Consistent Disharmony: Sentence-final Particles in Chinese[*]

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Mandarin Chinese is one of the languages challenging the *Final-Over-Final Constraint* (FOFC) (cf. Biberauer *et al.* 2008), given that it is SVO and displays a head-final CP, where C is instantiated by the so-called *sentence-final particles* (SFP). Since for all of its attested history Chinese has been SVO, the "disharmony" between VO word order and SFP observed in modern Mandarin is not an isolated case, but rather reflects a situation existing since the emergence of SFP in the 6th c. B.C. Accordingly, the "violation" of the FOFC represented by Chinese must be taken at face value and a closer look at the FOFC itself is called for. Applying Whitman's (2008) analysis of the Greenbergian universals, the incompatibility between VO order and head-final CP predicted by the FOFC turns out to illustrate (the borderline case of) a *cross-categorial generalization*. Whitman (2008) argues that cross-categorial generalizations are <u>not</u> exceptionless (as they should be if they were due to an imperative of Universal Grammar), but rather of a statistical nature, because they arise through well-documented patterns of language change.

1 INTRODUCTION

Given that Mandarin Chinese is SVO and displays a head-final CP, it is one of the languages challenging the *Final-Over-Final Constraint* (cf. Biberauer, Holmberg & Roberts 2008), which precludes that a head-intial phrase XP is dominated by a head-final YP (provided X

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and Y have the same specifications for the categorial features [N] and [V]).[1] The category complementiser in Chinese is instantiated by the so-called *sentence-final particles* (SFP):

(1)   (a)   [CPforce [CPlow [TP Xià yu   le   ] ma]] ?
                              fall rain Clow   FORCE
              'Is it raining?'

       (b)   *[CPlow [CPforce [TP Xià yu] ma   ] le]?
                              fall rain FORCE Clow

(2)   Bù   zǎo [le + ou=>] l'ou ! Kuài zǒu [ba   + ou=>] b'ou ![2]
       NEG early Clow ATT   fast go   FORCE   ATT
       'It's getting late! Hurry up and go!'   (Chao 1968: 808)

In fact, their traditional division into three distributional classes (cf. a.o. Chao 1968: ch. 8.5, Zhu 1982, Hu 1981) displaying a rigid relative order (cf. (1a) vs (1b)) can be successfully recast as a "split" CP à la Rizzi (1997), modulo some changes (cf. Paul 2008):

(3)   TP < C(low) < Force < Attitude.

In contrast to Rizzi's hierarchy,[3] the SFP indicating the sentence type (Force) such as *ma* and *ba* (interrogative and imperative, respectively) are not hosted by the highest C head available. Instead, it is the SFP expressing the speaker's or hearer's attitude (e.g. *ou* 'gentle warning') that constitute the outermost particles and thus occupy the highest C head above *Force*.
      This at first sight surprising picture becomes plausible in the light of another important property of Chinese, viz. the fact that Chinese lacks a C heading propositional complements of verbs and sentential subjects, comparable to e.g. *that* in English. Consequently, the main "motivation" for Force as the highest head i.e., its accessibility to an external selector, is not given. In fact, with the exception of the non-root C *de* and *dehua* (cf. Paul 2007, 2008; Paul & Whitman 2008), SFPs in general are banned from embedded contexts and exclusively appear in root sentences, hence no split CP in non-root contexts.
      Another striking property of Chinese is the homophony between (some of) the SFP instantiating C and the particles realizing Topic°. Unlike CP, TopicP is head-initial in Chinese, suggesting that a typology of particles *per se* is not on the right track, because it would wrongly treat in fact quite different items as a homogeneous group.

(4)   [ForceP [TopP Wǒ [Top° ne] [TP shéi lái   tīng   wǒ shuō]] ne   ]?
                     1SG   TOP   who come listen 1SG say   FORCE
              'And me, who will listen to what I say ?'

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[1]   "If a phase head PH has an EPP feature, then all the heads in its complement domain from which it is non-distinct in categorial features must have an EPP feature". (Biberauer et al. 2008: 101).

[2]   Consisting of a single vowel, Attitude-SFP are phonetically fused with the preceding word when the latter ends with a vowel, in this case with the preceding SFP *le* and *ba*, respectively.

