-classifier, it *must* be a result of movement (to SpecDP).
- This is further supported by the fact that the relative order of a low adjective and a low possessive is flexible (24), whereas the order of a high adjective and a high possessive is fixed: you always get Poss>Adj (25).

(24) a. san-jian zangsan-di hong-di maoyi  
 three-CL Zhangsan-DE red-DE sweater [ ✓ Poss>Adj]

b. ?san-jian hong-di zangsan-di maoyi  
 three-CL red-DE Zhangsan-DE sweater [ ✓ Adj>Poss]

(25) a. zangsan-di hong-di san-jian maoyi  
 Zhangsan-DE red-DE three-CL sweater [ ✓ Poss>Adj]

b. \*?hong-di zangsan-di san-jian maoyi  
 red-DE Zhangsan-DE three-CL sweater [ ✗ Adj>Poss]

- The pattern is expected if both low adjectives and low possessives are NP-adjuncts, and high adjectives and high possessives are DP-Specs and DP-adjuncts, respectively (high adjectives are generated low and they move into SpecDP). (25) is so because the adjunct>Spec order is fixed (22).
- The possessive vs. adjective contrast found in SWM is crystal clear, though it remains to be seen whether it also applies to Putonghua (i.e., ‘standard’ Chinese), where the pattern seems less clear (there is a lot of interspeaker variations).
- To summarize, though they look similar, Shizhu N-(Num)-CLs and Zunyi N-CLs have quite different underlying structures. They show a contrast between phrasal movement and head movement.

### 3.4. Diachrony: the genesis of N(P)-fronting

- I have shown that Shizhu NP-(Num)-CLs involve NP-fronting, and that Zunyi N-CLs are derived from head movement.
- Other SWM dialects (outside the Shizhu-Zunyi region) have neither, but importantly, fronting an adjective is possible in *all* these dialects that I am aware of (23–25).
  - (26) is another example of adjective-fronting. Notice that in such cases, an overt noun is frequently missing:

(26) Zangsan song ngo wu-ben su; ngo xihuan hong-di liang-ben (??su)  
 Zhangsan give 1SG five-CL book 1SG like red-DE two-CL book  
 ‘Zhangsan gave me five books; I like the two red [books]’

- But if the noun is often missing, it is not immediately clear whether (19) involves AdjP-raising (27a), or in fact NP-raising (27b).

(27) a. [DP [AdjP *hong-di*]<sub>i</sub> [NumP *liang-* [CLP *-ben* [NP [<sub>AdjP</sub> *hong-le*]<sub>i</sub> *su* ]]]] [NP-ellipsis & AdjP-raising]  
 b. [DP [NP<sub>1</sub> *hong-di* [<sub>NP<sub>2</sub></sub> *su* ]]<sub>i</sub> [NumP *liang-* [CLP *-ben* [NP<sub>1</sub> *hong-le* [<sub>NP<sub>2</sub></sub> *su* ]]<sub>i</sub> ]]]] [NP<sub>1</sub>-raising & NP<sub>2</sub>-ellipsis]

- I suggest that adjective-fronting involves (27a) in ‘mainstream’ SWM but involves (27b) in Shizhu.
- Specifically, as in (28), Shizhu adjective-fronting is innovative, i.e., it used to be (27a), but now has changed to (27b) (it cannot be the other way around, otherwise one needs to posit that the (27b>a) change happens independently multiple times in different regions within the huge SWM-speaking area).

(28) [DP AdjP [ ... [NP AdjP NP ]]] > [DP [NP AdjP NP ] [ ... [~~NP AdjP NP~~ ]]] (the NP in box may get elided)

- This explains why ‘mainstream’ SWM allows adjective-fronting but disallows noun-fronting, while Shizhu allows both (it is always the whole NP that is fronted, with optional ellipsis).
- If no ellipsis happens at all, we expect the following contrast between Shizhu and ‘mainstream’ SWM, which is indeed what we find:

(29) a. hong-le yi-ben su  
 red-DE one-CL book  
 ‘the red book’ [‘mainstream’ SWM]

b. hong-di su yi-ben  
 red-DE book one-CL [Shizhu]

- After (optional) ellipsis of the noun, (29a&b) will be the same on the surface.
- What is the motivation for (28)?
  - Notice that Shizhu seems to have a more symmetrical syntactic paradigm than ‘mainstream’ Southwestern Mandarin, after (28) happens.

(30) de-phrases > Numeral > Classifier > de-phrases  
 %‘canonical’ NPs ‘canonical’ NPs

- Suppose that the traditional structuralist grammar of Chinese is correct in that what we have labeled as AdjPs above are by themselves derived nominals, with the final *-le/-di* (both are SWM cognates to ‘standard’ Chinese *-de*) being a nominalizer (Zhū 1982; note that traditional grammar simply labels them as *de*-phrases, possibly because they fail to find a better name for them). As in (30), one can say that in ‘mainstream’ SWM, only derived nominals can be fronted, while ‘canonical’ NPs cannot; in Shizhu, however, such a gap in this paradigm is reduced, as a result of the reanalysis in (28).
- If the reasoning above is on the right track, it may be concluded that (28) involves paradigm economization.
- Now we consider the relation between Shizhu NP-fronting and Zunyi N-to-D.
  - Since there are good reasons to suggest that NP-raising in Shizhu is innovative compared to ‘mainstream’ SWM, it is equally reasonable to argue that the head movement of N in Zunyi must be a further development, because it is more ‘deviant’ from the ‘original’ type.
  - Additionally, in Wuchuan, another SWM dialect geographically close to Zunyi (the Wuchuan area is actually governed by the Zunyi prefectural city), also allows N(P)-fronting (Xiè 2012). In most N(P)-fronting cases described by Xiè 2012, there is also no overt numeral, and when there is one, the numeral is invariably *yi* ‘one.’ Wuchuan Mandarin seems to demonstrate an intermediate stage.
- I thus propose that Shizhu NP-(Num-)CLs and Zunyi N-CLs are not developed independently, but are genetically related: the Zunyi case is derived from the Shizhu case, i.e., there was a recent stage



when Zunyi behaved exactly like Shizhu in NP-fronting, but the strategy has become a case of head movement.

