Mirative focalization: A case study of Mandarin *lian*-DP *dou* construction[*]

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Abstract

The paper investigates Mandarin *lian*-DP *dou* construction (aka. 'even'-construction) in terms of the following controversial aspects – i.e., the contributions of the syntactically indispensable elements *lian* 'even' and *dou* 'all', and the syntactic distribution of the construction in connection with associated information structure. It is extensively accepted in the literature that a *lian*-DP – i.e., the chunk formed by *lian* and the following nominal phrase, can represent two functional positions – in the clause-external Left Periphery (henceforth LP), and in the low IP area, because it occurs either preceding or following the alleged subject. In the present paper, however, I argue that a *lian*-DP, regardless of its linear position, undergoes successive-cyclic movement and, specifically, it first makes a stopover in Spec*dou*P for quantificational reasons before it takes a further step of mirative focus fronting targeting the LP. Support is threefold – pragmatically, *lian*-DP *dou* construction denotes contextually similar implicatures as Sicilian mirative expressions do; semantically, the quantifier *dou*, serving as a maximality operator, imposes exhaustivity over the alternatives available on a scale and therefore forces the *lian*-DP to move to Spec*dou*P; and syntactically, the observable weak crossover effects (WCO) manifest that *lian*-DP movement is inherently focus fronting.

Keywords: *lian*-DP *dou* construction, Mandarin, maximality operator, mirative focus, weak crossover

1. Introduction

Mandarin *lian…dou…* construction, also termed as Chinese 'even'-construction in the literature, has been a subject of debate over the past several decades. Nevertheless, controversy remains over the syntactic distribution and information structure of the construction (Badan and Del Gobbo 2010, 2015; Paris 1979; Paul 2005; Shyu 1995; Tsai 2004; Zhang 2013, among others). The present paper addresses the relevant issues on Chinese 'even'-construction when the phrase immediately

following *lian* is a nominal phrase (henceforth *lian*-DP *dou* construction). As illustrated in (1), *lian*-DP is linearizable sentence-initially and sentence-internally.

(1)
a. *lian* xiao haizi [IP ta *dou* bu xihuan].
    even little kid 3sg all neg like
    'Even children (s)he doesn't like.'
b. [IP ta lian xiao haizi dou bu xihuan].
    3sg even little kid all neg like
    '(S)he doesn't like even children.'   adapted from Paul (2005: 117: 19)

    Traditionally, it is claimed that the sentence-initial *lian*-phrase occupies the Left Periphery (LP), whereas the sentence-internal one is in the low IP area (see, e.g., Paul 2005; Zhang 2013, Badan and Del Gobbo 2015, *à la* Belletti 2004). The bipartite distribution of *lian xiao haizi* 'even-children' in (1) correlates with the syntactic position of the sentence subject *ta*, which is supposed to occupy the structural subject position in SpecIP following the Extended Projection Principle (EPP). However, the opposite opinion holds that a *lian*-phrase is invariably licensed in the *v*P periphery, see, e.g., Xiong (2017).[1] In combination with the fact that Chinese is a Topic-prominent language that lacks the strong EPP feature of T, the distribution of *lian*-DP alongside the structure of *lian*-DP *dou* construction is still something worth exploring.

According to Rizzi (2005), a Topic is distinguished from a pure subject in having the [+D-linking] property, which prevents a Topic constituent from occurring in out-of-the-blue contexts. Consider, for example, the question-answer pair in (2), where the only felicitous answer to the question ("what happened to the celebrity") must embrace a discourse-related Topic referring back to *zhe-ge mingxing* 'this celebrity'. That follows only if the sentence-initial *ta* that precedes *lian*-DP in (2-*A*) is inherently a topic rather than a normal structural subject. By contrast, a plausible assumption that can be made about the grammatical but infelicitous reply in (2-*A′*) is that the post-*lian*-DP *ta* might serve as a real subject[2].

(2)   **Q**: zhe-ge mingxing fasheng-le shenme?
        this-cl celebrity happen-prf what
        'What happened to this celebrity?'
   A: -ta *lian* SHUI *dou* tou!
        3sg even tax all evade
        '(S)he even the tax evaded!'

