# The relationship between Chinese *zhiyou* 'only' and *cai*: a matter of morphosyntax

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**Abstract** This short article pursues two goals. First, it critically reviews some results arrived at by Sun (2021), an article that discusses the interplay of Chinese *zhiyou* 'only' with an empty exclusive operator while denying any interesting interaction between *zhiyou* and the scalar particle *cai* (against the view defended by Hole, 2004, 2017). Second, it develops a featural account to analyze the morphosyntactic interaction between *zhiyou* and *cai*. In sum, the gist of Sun's and Hole's views complement each other.

**Keywords** Bipartite analysis of focus · Scalarity · Chinese · A′-movement

## 1 Introduction

Sun (2021) presents a bipartite analysis of Chinese monoclausal *zhiyou* 'only' sentences in the tradition of Bayer (1996), Kayne (1998), Wagner (2006), Quek & Hirsch (2017) and others. An example is given in (1).[1]

(1) *Akiu* [*zhiyou niurou*] *cai chi* $t_i$
    Akiu  only    beef   CAI  eat
    'Akiu eats only beef.'

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[1] The following abbreviations are used in glosses: CL—classifier, DE—modification marker, DOM—differential object marker, EXP—experiential aspect.

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*Zhiyou* combines with XPs that are not (extended) verbal projections (here, the direct object *niurou* 'beef') and, according to this analysis, values features of an empty exclusiveness head by moving to, or through, its specifier. That's why we find the direct object in preverbal position, and not in its canonical postverbal position. The lowest position of this exclusiveness head is the vP edge. Higher positions are possible as scopally needed. This analysis denies a close relationship between *zhiyou* and the particle *cai*. A strand of research assumes a spec-head relationship between these two elements (Hole 2004, 2017) claims that *cai* always goes hand in hand with a scalar interpretation of the *zhiyou* focus, where a scalar interpretation presupposes or conventionally implicates the assessment of the focus value as little or insignificant. At the same time, an order of counting as more or less insignificant is imposed on the set of alternatives. Hence, for Hole, *zhiyou* and *cai* participate in the marking of scalarity with 'only' foci in Chinese, where Sun (2021) has *zhiyou* and zero interact to express 'only' with vP-external (frequently moved) foci.

Sun's syntactic proposal, which is based on Quek and Hirsch (2017), is summarized in (2). Note that it depicts the structure before movement of the 'only'-focus (Sun 2021: 327).

(2) $[_{\text{FocP}} [_{\text{Foc}'} \text{Foc}^0_{[\text{iONLY}(), \text{ EPP}]} [_{\text{vP/TP}} \dots [_{\text{QP}} \text{Q}^0_{[\text{uONLY}(+)]} \text{XP}_F ] \dots ] ] ]$

$\text{Foc}^0$ is the empty exclusive operator. It has an interpretable, though unvalued, ONLY feature, and an EPP feature. The EPP feature triggers movement of the lower QP.[2] QP, the *zhiyou*-phrase in Chinese, is headed by *zhiyou*/Q. Q bears an uninterpretable, though valued, ONLY feature. Its sister is the focus XP. After movement, QP is in Spec,Foc. In this position, it values the ONLY feature of $\text{Foc}^0$.

There's a lot of variance in the literature when it comes to the term "scalarity". I divide the empirical domain as follows. There is informational scalarity, a property of propositions to entail certain other propositions, and not entail certain others (Krifka 1995). If one says *I ate only two apples* this entails that I didn't eat three apples, and it entails that I ate one apple. There is scalarity proper (Guerzoni 2003: 173), which presupposes or conventionally implicates that the prejacent focus counts as little. If I say *I ate only salad*, then, in most contexts, this will not just mean that I ate nothing but salad, but that to eat salad and no more counts as little on some contextually determined scale. Finally, there is a frequently overlooked component of evaluation as bad that may accompany the use of 'only' words and other elements (Hole 2015). If someone says *He's only a cadet, don't marry him*, then the speaker will, in most contexts, want to express that being no more than a cadet is not just little or insignificant, but also bad. As already mentioned, I am concerned with scalarity proper here, the assessment of a focus value as little or insignificant. Note that monotonocity has certain effects on scalarity that sometimes obscure the assessment as little. There is no problem with sentences like *She owns only two T-shirts.* Things are different with *Only a golden bracelet will do*. Here it seems that a golden bracelet counts as a lot, seemingly reversing the scales.

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[2] Sun (2021) doesn't comment on this, but I assume that the EPP feature is needed to enforce feature valuation in a spec-head relationship, and not via Agree.

However, I argue that this is still a case of normal scalarity proper: only as little as gold (and maybe platinum) will do, irrespective of the high value of gold.

Because an anonymous reviewer felt confused by my use of the term *scalarity*, I would like to clarify the issue further by providing two pertinent examples (examples that were actually provided by the reviewer). Consider (3).