[3]   While the hierarchy in Rizzi (2004) 'Force > Top* > Interrogation > Top* > Focus > Mod* > Top* > Fin > IP' introduces some additional heads in comparison with Rizzi (1997), Force continues to be the highest head. For evidence that sentential adverbs in Chinese pattern with topics and do not occupy a dedicated functional projection ModP as well as for other accommodations required by the Chinese data, cf. Paul (2005). Given these differences with respect to Rizzi's hierarchy, the lowest C in Chinese is not labelled FIN.

Joint work (in progress) with R. Djamouri and B. Meisterernst shows that the properties of the split CP in Mandarin Chinese also hold for earlier periods such as Classical Chinese (5th c. - 3rd c B.C.). (Note that SFPs are attested since the 6th c. B.C.). We equally observe a split CP with three layers, where the lowest C clearly has access to material inside TP. Some topic heads are homophonous with C heads and occur in the same period. Given that for all of its attested history Chinese has been SVO (cf. Djamouri 1987; Djamouri *et al.* 2008) the "disharmony" between VO word order and SFP observed in modern Mandarin is thus not an isolated case, but rather reflects a situation existing since the 6th c. B.C. Accordingly, the "violation" of the FOFC represented by Chinese must be taken at face value.

Against this background, a closer look at the FOFC itself seems necessary. Applying Whitman's (2008) analysis of Greenberg's universals, the incompatibility between VO order and head-final CP predicted by the FOFC turns out to illustrate (the borderline case of) a *cross-categorial generalization*. Whitman (2008) argues that cross-categorial generalizations are <u>not</u> exceptionless (as they should be if they were due to an imperative of Universal Grammar), but rather of a statistical nature, because they arise through well-documented patterns of language change. In other words, exceptions to predictions made by the FOFC as a statistical generalization are precisely what we expect in the case of those languages whose C elements show a historical source different from the one having served as the basis for the empirical generalization 'VO - head-initial CP'.

The present article is organised as follows. Section two provides evidence for the root vs. non-root asymmetry at work in the Chinese C system. Section three gives a short overview of the three classes of root complementisers and establishes their positions relative to the projections TopicP and 'even' FocusP, equally present in the sentence periphery. Section four discusses particles instantiating the head of TopicP and shows their syntax to be different from that of non-root C. Section five examines the status of cross-categorial generalizations such as the FOFC and briefly discusses Kayne's (1998) attempt to motivate Dryer's (1992) correlation of sentence-final CP with OV word order. Section six makes a short excursion into the historical origin of the SFP and finds that the etymology of a given SFP is not reflected in its feature make-up in the synchronic grammar. The article is concluded in section 7.

2   SENTENCE-FINAL PARTICLES: ROOT VS. NON-ROOT

The analysis of the SFP as complementisers proposed here is an extension of the analysis of the yes/no-question marker *ma* as a complementiser (cf. Lee Huntak 1986, Tang Ting-chi (1988). It is also with respect to the interrogative *ma* that the limitation to root contexts was explicitly stated for the first time (cf. Li & Thompson 1981: 557, Tang Ting-chi (1988:363ff). Note that so far the literature on the Chinese C system (from Cheng 1991 up to the most recent studies by Li Boya 2006, Xiong Zhongrui 2007 a.o.) has not acknowledged the <u>systematic</u> character of the root/non-root asymmetry and at best stated the root-only distribution as idiosyncrasy of an individual SFP (as in the case of as *ne*, cf. Cheng 1991, A. Li 1992: 153), although some of the data underpinning that generalization were observed in earlier work (cf. Li & Thompson 1981, Tang Ting-chi 1988, Ross 1983).

2.1. Root SFP

As noted by Li & Thompson (1981:556-7) and (Tang 1988:363) the *yes/no* question particle *ma* (cf. (5)) cannot be part of an embedded clause, but must be construed as belonging to the matrix sentence. This is straightforward in (6a): a sentential subject cannot contain *ma*:

(5)   Ākiū lái   ma?
       Akiu come PART
       'Does Akiu come?

(6)   (a)   *[Ākiū lái   ma] méi yǒu guānxi
                 Akiu come PART NEG have relation
              ('Intended meaning: Whether or not Akiu comes doesn't matter.')

       (b)   [Ākiū lái   bù   lái] méi yǒu guānxi
              Akiu come NEG come NEG have relation
              'It doesn't matter whether or not Akiu comes.'