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[1] Evidence arguing for the proposal that *lian*-phrase is licensed in the *v*P domain in Xiong's (2017) is twofold: First, *lian*-phrase can be used in an embedded relative clause; second, the fact that Chinese allows for null subjects indicates that it has a weak EPP feature.

[2] Example (i) presents a grammatical sentence in which the non-referential subject *mei'ge'ren* is supposed to project a QP in SpecTP, which is preceded by two functional projections, i.e., a TopP hosting *Zhang San* and a FocP hosting *lian yi-ben-shu* (details on the focalization of *lian*-DP will be discussed later in the paper). This observation supportatively converges with our assumption that the normal subject position in Mandarin *lian*-DP *dou* construction is in SpecTP.

    (i) Zhang San$_i$, *lian* yi-ben-shu$_k$ mei'ge'ren dou bu gei *ta*$_i$ t$_k$
       Zhang San even one-CL-book everyone all NEG give him
       'Zhang San, everyone does not even give him a book.'

#A': -*lian*	SHUI	ta	*dou* tou!
even	tax	3sg	all evade

'(S)he even evaded the tax!'

Therefore, the syntactic distribution of *lian*-DP brings itself back as a remaining question. As is suggested by the topic-hood of the sentence-initial subject in (2-*A*), a functional projection like FocP seems a quite plausible host for the *lian*-DP that follows the Topic. Thus, the following questions arise: (i) What is the functional projection that hosts *lian*-DP and, (ii) what kind of discourse-related features are associated with this projection? This may give us a clue about the distribution of a *lian*-DP once these questions are answered. In addition, in order to capture a general picture of *lian*-DP *dou* construction in terms of its underlying structure, I will also look into the properties of the particle *lian* 'even' and the quantifier *dou* 'all' and try to understand how they configure the Mandarin 'even'-constructions as depicted in this paper.

Below are my proposals for the paper: ***a)*** 'even'-construction in Mandarin involves Mirative focalization of the *lian*-DP; ***b)*** *dou* serves as a maximality operator that quantifies over the scale introduced by *lian*; and ***c)*** the promotion of the *lian*-phrase takes two steps: *lian*-DP first journeys through Spec*dou*P for quantificational reasons, then undergoes mirative focalization to the Left Periphery. This holds no matter whether a *lian*-DP is linearized sentence-initially or sentence-internally [3].

The remainder of the paper is structured as follows. Section 2 presents the pragmatic parallelism between *lian*-DP *dou* construction in Mandarin and mirative constructions in Romance languages (Cruschina 2012) in conveying unexpected new information. Section 3 examines the maximality operator *dou* in terms of its semantic properties and demonstrates the semantic and syntactic essentiality of *lian* as a scalar introducer in Chinese mirative construction. Section 4 focuses on the syntax that derives a *lian*-DP *dou* construction proper, showing that *lian*-DP fronting must be licensed through focalization. Section 5 winds up the paper with conclusions and potential puzzles of the analyses.

2. Mirative expression: *lian*-DP *dou* construction and Romance mirative focalization

According to Cruschina (2012), mirative constructions in Romance languages are applied to convey unexpected new information alongside pragmatic intentions such as surprise, anger, concern, and fright in out-of-the-blue contexts. Mirative expressions in Romance feature

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[3] As opposed to the idea that external *lian*-DP exhibits Ā-movement whereas internal *lian*-DP is derived from A-movement, as claimed in Badan and Del Gobbo (2015), Paul (2005) and Zhang (2013), the paper argues that *lian*-DP *dou* constrruction is derived through the Ā-movement of *lian*-DP to the mirative focus position in the high left periphery. In reply to a reviewer's concern about the difference between the current paper and Badan and Del Gobbo's (2015) analysis, the paper holds that *lian*-DP fronting is inherently restricted to focalization rather than topicalization, as corobborated by the weak crossover effects exhibited in section 4.1. In addition, the paper examines the semantic contribution of *lian* to setting up a gradable scale in order for the maximality operator *dou* to quantify over and, therefore, *lian*-DP is forced to take the first step of movement targeting Spec*dou*P, from where focalization of *lian*-DP takes place. Besides, the paper proposes that *lian*-DP *dou* construction denotes contextually similar unexpected implicatures as Sicilian mirative expressions do and concomitantly, defines *lian*-DP *dou* construction as a case of mirative construction.

mirative fronting of the constituents carrying "unexpected new information", which in turn "gives an exclamative flavor to the whole sentence" (71). Compare (3), a typical example of mirative fronting in Sicilian, with a *lian*-DP *dou* construction in (4). The use of the *lian*-phrase in Mandarin bears great resemblance to the application of "macari-" in Sicilian to express the extreme unexpectedness upon hearing about the news of inviting a designated person to the theatre.