(3) a. *Zhiyou 18 sui-de          qingshaonian neng lai     canjia.*
      only    18 CL:year.of.age-DE youngster    can   come participate
      'Only 18-year old youngsters can participate.'
  b. *Zhiyou 18 sui-de          qingshaonian cai   neng lai     canjia.*
      only    18 CL:year.of.age-DE youngster    CAI   can   come participate
      'Only youngsters who are at least 18 years old can participate.'

(3a) excludes teenagers who are 17 or 19 years old. (3b) exludes teenagers who are younger than 18 and leaves it to context whether youngsters who are older than 18 may participate. (3b) necessarily involves scalarity, whereas (3a) needn't.

As mentioned above, Sun (2021) denies any interesting or morphosyntactic interaction between *zhiyou* and *cai* (cf. the obligatory use uf *cai* in (1)). This article takes issue with this and some other views as defended by Sun (2021). Specifically, I will demonstrate that the *cai* frequently co-occurring with *zhiyou* is not emphatic *cai*, as proposed by Sun (Sect. 2.1). Furthermore, I will show that *cai* defines a scope position that does have a presuppositional or conventional-implicature scalarity semantics as proposed by Hole (2015) (Sect. 2.2).[3] Section 2.3 is devoted to describing the tradition leading from Hole (2015) to Quek and Hirsch (2017) and then to Sun (2021), thereby pinpointing the close parallels between Hole's and Sun's accounts. In Sect. 2.4, I discuss some problematic data which Sun (2021) uses to argue in favor of an A′-movement account for *zhiyou* foci. I don't wish to deny the fact that A′-movement is involved, I would just like to insist on better data. Section 3 presents an account that combines Hole's and Sun's insights. In sum, I think both Hole (2017) and Sun (2021) may be right in that *zhiyou* phrases have morphosyntactic interactions with both an empty exclusiveness head and with the overt scalarity head *cai*.

## 2 A critical review of Sun (2021)

In this Sect. 1 present data and arguments which show that a reassessment of some of Sun's (2021) results is needed. I would like to make it clear at this early point that this leaves the core of Sun's proposal intact. Nevertheless, the reassessment is necessary to justify the addition to Sun's theory that I will present in Sect. 3.

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[3] Scalar and evaluative components of 'only'-words are typically modeled as presuppositions in the literature (Guerzoni 2003, Beaver and Clark 2009). However, it is probably more appropriate to treat them as conventional implicatures in the sense of McCready (2010), who states that conventional implicatures are not about information present in the common ground, but introduce new information, which, however, cannot be targeted by negation or other higher operators. This question is orthogonal to the concerns of the present article.

## 2.1 The *cai* co-occurring with preposed *zhiyou* phrases is not emphatic *cai*

Sun (2021) argues that the *cai* which frequently co-occurs with *zhiyou* is not a head of any sorts and that its use is not as obligatory with *zhiyou* phrases as Hole (2004, 2017) makes it appear. (Hole 2017 claims it is a scalarity head, and an 'only'-focus must sit in, or move through, its specifier.) Instead, Sun identifies the adjunct emphatic use type of *cai* as the particle really co-occurring with *zhiyou* phrases. Examples of each use type, the debated one and the clearly emphatic one, are given in (4) and (5).

(4) *Zhiyou Yuehan* (*cai*) *chi niurou.*　　　　　　　　　(Sun's 2021 (64))
　　only　John　CAI　eat　beef
　　'Only John eats beef.'

(5) a. [I watched the China-Japan basketball game yesterday.] (cf. Sun's 2021 (75))
　　　*NA-CI*　　　*BISAI*　　　*cai*　　　*jingcai*　　　*ne!*
　　　that-CL　　　game　　　CAI　　　great　　　SFP
　　　'THAT GAME was great!'
　　b. *Na-bu*　　　*dianying*　　　*cai*　　　*huangdan*　　　*ne!*
　　　that-CL　　　movie　　　CAI　　　ludicrous　　　PRT
　　　≈'How ludicrous that movie is!' (Hou ed., 1998: 77)

It is a welcome addition to our knowledge of Chinese to have it pointed out, more than it is in Hole (2004: 52), where the *cai* in question is not obligatory (after subject foci, with more than a bare verb following *cai*, and after some temporal adjuncts). However, I would like to point out three facts in defense of the head analysis. First, as Sun (2021: fn. 4) acknowledges herself, *cai* is absolutely mandatory after subordinate 'only-if'-clauses introduced by *zhiyou* (Wimmer 2022). Sun (2021) chooses not to incorporate these cases in her analysis. I doubt that this is a good strategy. We have subordinate *zhiyou* clauses with obligatory matrix *cai*, we have obligatory *cai* with many monoclausal foci, and we have perfectly similar *mới* in Vietnamese (Hole 2013, 2015). It is the core idea in Hole (2015) and in the present article, that the use of *cai* with 'only'-foci invariably indicates a scalar interpretation of the focus. Like this it becomes possible to account both for its obligatoriness in many cases, and for its optionality in many cases, at least in principle.[4] (We will see in Sect. 2.2 below, as we saw in the introduction, that under certain circumstances

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[4] Note in passing that the similar pair *zhiyao…jiu* used in conditionals with foci in the protasis (Wimmer 2022) is likewise attested in a variant without *jiu* in colloquial language, while no-one contests the general obligatoriness of *jiu* in this construction. (i) presents an attested example, where the variant without *jiu* is the attested one (Hou ed., 1998; Hole 2004: 72).