In (7a), where the final position of the root clause coincides with the final position of the clausal complement, this must be deduced from the interpretational possibilities. As indicated, *ma* can only question the root clause, not the clausal complement in (7a), although *zhidao* 'know' can also select an interrogative clause (7b). In the case of an embedded interrogative clause (cf. (6b), (7b)), only the 'A-*bu*-A' question is possible (for an extensive discussion of 'A-*bu*-A' questions, cf. Huang 1982).

(7)   (a)   [[Tā bù zhīdao [Ākiū lái   ]] ma]?
                 3SG NEG know   Akiu come PART
              'Doesn't she know that Akiu is coming?'
              [Excluded: 'She doesn't know whether or not Akiu is coming.']
                              (cf. Li & Thompson 1981:557; Tang 1988:365)

       (b)   Tā bù zhīdao [Ākiū lái   bù   lái]
              3SG NEG know   Akiu come NEG come
              'She doesn't know whether or not Akiu is coming.'

As argued for in Paul (2007, 2008), the limitation to root contexts illustrated for the interrogative C *ma* holds for SFPs in general. (For a descriptive overview of SFPs, cf. a.o. Chao 1986: ch. 5; Li & Thompson 1981, ch. 7.). Accordingly, they are excluded from relative clauses (8a), noun complement clauses (9a), and propositional complements of verbs (10a). Furthermore, Mandarin Chinese lacks a C heading propositional complements of verbs (11) and sentential subjects (12), comparable to e.g. *that* in English.

(8)   (a)   [DP [TP Zuótiān chī yúròu (*le) de] rén   ] dōu bìng-le
                      yesterday eat fish   PART SUB person all ill -PERF
              'The people who ate fish yesterday are all sick.'
                              (slightly changed example from Ross 1983: 235)

       (b)   Wǒmen zuótiān   chī yúròu le .
              1PL   yesterday eat fish   PART
              'We ate fish yesterday.'

(9)   (a)   [DP [TP Xià yǔ (*le)] de   xiāoxi]
                      fall rain PART SUB news
              'The news that it was raining'

(b)   Xià yǔ   le
        fall rain   PART
        'It is raining.'

(10) (a)   Tā gāngcái gàosu wǒ [Ākiū yǐjīng   líkāi Běijīng (*le)]
            3SG just   tell   1SG Akiu already leave Beijing PART
            'He just told me that Akiu had already left Beijing.'

      (b)   Ākiū yǐjīng   líkāi Běijīng le
            Akiu already leave Beijing PART
            'Akiu had already left Beijing.'

(11)   Tā shuō [Ākiū dé   -le   jiǎng]
            3SG say   Akiu obtain-PERF award
            'She told me <u>that</u> Akiu had won a prize.'

(12)   [Ākiū dé   -le   jiǎng] shǐ   wǒmen hěn gāoxìng
            Akiu obtain-PERF award make 1PL   very happy
            'The fact <u>that</u> Akiu won a prize made us very happy.'

2.2. The non-root C *de and* dehua

It is correct that *de* closing off the relative clause (cf. (8a) above) has been analysed as C by Cheng (1986). She fails, though, to note the <u>non-root-only</u> nature of *de* in opposition to the other <u>root-only</u> C elements. As argued for by Paul & Whitman (2008), *de* in the *propositional assertion* structure is another instance of a non-root C: the copula *shi* 'be' selects a complement headed by *de* which in turn takes as its complement a non-finite TP:[4]

(13)   Wǒ shì [DeP [cónglái bù chōu yān] de]
       1SG be   ever   NEG inhale smoke C(-root)
       '(It is the case that) I have never smoked.'

(14)   Wǒ shì [DeP [dào sǐ   dōu huì xiǎng-zhe nǐ] de   ]
       1SG be   until death all will think -DUR 2SG C(-root)
       '(It is the case that) I will think of you until I die.'
                                    (based on example (10) by Li *et al.* 1998: 95)

(15)   Tā shì [DeP [yīdìng   huì [PP duì   nǐ] hǎo yī-bèizi   ] de]
       3SG be   certainly will   towards 2SG good 1-generation C(-root)
       '(It is the case that) he will certainly be good to you for an entire lifetime.'
                                                        (Li *et al.* 1998: 94, (C))

(16)   [TopP [DP Zhèi-ge dōngxī] [TP tā shì [DeP [yīnggāi bàn   -de -dòng tDP] de   ]]]
                 this-CL thing   3SG be   must remove-able-move   C(-root)
       'This thing, he should indeed be able to move it.'