(3)   [Sicilian]
        MACARI/MANCU GIUFÀ[4] 'mmità   au   tiatru!
        EVEN/NOT-EVEN GIUFÀ invite.past.3sg to-the theatre
        'He even invited/didn't even invite Giufà to the theatre!'   Cruschina (2012: 66; 69)

(4)   [Mandarin]
        ta   *lian* ZHANG SAN *dou* yaoqing/ bu yaoqing qu kanxi!
        3sg even Zhang San   all invite/   neg invite   go theatre
        'He invited/didn't invite even Zhang San to the theatre!'

Examples in (5)-(10) below show analogies between Mandarin *lian*-DP *dou* constructions and Romance mirative constructions at length from a pragmatic perspective. Each pair of utterances converge on the condition under which they are applied with an exclamative intonation and interpretation to express unexpected new information alongside surprise, anger, or fright:

    [Context for surprise: The man that is referred to as *ta* 'he' earns very little and cannot afford a house, about which the interlocutors involved in the conversation know very well. One interlocutor said (5) or (6) out of surprise as soon as (s)he heard that the man had bought a big house on his own.]

(5)   [Sicilian] [5]
        Na casa   s'accattà!
        a   house refl buy.past.3sg
        'He bought a house!'   Cruschina (2006: 371)

(6)   [Mandarin]
        ta   *lian* FANGZI *dou* mai le!
        3sg even house   all   buy prf
        'He bought even a house!'

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[4]   Throughout the paper, the focal portion of a sentence is written in capital letters.

[5]   As precisely pointed out by a reviewer, overt Focus marker is invariably present in Chinese *lian*-DP *dou* constructions but not necessarily in Sicilian mirative examples. As depicted in Cruschina (2012), Sicilian resorts to focus fronting to express mirativity. In some cases, mirative focus fronting is not associated with any overt lexical operators, as in examples in (5), (7), and (9); in others, it is bound to focalizing adverbs, such as *sempri* 'always' and *mai* 'never', or focus particles such as exclusive (*sulu* 'only'), additive (*anchi, puru, macari* 'also'), and scalar particles (*macari* 'even', *mancu* 'not even'), as in (3). With or without overt focus particles, Sicilian mirative construction gives rise to the same interpretative effects of unexpected new information. In Mandarin Chinese, there are indeed cases in which Chinese mirative construction involves a *lian*-phrase that contains a silent *lian*, as shown in section 3.2. Nevertheless, the semantic properties of *lian* requires it to be syntactically present as a scalar introducer in order for a proper Chinese mirative construction to obtain the maximal degree of unexpectedness. Simply put, bare mirative focus fronting of the type in (5), (7), and (9) is impossible in Mandarin Chinese. In order to have a focus delivered narrowly to a fronted nominal phrase (a DP, as is referred to throughout the paper), focus operators such as *lian* and *dou* must be syntactically present.

[Context for anger: Supposing that the person who utters (7) or (8) is the director of a project, leading a team of 20 people. At a regular meeting this Monday morning, a member of the director's team didn't show up without asking for her/his permission and, even worse than that, that member did not submit his proposal in time. The director was so angry with this absent person and said the following at the meeting]

(7)   [Sicilian]
       Maria Santissima! UN MORTU è!
       Mary very-holy   a   dead   be.pres.3sg
       'Holy Mary! He is like a corpse!'   Cruschina (2012: 70; 90)

(8)   [Mandarin]
       tian na! ta *lian* SIREN   *dou* bi   bu shang
       Jesus sfp 3sg even dead men all   compare neg up
       'Jesus! He is even worse than a dead man!'

[Context for fright: The speaker just knew from a friend that the man who has been a close friend to him is truly a scary person, who was once imprisoned for robbing a bank with a gun. The speaker is very upset knowing about the truth and telling his girlfriend to stay away from that guy.]