(i) *Zhiyao*　　　　*wo*　*ba*　*wo*　*dui ta-de yinxiang*　*shuochulai,*　*ta*
　　only.necessary　I　DOM　I　to　he-DE impression　speak.out　he
　　(*jiu*)　　　　*bu*　*hui*　*guaizui wo.*
　　JIU　　　　not　will　blame　I
　　'If I told him what my impression of him was, he wouldn't blame me.'

true minimal pairs with and without *cai* do exist which feature a stable contrast in meaning as well.) Second, and as has been known at least since Alleton (1972), the *cai* in (4) cannot be emphatic *cai*, because emphatic *cai* only occurs in exclamations and is typically, but not always (Hou ed., 1998: 78, Hole 2004: 18–9), followed by the sentence-final particle *ne*; cf. (5).[5, 6] Neither of these two generalizations holds for the *cai* co-occuring with *zhiyou* phrases. What is more, emphatic *cai* sits higher in the tree, a fact which is evidenced by the contrast between (4′) and (5′).[7]

(4′)  *Zhiyou Yuehan cai* (\**zhen*) *chi niurou.*
     only    John   CAI  really    eat  beef
     'Only John eats beef.'

(5′)  [I watched the China-Japan basketball game yesterday.]
     *NA-CI*    *BISAI*    *cai*    (*zhen*)    *jingcai*    *ne!*
     that-CL    game    CAI    really    great    SFP
     'THAT GAME was really great!'

According to Alleton (1972: 147), emphatic *cai* may be followed by *zhen* 'really' without ever influencing acceptability. This may not be true (Alleton only has few pertinent examples in her corpus), but the difference in acceptability judgments between (4′) and (5′) is robust. A generalization that probably holds without exception is that emphatic *cai* may always be replaced by *zhen* without leading to unacceptability. Hole (2017) and Bross and Hole (2017) locate the scalarity projection spelled out in (1), (4) and (4′) right above T, whereas *zhen* 'really' is an evidential device and, hence, above the scalarity projection (Cinque 1999). Ironically, the informal semantics that Sun (2021: 344) provides in (6) characterizes an exclusive—though corrective—focus particle with a scalar semantics, precisely what Hole (2017) claims for the interaction between *zhiyou* and (parametric) *cai*.

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[5] Lai (1999) and Sun (2021) base their generalizations concerning emphatic *cai* on a single (the same) example. Biq (1984, 1988) lists three examples, and Alleton (1972) has 17 examples in her corpus. My treatment of emphatic *cai* rests on Alleton (1972) and Hole's (2004: 18–9) rendering of the tradition.

[6] Liu Mingming (p.c.) points out to me that to him (5b) sounds more like a structure involving a contrastive topic. '[This game]CT was soso. [That game]CT, on the other hand, was CAI great.' It has indeed been observed by Alleton (1972) that emphatic *cai* comes in two flavors, one associating with a gradable property, and one which associates with something that is similar to a clefted constituent. I take it that Liu read (5) as such. The distributional generalization to be discussed next in the main text holds for both use-types of emphatic *cai*.

[7] An anonymous reviewer points out that (5) contains a scalar predicate whereas (4) does not, and that this may account for the difference in acceptability. (i) features a scalar predicate, contains scalar *cai* and still disallows *zhen*.

(i)  *Zhangsan cai* (\**zhen*) *wu-sui.*
    Zhangsan  CAI  really    5-CL:year.of.life
    'Zhangsan is a mere 5 years old.'

I take this to mean that the *cai* that Hole and Sun mainly investigate is not the emphatic *cai* of Alleton (1972) and others.

(6) *cai(p)* is used in a context when –

   a.  *p* and its alternatives are ranked in terms of what standard they indicate for a context-salient property *G*;

   b.  The prejacent *p* is uttered to correct a potential alternative *p′* in the previous discourse to indicate a higher standard of *G*.

All in all, Sun (2021) rejects Hole's semantic and distributional analysis of parametric *cai*, only to reintroduce a device with an almost identical function as a replacement, claiming that this is a discourse marker, and not a device involved in focus marking.

### 2.2 *Cai* defines a scope position of its own interacting with *zhiyou* foci

Sun (2021: 339, fn. 11) uses the contrast between (7a) and (7b) to argue against a fixed scope position of the 'only' foci involved.