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[4]   For evidence that this *de* is different from the relative clause *de*, cf. section 6 below.

Analysing *de* in the *propositional assertion* construction as a non-root C allows us to correctly predict the unacceptability of root-only SFPs within DeP (cf. (17)). This also holds for the projection headed by the other non-root C, *dehuà*, i.e. conditional clauses (cf. (18)). (For further discussion of *dehuà*, cf. section 4 below.)

(17)   [$_{TopP}$[Zhèi-ge dōngxī]$_i$ [$_{TP}$ tā shì [$_{CP(-root)}$ [yīnggāi bàn   -de -dòng t$_i$ (*le)] de   ]]]
              this-CL thing   3SG be   must remove-able-move Clow C(-root)
        'This thing, he should indeed be able to move it.'

(18)   [$_{CP}$[$_{TopP}$[$_{C(-root)}$ Ākiū líkāi Běijīng (*le) dehuà] [$_{TP}$ tā hěn kuài jiù yào dào]] le]
              Akiu leave Beijing Clow C(-root)   3SG very fast then will arrive Clow
        'If Akiu has left Beijing, then he should be here very soon.'   (cf. (10b))

(19)   [$_{CP}$[$_{TopP}$[$_{C(-root)}$ Yàoshi xià yǔ (*le)] dehuà] [$_{TP}$ wǒ jiù   bù   qù]]]   (cf. (9b))
                  if   fall rain Clow C(-root)   1SG then NEG go
        'If it rains, then I won't go.'

There is thus no split CP in non-root contexts,which reflects the fundamental root vs. non-root asymmetry in the Chinese C system.
        Once we acknowledge the non-root C status of *de* in the propositional assertion construction we can account for the co-occurrence of *de* with a low root C (e.g. *le*) in the order '*de le*', as illustrated in (20) - (21):

(20)   [$_{CPlow}$ [$_{TP}$ Wèntí   xiànzài shì [$_{C(-root)}$ néng jiějué de   ]] le]
                  problem now   be   can solve C(-root) Clow
        'The problem can certainly be solved now.'

(21)   [$_{TopP}$ [$_{CP}$ [Zhèi-ge dōngxī]$_i$ [$_{TP}$ tā   shì [$_{C(-root)}$ [yīnggāi bàn   -de -dòng t$_i$] de   ]] le]]
              this-CL thing   3SG be   must remove-able-move C(-root) Clow
        'This thing, he should indeed be able to move it.'

The co-occurrence of the low C *le* with *de* would not be possible if *de* were a low <u>root</u> C on a par with *le*, given that only one overt head is allowed per sub-projection within the split CP. The SFP instantiating the same head (C$_1$, C$_2$ or C$_3$) are in a paradigmatic relation to each other and mutually exclusive (cf. table (i) below).

3   THE INTERNAL ARCHITECTURE OF THE SENTENCE PERIPHERY IN CHINESE

Traditionally, Chinese linguists (cf. *a.o.* Zhu 1982, ch. 16) identify three distributional classes of sentence-final particles, whose relative order is fixed: [[[TP C$_1$] C$_2$] C$_3$].

(Table (i))   *The three classes of root complementisers*

(low C) C$_1$	C$_2$ (force)	C$_3$ (attitude)
le currently relevant state	*ma* interrogative	*ou* warning
laizhe recent past	*ba* imperative	*(y)a* astonishment
ne$_1$ continued state	*ne$_2$* follow-up question	*ne$_3$* exaggeration
	……..	……..

The brief overview in this section can only give a general idea of the complementisers and their hierarchy in Chinese. It is by no means exhaustive nor can it render exactly the import of each SFP. In fact, the meaning of the SFP itself, the propositional content, the intonational contour and the extralinguistic context interact in a complex way which still needs to be analysed.[5]

3.1. *Overview of the three classes of root complementisers*

3.1.1. *Low* C_1 : *le, laizhe, ne$_1$*

As already noticed by Teng (1973: 26), a low C (C_1) such as *le* is different from the SFP in the C_2 and C_3 positions, because it interacts with material inside TP. This is in fact expected, insofar as CP, and not TP, is a phase (cf. Chomsky 2001 onwards).