(9)   [Sicilian]
       Stassi   accura, signurina UN-CHIACCU-DI FURCA è!
       stay.impr.2sg aware lady   a-knot-of   gallows be.pres.3sg
       'Be careful, my lady – He is like a gallows knot!'   Cruschina (2012: 70; 91)

(10)   [Mandarin]
       li   ta yuan-dian, ta *lian* YINHANG *dou* qiang-guo!
       away 3sg far-cl,   he even bank   all rob-prf
       'Stay away from him, he has even robbed the bank!'

In addition, as noted by Cruschina (2012), mirative constructions are attested in non-canonical interrogative environments as in (11), where Sicilian mirative expressions are completely compatible with rhetorical questions. In a similar fashion, it is also possible for a *lian*-DP *dou* construction to be present in a non-canonical interrogative environment to express surprise and incredulity, see (12).

(11)   [Sicilian]
a.   Chi viglianti sì?
       int awake   be.pres.2sg
       'Are you awake?'
b.   Chi a   Maria   salutasti?
       int to   Maria   greet.past.2sg
       'Did you say hello to Maria?'   Cruschina (2006: 372)

(12)   [Mandarin]
       ta *lian* ZHE-DIAN CHANGSHI   *dou* bu zhidao?
       3sg even this.cl   common knowledge   all neg know
        '(S)he doesn't know even this common knowledge, does (s)he?'

So far, the connection between 'even'-construction and mirativity is only observed in root clauses. However, the 'even'-sequence is also compatible with subordinated clauses such as conditional 'if'-clause. And when doing so, the illocutionary exclamative force fades away. Take (13), Mandarin *lian*-DP *dou* sequence is felicitous in the conditional *ruguo* 'if'-clause, and so is the English 'even'-construction, as suggested by the translation line. Therefore, it needs to be pointed out that this paper centers its discussion around *lian*-DP *dou* construction in root clauses whereby it is always compatible with mirativity as defined in Cruschina (2012).

(13)   ruguo *lian* jiankang *dou* mei you,   najiu shenme dou bu sheng-le.
        if   even health   all   neg have, then   what   all neg left-prf
        'You will have nothing left if you don't even have health.'

3. Maximization over scalarity: when *dou* meets *lian*

3.1. *Dou: a maximality operator*

This paper adopts Giannakidou and Cheng's (2006) and Xiang's (2008) proposal in viewing Mandarin *dou* as a maximality operator. In line with Xiang (2008)[6], the presence of *dou* in a *de*-degree construction gives rise to maximality and exhaustivity. Compare the two sentences in (14): when *dou* is absent from the degree construction, as seen in (14a), the crying event is not necessarily the effect of her being sad; whereas in the presence of *dou*, as in (14b), the crying event must be interpreted as a result of the maximal degree of 'her being sad'.

(14)
a.   ta   shangxin-de ku le.
       3sg sad-ext   cry prf
       'she was sad and she cried.'
b.   ta   shangxin-de *dou* ku le.
       3sg sad-ext   all   cry prf
       'she was so sad that she cried.'   Xiang (2008: 239; 42)

Moreover, what is shown in (15) suggests that *dou* is incompatible with non-maximal degrees of sadness as indicated by the use of *zhibuguo* 'only/just'.

(15)   ta   bu   shi hen shangxin,…
        3sg neg   be very sad
        'She is not very sad,…'
a.   ta   zhibuguo ku le.
        3sg only/just cry prf
       'She only cried.'
b.   *ta zhibuguo *dou* ku   le.
        3sg only/just all cry prf
        'She only even cried.'   Xiang (2008: 240; 43)

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6   As pointed out by Xiang (2008), "A degree construction without *dou* simply describes a degree of the predicate, but the same sentence with *dou* emphasizes the upper-bound of the maximal degree".

In fact, the maximizing effects that come alongside the presence of *dou* are directly relatable to *dou's* inherently being a universal quantifier. As reported by Xiang (2008), *dou* distributes over a plural set that is linearized to its left and imposes exhaustivity. The presence of *dou* in (16b) is inherently and mandatorily quantifying over every single child getting involved, making it semantically distinguished from the sentence in (16a) wherein *dou* is absent.