(7) a.  *Zhiyou zhe-zhong qufeng   Yuehan   keneng    cai jieshou.*
       only    this-kind  music.style John      likely      CAI accept
       'Only this kind of music style is John likely to accept.'

   b.  *Yuehan keneng   zhiyou      zhe-zhong qufeng    cai jieshou.*
       John    likely      only       this-kind  music.style CAI accept
       'It is likely that John only likes this kind of music style.'

The truth conditions of these two sentences differ (albeit only in a superset fashion: the truth-conditions of (7a) are a superset of those in (7b), i.e. (7a) is true in fewer situations than (7b)). Hence, Sun argues, it cannot be the specifier of a *cai* phrase where the *zhiyou* focus has its obligatory site of interpretation. I grant that much, but this is not what Hole (2015) claims. What he claims is that *cai* defines the scope of the scalarity operator LITTLE. It is instructive in this context to see what happens in a configuration where the interacting operators have different monotonicity properties and the truth-conditions differ more dramatically than in (7).

(8) a.  *Zhiyou zhe-zhong   qufeng    Yuehan     bukeneng   (\*cai) jieshou.*
       only    this-kind    music.style John      impossibly CAI      accept
       'Only for this music style is it impossible that John accepts it.'

   b.  *Yuehan bukeneng   zhiyou      zhe-zhong qufeng    cai     jieshou.*
       John    impossibly only      this-kind  music.style CAI     accept
       'It's impossible that John accepts only this music style.'

With *zhiyou* scoping above *bukeneng* 'impossibly' as in (8a), *cai* is deviant. With *zhiyou* scoping below *bukeneng* as in (8b), it is fine. If we spell out the scalarity component of *cai*, we see why this is the case.

(8) a. #  'Only for this music style is it impossible that John accepts as few music styles as that.'

   b.     'It's impossible that John accepts only as little as this music style.'

The reason for the impossibility of *cai* in (8a) lies in the fact that it is implied by *cai* in its scoping position that John likes few music styles. With the operators on top, however, the sentence implies that he likes many music styles. That is a contradiction. (8b), on the contrary, negates the possibility that John likes as little as one music style, and that doesn't result in a contradiction.

More evidence to the effect that *cai* defines a scope position of its own comes from (9), a sentence contributed by an anonymous reviewer.

(9)  *Zhiyou    zhe-zhong    qufeng         Yuehan   cai   bukeneng    jieshou.*
    only       this-kind     music.style     John     CAI   impossibly   accept
    'Only for as little as this music style is it impossible that John accepts it.'


With the scalarity operator scoping above the negated epistemic modal, the deviance of (8a) with *cai* turns into impeccability. This reading is predicted by Hole's (2017) proposal for *cai*'s function.[8]

Interestingly, Sun (2021: 342–343) herself adduces evidence to the effect that *cai* contributes this kind of scalarity. Consider (10) and (11), where Yangmi represents an actress of average quality, Tangwei one of higher quality, and Zhangziyi one of excellent quality.

(10)  A:  *Zhe-ge   juese       shei     neng   yan?*
        this-CL   role        who      can    play
        'This role, who is able to play it?'
    B:  *Zhiyou   Tangwei   zhe-ge  jibie   cai    neng   yan.*
        only       Tangwei  this-CL  level  CAI   can    play
        'Only actresses from Tangwei's level on upwards can play this role.'
    A:  *Tai    hao   le!   Na    qing     Zhangziyi kending   mei       wenti!*
        too     good  LE    then   invite    Zhangziyi definitely not.exist  problem
        'Great! Then having Zhangziyi will definitely work.'

(11)  A:  *Zhe-ge   juese       shei     neng   yan?*
        this-CL   role        who      can    play
        'This role, who is able to play it?'
    B:  *Zhiyou   Tangwei   zhe-ge  jibie   neng   yan.*
        only       Tangwei  this-CL  level  can    play
        'Only actresses of Tangwei's level can play this role.'
    A:  #*Tai hao   le!   Na    qing Zhangziyi kending   mei       wenti!*
        too     good  LE    then   invite Zhangziyi definitely not.exist  problem
        'Great! Then having Zhangziyi will definitely work.'

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[8]  What is not predicted by Hole (2017), though, is that *cai* can take scope above epistemic modals at all. Hole (2017) assumes that scalar *cai* sits in a fixed position right above T, but below epistemic modality. That parametric words may scope in different positions which must be at least above T has also been shown for the parametric-scalar use of *ye* 'also' by Yang (2020). I have adjusted the statements about *cai*'s syntactic position in the main text accordingly.
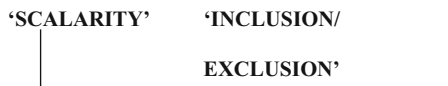
These dialogues only differ with regard to the presence or absence of *cai* in B's turn. While the presence of *cai* makes it possible to include higher-ranking options, B's turn in (11) excludes all other alternatives, no matter what their rank is. Sun (2021) uses this kind of data to steer in the direction of her emphatic-*cai* proposal. I think I have shown above that this is not viable. What this kind of data shows, however, is that *cai* may very plausibly be assumed to induce an order over alternatives, and that this order associates the asserted option with a low scalar value. It is important to note at this point that this scalar lowness holds even in cases like (10). The levels of excellence that will do in (10) are stated to be few, with higher levels of excellence than that of Tangwei trivially making B's turn true. In (11), on the contrary, no scalarity is invoked, and all alternatives are excluded independently of any concomitant ranking.