(31) The Shizhu-to-Zunyi reanalysis

$[_{DP} \boxed{NP} [_{NumP} (Num) [_{CLP} CL \text{ NP } ]]] \Rightarrow [_{DP} N-CL [_{NumP} \text{ N-CL } [_{CLP} \text{ N-CL } [_{NP} \text{ N } ]]]]$

- To put (28) and (31) together:

(32) DP-internal AdjP-fronting =step 1=> DP-internal NP-fronting =step 2=> N-to-D  
 ‘mainstream’ SWM Shizhu Zunyi  
 (Recall that AdjPs are NP-like in Chinese.)

- Step 2 involves a change from phrasal movement to head movement, which is the focus of our discussion.

#### 4. Discussion: what is behind phrasal-to-head-movement change?

##### 4.1. Economy considerations

- Recall that the two cases we have discussed are neither Spec-to-head reanalysis nor the loss of movement.
  - Movement is *not* lost in the change.
  - In addition, what gets reanalyzed is *not* a single syntactic element, but the entire operation. The moving element (e.g., the fronted noun in Shizhu-to-Zunyi) does not get reanalyzed by itself, since it is *always* a lexical category involved in movement.
- Though certainly more cases of this type need to be discovered, I would like to suggest that the change from phrasal movement to head movement reflects a general diachronic tendency/direction; it thus should be conditioned by economy considerations (a structure tends to be reanalyzed as a more economical one; van Gelderen 2004).
  - The implication then is that, everything else being equal, head movement is preferred over phrasal movement.
  - There is a possibility that (syntactic) head movement and phrasal movement are the same thing (see Donati 2006 for some relevant discussion). The two sorts of movement are in complementary distribution in terms of locality (Pesetsky & Torrego 2001): phrasal movement is strictly non-local (i.e., antilocality effects; Abels 2003) while head movement is local. Long head movement often seems to involve clitics, which are ambiguous between heads and phrases.
- Two suggestions:
  - Movement wants to be as short as possible.
  - Head movement is preferred because it carries less material (Chomsky 1995; see also Coon 2010).
- It is not immediately clear if labeling-based discussion can deduce this preference, i.e., head movement over phrasal movement.
  - For Dadan 2019, both head movement and phrasal movement are dispreferred, because both {X, Y} and {XP, YP} require an extra step in terms of labeling (he only discusses Spec-to-head and the loss of movement in general).

- Perhaps the phrasal-to-head-movement change is independent of labeling considerations, but there remains one generalization that needs to be explained:
  - All three types of change, i.e., (i) the Spec-to-head reanalysis, (ii) the loss of movement, (iii) from phrasal movement to head movement, involve the loss of specifiers (in this respect, nothing is really special regarding the third case).
  - I will simply suggest that specifiers are dispreferred in general, and thus diachronically, they tend to undergo reanalysis. I further note that phrase-phrase relations, which involve the presence of specifiers, are dispreferred compared to head-head relations, and this is not easily accounted for in terms of labeling. However, I leave a proper explanation of the preference for further study.

#### 4.2. Reanalyzing an operation: notes on contextuality

- Note that in canonical cases of Spec-to-head, a specifier is dispreferred not because it is phrasal, but because it occurs in the context where it is viewed as a specifier. Typical Spec-to-head reanalysis thus in fact happens at the level of the entire structure.
- This point is more evident in the current cases. Take case II for example: again, the fronted N(P) does not get reanalyzed by itself—it is always a lexical category involved in movement. What is observed is a change of the type/scale of movement, the loss of a specifier being a byproduct.
- It may be suggested that reanalysis, as a mechanism, in general does *not* involve a single syntactic element, but the entire derivation.
  - The reanalysis may nevertheless result in the change of a single element, but this is not a necessity; crucially, the entire structure *always* plays a role, i.e., an element gets changed under particular contexts.
- Whatever the ultimate formulation would be, it seems safe to conclude that the units of syntactic reanalysis can be an operation or an entire structure, not just a single linguistic element.

### 5. Conclusions

- I have discussed two cases that involve change from phrasal movement to head movement:
  - Serbo-Croatian *li* attracts a head to move to its left; at an earlier stage, however, the host was phrasal.
  - Zunyi N-CLs are a result of the head movement of N; historically, it was derived from NP-raising, a case of phrasal movement, as can be seen in Shizhu, a genetically closely related dialect of Southwestern Mandarin.
- Besides (i) traditional Spec-to-head reanalysis and (ii) the loss of movement, this study provides empirically another way of losing a specifier regarding the historical change of languages: phrasal movement gets reanalyzed as head movement.
- It has been suggested that head movement is more economical than phrasal movement; consequently, the former is preferred over the later in the course of diachronic change.
- The study also implies that syntactic reanalysis can apply to entire structures/operations, not just a single syntactic element.

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