(16)
a.   haizimen qu-le gongyuan
      children go.prf park
      'The children went to the park.'
b.   haizimen *dou*   qu-le   gongyuan
      children all   go.prf   park
      'The children all went to the park.'   Xiang (2008: 236; 31)

Following the assumption of *dou* as a maximality operator, I postulate that *dou* must co-occur with a gradable scale to maximize over. Reconsider (14b), the maximal sadness reading obtained in the appearance of *dou* suggests that there is a scale of sadness, which is saturated by the gradable predicate *shangxin* 'sad' on its own. Provided the presence of *dou* also requires maximality on a given scale of alternatives in *lian*-DP *dou* construction, the following questions then arise: which element introduces the scale requested by *dou* and; what does *lian* contribute to the entire construction? In the following section, I will demonstrate the claim that "*lian* introduces a scale" (Xiang 2008: 242) for *dou* to quantify over.

3.2. Lian and scalarity

Taking a cross-linguistic position, 'even'-construction systematically involves a scalar implicature that is associated with the focus-sensitive particle 'even' (see, e.g., Beaver and Brady 2008; Chierchia, Danny and Benjamin 2011; Giannakidou 2007; Greenberg 2018; Nakanishi 2012; Simonin 2018; Wilkinson 1996, a.o.). As can be seen from the previous section, *dou* seems to call for a gradable scale of alternatives in order to activate the maximality effect. In a *lian*-DP *dou* construction, the only possible candidate for a scale introducer is *lian* since the DP in question is certainly not inherently gradable, nor is the predicate of the sentence. As illustrated in (17), *lian* is ineligible to appear in a *de*-degree sentence already containing a gradable predicate. That confirms the assumption that *lian* is responsible for setting up a gradable scale requested by the maximality operator *dou* in *lian*-DP *dou* construction.[7, 8]

(17)   *ta *lian*   shangxin-de *dou* ku   le
       3sg even   sad-de   all cry prf
       Intended reading: 'she was even sad enough so that she cried.'

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[7]   Although *de* is obligatorily present in a *de*-resultative sentence, I would assume that the necessity for an overt lexicalization of *de* serves as a linker that functions in establishing a connection between the gradable predicate 'being sad' and the result event of 'crying'. *De* has nothing to do with the scalarity because the event of 'her being sad' has already introduced a scale of sadness before *de* is introduced and moreover, *de* cannot be taken out from (14a), where a scale is not even needed when the sentence is paraphrased as "she cried sadly".

[8]   It is briefly mentioned in Xiang's (2008) that *lian* is literally used as a conjunction that roughly means *with*, *together,* or *and*. Such a connective use of *lian* might be amenable to its scalarity nature.

In line with the fact that *lian* correlates with the scalarity in *lian*-DP *dou* construction, *lian* must be semantically and syntactically present. (18) presents an example where *lian* takes a silent form that is yet semantically and syntactically requested for a scale of unexpectedness gained from the reading 'even Zhang San found a job', where the highest degree of unexpectedness is picked out by *dou*.

(18)   Zhang San *dou* zhaodao-le gongzuo
        Zhang San all   find.prf   job
        'Even Zhang San found a job!'

The semantic and syntactic status of *lian* becomes more salient if we replace *Zhang San* in (18) with a plural form *tamen* 'they'. As shown in (19), the sentence is ambiguous between two logically possible readings. The distributive interpretation presented in the *a*-reading is naturally associated with a phonetically prominent *dou*. In that sense, *dou* functions as nothing more than a distributor (Lin 1998), which makes it possible to get the predicate (*zhaodao-le gongzuo* 'found a job') distributed over each and every individual in the plural set of arguments. The other available interpretation, however, is inevitably associated with a focal stress on *tamen* 'they' when a covert *lian* is introduced to the structure. Consequently, as illustrated by the *b*-reading, the speaker expresses a very strong sense of unexpectedness upon hearing the news about the fact that they have found their jobs. It should be noted that when *lian* is syntactically represented (even covertly), the distributive paraphrase now fails to be activated by *dou* since the *b*-reading cannot be paraphrased as 'even each and every one of them has found a job'. Instead, *dou*'s being a maximal operator perfectly converges with the syntactically present *lian* in conveying such a strong flavor of surprise and mirativity under the assumption that *lian* introduces a gradable scale of unexpectedness.

(19)   tamen   *dou* zhaodao-le gongzuo.
        3pl   all   find-prf   job
A.   'Every and each of them found a job.'
B.   'Even they have found their job(s) (which is unbelievable)!'