To sum up, Hole (2017) is probably wrong in claiming that each *zhiyou* focus involves *cai* scalarity. He is right, I think, in claiming that the evidence points towards assuming that *zhiyou* foci, if *cai* is present, interact with *cai* in a way that may well be analyzed as a spec-head relationship, if only as one step in a longer movement chain.[9]

### 2.3 Sun's (2021) architecture is more similar to Hole's (2015, 2017) than might first appear

Sun (2021) proposes that there is an exclusive focus head where needed above vP which indicates the scope position of 'only' operators and that *zhiyou* phrases obligatorily move through or land in that projection. While Hole (2015, 2017) in his work on German, Dutch, Vietnamese and Chinese doesn't consider the possibility that *zhiyou* phrases must value features in that projection, he proposes precisely this overall architecture for sentences that have a scalar and exclusive meaning. This overall architecture is provided in (12). (Hole, 2017: 404 treats 'even' foci on a par with 'only' foci, that's why the scalarity head LITTLE$^0$ in (12) has a MUCH$^0$ variant. AdFoc stands for "ad-focus particle" like Chinese *zhiyou* 'only'. FocAdv stands for "focus adverb" like Chinese *zhi* 'only'.)

(12) $[_{\text{SCAL}}\,\text{MUCH}^0/\text{LITTLE}^0 \ldots [_{\text{v}}\,\text{FocAdv} \ldots [_{\text{XP}}\,\text{AdFoc}\,[_{\text{XP}}\ldots]\,]\,]\,]\,]$

|  |  |
|---|---|
| **'SCALARITY'** | **'INCLUSION/** |
|  | **EXCLUSION'** |

Move or Agree

Hole (2015) develops an argument to the effect that 'only' phrases should reconstruct to a position underneath the exclusive projection. He does so to tackle a problem first presented by Büring & Hartmann (2001: 259–63) for German.

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[9]  Cf. Hole (2015: 65–74, 2017: 402–403, 406–407) for evidence to the effect that the scalar operator and the exclusive operator take scope in different positions.

(13) ***Nur*** [*ein Bild von seiner*$_i$ *Fráu*$_F$] *besitzt* [*kein Mann*]$_i$.
　　　only a 　picture of his 　wife 　possesses 　no 　man
　　　'Only a picture of his wife does no man possess.'
　　a. 　LF: only ___ possesses [no man]$_i$ a picture of his$_i$ wife
　　　　'The only person no man possesses a picture of is his wife.'
　　b. 　*LF: ___ possesses [no man]$_i$ only a picture of his$_i$ wife.'
　　　　'No man only possesses a picture of his wife.'

 In (13) the topicalized quantifier must reconstruct to the c-command domain of the subject quantifier *kein Mann* 'no man'. Otherwise the possessive pronoun could not be bound. However, the scope of the exclusive operator must *not* be below the subject quantifier. Büring and Hartmann (2001) use this kind of example to argue against the constituenthood of *nur ein Bild von seiner Frau* in (13), something that is really hard to accept if one knows that the German topicalization position always hosts exactly one constituent. Now, Hole (2015) proposes that the semantically active focus operator is not pronounced and sits at the edge of vP. The ad-focus particle in (13) is not interpreted. This will yield the PF and LF in (14).

(14) a. 　PF of (13) with reading a:

　　　[ [***Nur***$_{AD\text{-}FOC}$ [*ein Bild von seiner*$_i$ *Frau*]] [∅$_{SCAL}$ [*besitzt* [$_v$∅$_{EXCL}$ [$_v$ [*kein Mann*]$_i$ [$_v$...]]]]]]

　　　　only 　　a picture.of.his.wife 　　　　possesses 　　　　no man

　　b. 　LF of (13) with reading a:

　　　[∅$_{SCAL}$ [$_v$∅$_{EXCL}$ [$_v$ [ *kein Mann*]$_i$ [$_v$ [***nur***$_{AD\text{-}FOC}$ [*ein Bild von seiner*$_i$ *Frau*]] *besitzt*]]]]

　　　　　　　　　no man 　　　only 　　a.picture.of.his.wife 　　　possesses

 Whether it is the exclusive operator or the ad-focus particle that is pronounced, is regulated by the principle in (15), which holds for German.

(15) First Come, First Spell-Out (cf. Hole 2015: 59)
　　From among EXCL and AD-FOC in a single focus-background structure, the linearly first operator will be pronounced (where EXCL is the exclusive operator and AD-FOC the ad-focus particle/operator).

This principle was actually among the inspirations for Quek & Hirsch's (2017) spell-out principle for English, which Sun (2021) renders as in (16) (Aron Hirsch, p. c.).

(16) Exactly one head in the bipartite structure of 'only' must be phonologically overt.

In sum, Sun (2021) proposes an architecture that, among other inspirations, goes back to Hole (2015, 2017), but with the important addition that *zhiyou* phrases are

seen as partaking in feature valuation not in scalarity phrases, but in the projection of the exclusive operator. I would like to propose that the *zhiyou* phrase might well value features both in the exclusive position and in the scalarity position.

## 2.4 Sun's reconstruction evidence is inconclusive

The present and the following subsections are different from the preceding ones in that they critically review data that don't really affect the core of Sun's proposal or its compatibility with the proposal to be made in Sect. 3. These subsections aim at pointing out that some of Sun's (2021) data should only be used with caution.

Sun (2021: 326) uses the data in (17) to argue in favor of the reconstruction of *zhiyou* phrases. This is done to corroborate the A′-movement nature of the movement involved.

(17)  a.  *Wo*  [*zhiyou ZHE-ben guanyu taziji$_i$  de  shu*]$_1$ *gei-guo*  *Lisi$_i$*  t$_1$.
          I    only this-CL  about  himself DE  book  give-exp  Lisi
          '[Only this$_F$ book about himself$_i$] did I give Lisi$_i$ t$_1$.'  (Condition A)

 b. *  *Wo* [*ZHE-ben zhiyou*  *guanyu*  *Lisi$_i$*  *de*  *shu*]$_1$  *gei-guo*  *ta$_i$*  t$_1$.
          I    only this-CL  about  Lisi  DE  book  give-EXP  he
          '[Only this$_F$ book about Lisi$_i$] did I give him$_i$.'  (Condition C)

 c.  *Yuehan* [*zhiyou*  *ZHE-ge*  *niu*]$_1$  *changchang chui* t$_1$.
          Yuehan only  this-CL  bull  often  blow
          '[Only this$_F$ boast] does John often make t$_1$.'  (Idiomatic meaning available)

The reflexive-like element in (17a) is expected if the *zhiyou* phrase reconstructs. After reconstruction, *Lisi* in (17b) will be c-commanded by *ta*, hence the reported Condition C effect. In (17c), finally, the availability of the idiomatic reading of *chui zhe-ge niu* 'boast' is available, which should mean that the direct object undergoes reconstruction.

The problem with (17a) is that *taziji* is not the short-distance reflexive *taziji* here, but a sequence of the ordinary Condition B pronoun *ta* and an intensifier 'he himself' (Hole 1998, 2008). This can be seen clearly in (18), a sentence which is as good as (17a).

(18)  *Wo* [*zhiyou ZHE-ben guanyu ta$_i$  de  shu*]$_1$ *gei-guo*  *Lisi$_i$* t$_1$.
          I    only this-CL  about  him DE book give-EXP Lisi
          '[Only this$_F$ book about him$_i$] did I give Lisi$_i$ t$_1$.'

(18) could either mean that the *zhiyou*-phrase does not reconstruct, or that it reconstructs, but that *ta* 'him' is in an exempt position. Note the impeccability of (19), where no movement has taken place and the ordinary pronoun is fine under c-command from its antecedent.

(19)  *Wo gei-guo Lisi$_i$ zhe-ben guanyu ta$_i$  de shu.*
          I    give-EXP Lisi this-CL  About  him DE book
          'I gave Lisi$_i$ this book about himself$_i$.'

(19) renders it highly plausible that *ta*'s position in (18) is exempt. Hence this sentence cannot be used to argue in favor of reconstruction.

What is more, as Sun (2021: 334) notes herself, Chinese is known to have reconstruction for (reflexive) binding only, and not for scope. It is, hence, a bit unclear what the claim that *zhiyou*-phrases reconstruct really means.

Let us now turn to Sun's other two examples from (17) which are meant to show that *zhiyou* phrases reconstruct, repeated here as (20).

(20)  a.*  *Wo*   [*zhiyou ZHE-ben guanyu Lisi*$_i$   *de shu*]$_1$   *gei-guo*   *ta*$_i$   t$_1$.
          I     only   this-CL   about   Lisi   DE   book   give-EXP   he
          '[Only this$_F$ book about Lisi$_i$] did I give him$_i$.'   (Condition C)

      b.  *Yuehan*   [*zhiyou*           *ZHE-ge niu*]$_1$   *changchang*   *chui*   t$_1$.
          Yuehan   only           this-CL   bull   Often   blow
          '[Only this$_F$ boast] does John often make t$_1$.'   (Idiomatic meaning available)

As concerns (20a), I would like to deny its ungrammaticality. Condition C violations are known to be a bit tricky, and I would claim that the oddness of (20b) is of a much milder kind than that of, say, *\*Ta*$_i$ *dai-lai-le Zhangsan*$_i$-*de shu* '*He$_i$ brought along Zhangsan$_i$'s book.'