In light of these observations, we propose that the particle *lian* must be semantically and syntactically present in order to provide a scale of unexpectedness, from which the maximality operator *dou* picks out the most unexpected piece of information. That makes possible for *lian*-DP *dou* construction to express a strong sense of unexpectedness, i.e., mirativity.

4. On the syntax of *lian*-DP *dou* construction

4.1. *Lian-DP fronting: mirative focalization*

With the semantic contributions of *lian* and *dou* in mind, we will turn to the syntax involved in deriving *lian*-DP *dou* construction. It should first be mentioned that we adopt the approach of treating *lian* as a "minor functional head" that has to attach to a DP category bearing stress (Bayer 1996; Belletti 1990; Badan and Del Gobbo 2015) and thereby assume that *lian* merges

with the DP in the base-generated position of the phrase to be focused, namely, within *v*P domain.

Based on the quantificational nature of focus movement, foci always give rise to weak crossover (WCO) effects. (20) shows the impossibility of co-reference between the fronted Information Focus (IFoc, hereinafter) and the pronoun *sa* 'his/her' in Sicilian. On a similar account, the ill-formedness of the Mandarin sentence in (21) suggests that a fronted *lian*-DP gives rise to a WCO effect.

(20)   ??/* A Mario$_i$ vitti   sa$_i$ matri.
         to Mario see.past.3sg his/her mother
         'His/her mother saw Mario.'   Cruschina (2012: 54; 26)

(21)   *lian XIAOLI$_i$ tade$_i$ mama *dou* mei kanjian *t$_i$*!
         even Xiaoli   her mother all   neg see
         'Her$_i$ mother did not even see Xiaoli$_i$!'

The sentence in (21) upgrades if the trace of *Xiaoli* is dislocated to the left of its co-indexed pronoun *tade* 'his/her', as indicated in (22). The grammatical output in (22) then forms a minimal pair with (21) and in turn, demonstrates that (21) indeed involves a violation of the WCO effect.

(22)   *lian* XIAOLI$_i$ *dou* *t$_i$* mei kanjian tade$_i$ mama!
         even Xiaoli   all   neg see   her mother
         'Even Xiaoli hasn't seen her mother!'

The leftward movement of *lian Xiaoli* 'even Xiaoli', therefore, involves focalization rather than the left-dislocation of a Topic because the latter would not produce a WCO violation. In addition, as shown in (23), the contrastive topicalization of *Xiaoli* and *Xiaohua* does not give rise to the WCO, either.

(23)   Xiaoli$_i$ a, *lian* TADE$_i$ MAMA *dou* mei kanjian *t$_i$*;
         Xiaoli sfp even her   mother all   neg see
         Xiaohua$_k$ a, TADE$_k$ QUANJIA   *dou* kanjian *t$_k$*   le!
         Xiaohua sfp her   whole family all   see   prf
         'Her mother (Xiaoli's mother) has not even seen Xiaoli, whereas her whole family (Xiaohua's family) has seen Xiaohua!'

That is suggestive of the fact that *lian*-DP preposing is restricted to focalization. Next, we will show that *lian*-DP focalization is not associated with Contrastive Foci (CF). When "what happened" question is used to obtain IFoc, as illustrated in (24), *lian*-DP *dou* construction of the type exemplified in the a-sentence is considered a proper reply, whereas the *de shi*-type pseudo-cleft (identical to English 'what'-cleft) that involves contrastive foci in the b-sentence is not felicitous. Therefore, we conclude that *lian*-DP foci differ from contrastive foci in that the new pieces of information associated with *lian*-DP foci make it compatible with out-of-the-blue contexts.

(24)   -fasheng   shenme le?
       happen   what   prf
       'What happened?'

a.   -*lian* FAN BINGBING *dou* tao   shui le!
       even   Fan Bingbing   all evade tax prf
       'Even Fan Bingbing was a tax dodger!'

b.   # -Fan Bingbing *bei*   zhikong *de shi* TAO SHUI, bu shi PIAOCHANG.
       Fan Bingbing   pass   accuse de cop evade tax, neg cop prostitute
       'What Fan Bingbing was accused of is evading tax, rather than prostituting.'