Turning to (20b) now, I would like to point out that the canonical form of the idiom involves a bare object: *chui niu* 'boast'. The version in (20b) with the definite preposed object is interpreted in an ad-hoc compositional fashion which doesn't require reconstruction. The English translation gives a hint in that direction in that *zhe-ge niu* can be paired with the DP *this boast* in the translation. (Note that according to Diesing 1992, Carlson 2003 and many others definites obligatorily move out of VP and don't reconstruct.)

To sum up, Sun (2021) does not show beyond doubt that *zhiyou* phrases reconstruct.

## 2.5 The purported WCO effect is something else

The data in (21) is used to argue for a Weak Crossover Effect (WCO) with preposed *zhiyou* foci (Sun 2021: 327). This, if such an effect can be shown to exist, would strengthen the idea that *zhiyou* foci are not interpreted in their surface positions.

(21)  a.*  *Wo*   [*zhiyou*   *YUEHAN*$_i$]   *cai gei tade*$_i$   *shangsi jieshao-guo*   t$_1$.
          I     only   John   CAI   to   his   boss   introduce-EXP
          int.: 'I've only introduced [John$_i$]$_F$ to his$_i$ boss.'

      b.?*  [*Zhiyou YUEHAN*$_i$]$_1$   *wo*   *cai gei tade*$_i$   *shangsi jieshao-guo*   t$_1$.
          only   John   I   CAI   to   his   boss   introduce-EXP
          int.: 'I've only introduced [John$_i$]$_F$ to his$_i$ boss.'

To be sure, the *zhiyou* phrases have moved across the co-indexed pronoun, which makes these cases look like Weak Crossover violations. However, *Yuehan* doesn't c-command the co-indexed pronouns in (21), only *zhiyou Yuehan* does. This makes

Sun's footnote 7 appear in a new light. There she reports marginal acceptance of the sentences in (21) by some of her consultants. If no WCO violations existed in the first place, this would be expected. The footnote goes on to insist on the absence of the binding readings in (21) even if these sentences are deemed acceptable, those where other people are not introduced to their respective bosses, and not to John's boss. Again, the absence of this reading is expected, because *Yuehan* in its surface position does not c-command *tade*.[10]

## 2.6 Taking stock

I have presented strong evidence to the effect that the *cai* frequently co-occurring with *zhiyou* is not emphatic *cai*, as proposed by Sun (2021). Instead, I reinstantiated Hole's (2004, 2017) view that there is morphosyntactic interaction between *cai* and *zhiyou*-foci. I went on to show that *cai* defines a scope position for 'only'-foci of its own which does not coincide with the position of Sun's empty exclusive operator. Furthermore, I pointed out the large similarities in the overall architectures of Sun's and Hole's analyses. In the last portions of this section. I warned against using some of Sun's data without caution. It is probably fair to say that, at the present point, we don't know whether *zhiyou*-phrases really reconstruct.

## 3 The new proposal

The proposal that I wish to propose is quite obvious. It includes everything that Sun (2021) proposes for the interaction of *zhiyou*-foci with the phonetically empty exclusive operator. It adds to this the scalarity head instantiated by *cai*. *Zhiyou*-foci without a scalar component (such as the one in (11), repeated here as (22)), require no modifications of the theory. *Zhiyou*-foci co-occurring with *cai* (such as the one in (10), repeated here as (23)), require the assumption of an enriched feature structure of *zhiyou*-foci with a matching feature structure on *cai*.

(22)  A: *Zhe-ge  juese    shei    neng  yan?*
          this-CL  role     who     can   play
          'This role, who is able to play it?'
      B: *Zhiyou  Tangwei  zhe-ge  jibie   neng  yan.*
          only    Tangwei  this-CL level   can   play
          'Only actresses of Tangwei's level can play this role.'
      A: #*Tai  hao    le!  Na    qing   Zhangziyi  kending   mei       wenti!*
          too  good   LE   then  invite Zhangziyi  definitely not.exist problem
          'Great! Then having Zhangziyi will definitely work.'

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[10] If the *zhiyou* phrases reconstruct, then (21) would point to a Principle C effect.

(23) A: *Zhe-ge juese    shei    neng  yan?*
       this-CL role    who   can  play
       'This role, who is able to play it?'

   B: *Zhiyou Tangwei zhe-ge jibie   cai    neng  yan.*
      only  Tangwei this-CL level  CAI  can  play
      'Only actresses from Tangwei's level on upwards can play this role.'

   A: *Tai  hao   le!  Na    qing Zhangziyi kending mei     wenti!*
      too  good  LE  then  invite Zhangziyi definitely not.exist problem
      'Great! Then having Zhangziyi will definitely work.'

 (24) repeats Sun's (2021) proposal for *zhiyou*-foci (in a setting before movement of a direct object focus, for instance). (25) repeats (1) for illustration, the structure after movement.