4.2. Lian-DP focalization: Ā-type movement

Examples in (26) show the possibility and impossibility of getting *Mali* (i.e. the embedded object in (25)) focused with *lian*-particle in the matrix clause. As argued by Shyu (2001), *Mali* undergoes A-movement in (26a) as its preposing across a tensed clause boundary to the matrix post-subject position gives rise to an ill-formed sentence.[9] We find that such a restriction is nullified, however, if *dou* also ends up inside the main clause, as exemplified by (26b). This observation also captures the situation when *lian-Mali* promotes to the sentence-initial position. As seen in (26c,d), getting *lian-Mali* focused in the sentence-initial position calls for the co-occurrence of *dou* in the matrix sentence.

(25)   Zhangsan renwei [$_{IP}$ Lisi xihuan Mali].
       Zhangsan think Lisi   like   Mali
       'Zhangsan thinks that Lisi likes Mali.'   Shyu (2001: 95; 3)

(26)

a.   *Zhangsan *lian*   MALI$_i$ renwei [$_{IP}$ Lisi *dou* xihuan t$_i$].
        Zhangsan even Mali   think Lisi   all   like
       'Zhangsan even Mary$_i$ thinks Lisi likes t$_i$.'

b.   Zhangsan *lian*   MALI$_i$ *dou* renwei [$_{IP}$ Lisi xihuan   t$_i$].
        Zhangsan even Mali   all think   Lisi   like
       'Zhangsan even Mary$_i$ thinks Lisi likes t$_i$.'

c.   *lian*   MALI$_i$ Zhangsan renwei [$_{IP}$ Lisi *dou* xihuan   t$_i$].
       even Mali Zhangsan think   Lisi   all   like
       'Even Mary$_i$ Zhangsan thinks Lisi likes t$_i$.'

d.   *lian*   MALI$_i$ Zhangsan *dou* renwei [$_{IP}$ Lisi xihuan t$_i$].
       even Mali Zhangsan all think   Lisi   like
       'Even Mary$_i$ Zhangsan thinks Lisi likes t$_i$.'

As far as the locality / Relativized Minimality (RM) principle is concerned (Rizzi 1990, 2004), the fronted *lian-Mali* in the two grammatical cases (namely, b- and d-sentences) must end up in an Ā-position because *lian-Mali* preposing, though crossing over the subject position (SpecIP) represented as *Lisi*, does not give rise to any ill-formed sentences. That holds true whether *lian*-DP ends up sentence-internally (26b) or moves all the way up towards the sentence-initial position (26d). In fact, the proposal that sentence-internal *lian*-DP in the b-

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[9]   Similar analysis is also proposed in Badan and Del Gobbo (2015) to show that sentence-internal *lian*-XP undergoes A-movement that ends up in the low IP area.

sentence undergoes displacement into an Ā-position is suggestive of the fact that *Zhangsan* also occupies an Ā-position, just in line with our previous discussion for *ta* in (2-*A*).

4.3. Syntax of lian-DP dou construction

The syntax in Figure 1 provides a solution to the derivation of *lian*-DP *dou* construction of the type in (2), as reproduced in (27) and (28). The particle *lian* merges with the object *shui* 'tax' in the complement of V, while the maximality operator *dou* projects a *dou*P just above *v*P. As represented below, we propose a successive cyclic two-step movement for *lian*-DP fronting. *Lian-shui* starts out its journey from inside *v*P first to Spec*dou*P, wherein *lian*-DP provides a possible scale for *dou* to maximize over; subsequently, it targets SpecFocP, where discourse-related information such as mirativity is properly expressed. The subject *ta* '(s)he' moves to the usual structural subject position in SpecTP (cf. footnote 1), yielding the surface order where *lian*-DP linearizes sentence-initially, as in (27); with *ta* '(s)he' further undergoing topicalization (as indicated by the dashed line), the *lian*-DP then ends up surfacing to the right of *ta* '(s)he', as in (28).

(27) *lian* SHUI ta *dou* tou!
      even tax   3sg all evade
      'Even the tax (s)he evaded!'

(28) ta *lian* SHUI *dou* tou!
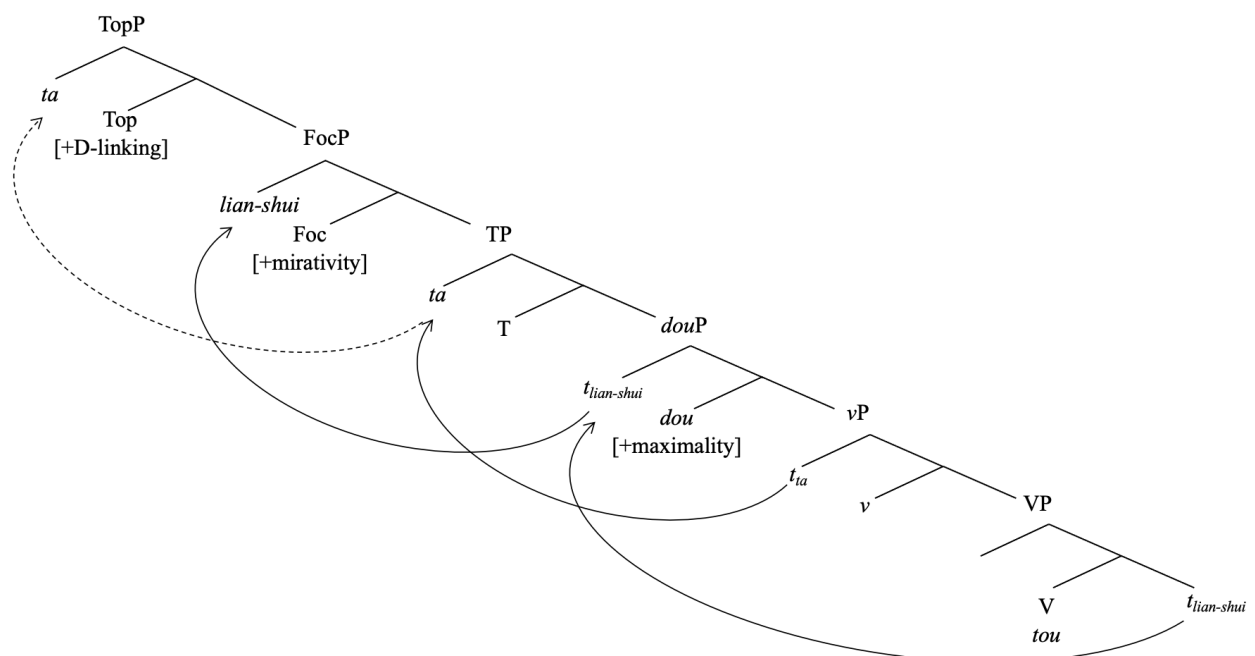   3sg even tax   all evade
      '(S)he even the tax evaded!'

Figure 1*: Structure of lian-DP dou construction*

5. Closing remarks

In this paper, we have investigated Mandarin's 'even'-construction featuring *lian*-DP *dou* with respect to its syntactic derivation and configuration. Taking a cross-linguistic view, we started out by examining the pragmatic parallelism between the *lian*-DP *dou* pattern and Sicilian mirative expressions. We then argued for the indispensability of the scalar introducer *lian* and the maximality operator *dou* in terms of their semantic and syntactic contribution to the highest degree of unexpectedness. Lastly, we provided a structural analysis for the two grammatical surface orders of *lian*-DP *dou* construction.

The major contribution of the paper can be generalized as follows: the linear position of a *lian*-DP – be it sentence-initial or sentence-internal – is a result of successive cyclic movement with the ultimate landing site in the Mirative Focus position in the Left Periphery. The first movement of *lian*-DP is semantically associated with the scalarity of the scope designated for the maximality operator *dou*, and the second step of *lian*-DP movement is essentially triggered by the discourse-related mirative features of the peripheral FocP.

There are, indeed, potential limitations instructive to future research. As suggested by the ill-formedness of 26(a,c), *lian*-DP and *dou* must end up being clause mates to each other. A depictive generalization, therefore, is that the physical location of *dou* seems to signal the location of FocP that hosts a fronted *lian*-DP. Throughout the analyses in this paper, however, *dou* inherently serves as a quantifier, which is in principle not in conflict with a *lian*-DP focus. In this regard, another assumptive analysis is required.

Abbreviations

cl = classifier, cop = copular, impr = imperative, int = interrogative, neg = negative, pass = passive, past = past, pl = plural, pres = present, prf = perfective, refl = reflexive, sfp = sentence-final particle, sg = singular

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