(24) $[_{FocP} [_{Foc'} Foc^0_{[iONLY(), EPP]} [_{vP/TP} \cdots [_{QP} Q^0_{[uONLY(+)]} XP_F ] \cdots ] ] ]$

(25) *Akiu*        $[_{FocP} [_{QP}$ *zhiyou   niurou]    cai    chi   $t_i$ ].
    Akiu              only    beef    CAI  eat
    'Akiu eats only beef.'

QP moves up to Spec,Foc, and there it values the interpretable ONLY feature. As just said, if the arguments from Sect. 3 hold up, the same architecture is needed for the interaction of *zhiyou*-foci with the scalarity head *cai*, if it is present.[11]

(26) $[_{ScalP} [_{Scal'} Scal^0_{[iSCAL(), EPP]} \cdots [_{vP/TP} \cdots [_{QP} Q^0_{[uONLY(+), uSCAL(+)]} XP_F ] \cdots ] ] ]$

Again, *zhiyou*-foci have to move to, or through, Spec,Scal to value the scalarity feature on the Scal head *cai*. This means, then, that *zhiyou*-foci come in two flavors, either as the QP type from (24), or as the QP type from (26) depending on whether *cai* co-occurs or not. This proposal maintains all the advantages of Sun's analysis while integrating the—empirically needed—morphosyntactic treatment of *cai* into the picture.

   Let me point out one important difference between Foc$^0$ and Scal$^0$. The syntactic position of Foc$^0$, the empty exclusive operator, varies above vP according to scopal needs. As shown in Sect. 2.2 and argued for by Hole (2015, 2017), the syntactic position of Scal$^0$ is fixed, only allowing for a scoping position right above TP/AspP or epistemic modality (the choice between TP and AspP depending on whether one assumes a tense node for Chinese or not).

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[11] Some readers may be uneasy about treating *zhiyou* as a constituent (Liu Mingming, p.c.). The *you* in *zhiyou* has uses elsewhere (*jin-you* 'only', *hai-you* 'furthermore', the *you* with indefinites in subject position), and its 'if'-like semantics appears to be stable across contexts. One might be tempted to assume, then, that *you* combines with a sister to its right first, to be merged with *zhi* only after that (researchers have entertained parallel proposals for English *only if* or *even if*; Vidal 2017: 259–260). Note, however, that a compositional account that treats *zhi* as taking *you* as its first argument (or that combines with it by function composition) can easily derive this stable behavior of *you* (Wimmer 2022).

The price to pay for this overall solution is that we are forced to assume a kind of morphosyntactic polysemy for *zhiyou*. The two variants differ in whether an instance of *zhiyou* carries the [uSCAL(+)] feature, or not.[12]

If all of this is on the right track and, specifically, if the presence of *cai* invariably indicates scalarity, one loose end still remains. Why is *cai* truly necessary in bi-clausal *zhiyou*-structures ('only-if'-structures) as in (27) (Hole 2004; Wimmer 2022)?

(27) *Zhiyou ni   lai    wo  *(cai)   qu.*
     only.if  you  come  I    CAI     go
     'Only if you come will I go.'

Even the most advanced treatment of such structures to date (Wimmer 2022) assumes no obligatory scalarity in this case, whereas such scalarity is assumed by Wimmer (2022) for *zhiyou*'s recalcitrant counterpart *zhiyao* 'if'. It would certainly increase the symmetry of Wimmer's proposal if arguments could be found to the effect that *zhiyou*-conditionals always involve scalarity, too. I'll leave this for another occasion.


## 4 Conclusions

In this short article, I have critically reviewed some conclusions arrived at by Sun (2021) in her article on bipartite monoclausal *zhiyou* structures. I hope to have convinced the reader that, despite my criticism, Hole's (2015, 2017) and Sun's (2021) theories are probably both on the right track and are, in fact, rather similar. Sun delivers the bipartite syntax for the interaction of *zhiyou*-phrases with the scope-taking exclusive operator of variable syntactic height, while Hole delivers the syntax of *zhiyou*-phrases with the scope-taking scalarity operator. For concreteness's sake, I developed an explicit featural architecture strictly following Sun (2021) and Quek & Hirsch (2017) to derive the behavior of *zhiyou*-phrases and *cai* in interaction.

An interesting avenue for future research would be to clarify whether bi-clausal *zhiyou* structures ('only-if'-conditionals) should all be analyzed as structures involving scalarity. The morphosyntactic evidence renders this highly likely.

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[12] An anonymous reviewer raises the possibility that *cai* might actually introduce evaluativity, as opposed to scalarity, in the sense of Greenberg (2019). However, Greenberg's evaluativity with exclusive operators is precisely the same as what Hole calls scalarity (cf. the Introduction to this article). Greenberg's scalarity is what Hole usually calls informational strength. To render things even more complicated, Hole (2015) uses the term "evaluative" to characterize uses of 'only' words that characterize the low asserted value within its proposition as bad.

the past about the lasting achievements of Viviane Alleton (especially Alleton, 1972). I feel greatly indebted to her pioneering work.

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