(22)   (a)   [$_{CPlow}$ [$_{TP}$ Tā chī-le   fàn] le][6]
                        3SG eat-PERF food Clow
             'He has eaten already.'

       (b)   *[$_{CPlow}$ [$_{TP}$ Tā méi chī fàn] le]
                        3SG NEG eat food Clow

(23)   [$_{TopP}$ Nà   [$_{Top'}$ [$_{CPlow}$ [$_{TP}$ wǒ jiù   bù   děng tā] le   ]]]
             in.that.case   1SG then NEG wait 3SG Clow
       'In that case I won't wait for him any longer.'

As illustrated in (22b), the SFP *le* is incompatible with a TP containing *méi* negating the accomplishment of an event, but compatible with the negation by *bù* (cf. (23)).

The semantic import of *le* is difficult to determine and still subject of ongoing research.[7] There seems to exist no common denominator for all the different cases where *le* appears other than that it closes off the sentence and relates the event to the speech time. (whence Li & Thompson's (1981) description of *le* as signaling "currently relevant state".)

(24)   [$_{CP}$ [$_{TP}$ Wǒ zuótiān   dào Zhāng jiā   chī fàn] le]   (Chao 1968: 798)
             1SG yesterday go   Zhang home eat food Clow
       'I went to the Zhang's for dinner yesterday.'

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[5]   In the vast Chinese descriptive literature on SFP, more recent case studies of individual SFP start taking into account this complex interaction and include e.g. the role of sentence intonation, cf. a.o. Jiang (2008).

[6]   Note that the verbal suffix *-le* indicating perfective aspect is distinct from the homophonous SFP *le*.

[7]   Audrey Li (1992: 153, note 16) tentatively suggests Infl-status for the sentence-final particle *le*. Given its unacceptability in relative clauses (cf. (8a) above), this cannot be correct, though. Li Boya (2006: 171) - without further explanation - analyses *le* as the category *Deik*. The only other passage discussing *le* is p. 125 where it is likened to the SFP *le* in Cantonese "mark[ing] realization" and illustrated by example (i) (her glosses and translation):
(i)   Wo xin -li   bian   de gaoxing he qingsong de duo   le
         1S heart-inside become DE happy and relieved   DE much PRT
         'My heart has become much happier and more relieved.'   (= Li Boya's (3b), p. 125)

(25)   Āiyā , [shíyī diǎn   bàn] le!   (ibid.)
        oh   11   o'clock half Clow
        'Goodness, it's (as late as) half past eleven!'

(26)   [TopP [TP Wǒ yī   ān mén-líng] [Top' [CP [TP tā   jiù   lái   kāi   mén] le]]]
              1SG once ring door-bell   3SG then come open door Clow
        'As soon as I rang the door bell, he came and opened the door.'
                                                          (slightly modified example from Chao 1968: 799)

(27)   [FocusP Lián xīngqītiān [CP [TP tā   dōu qù shàng bān] le   ]]
                even Sunday   3SG all   go ascend work Clow
        'Even (this) Sunday he has already left for work.'

As can be seen from the preceding examples, the interpretation of the SFP *le* strongly depends on the propositional content and the pragmatic context.

        Láizhe usually indicates that the event time is recent past (28), but "recent past" can also apply to the speech time of a preceding utterance or refer to a former state of knowledge as in (29b) (cf. Chao 1968: 810):

(28)   [CP [TP Nà màozi zài nàr   guà -zhe] láizhe], [CP [TP zěnme bù   jiàn] le]?
                that hat   at there hang-DUR Clow   how   NEG see   Clow
        'The hat was hanging there, how come it's no longer here?'
                                                          (slightly modified example from (cf. Chao 1968: 810)

(29)   (a)   Nǐ xìng shénme?
               2SG call what
               'What's your family name?'

        (b)   [CP [TP Nǐ xìng shénme] láizhe]?   (Chao 1968: 810)
                       2SG call   what   Clow
               'What (did you just say) is your family name?'
               'What was your family name?' (I forgot.)

Láizhe has access to material inside TP and is incompatible with the negation *méi (you)*

(30   (a)   Nǐ gāngcái shuō shénme láizhe ?
               2SG just   say what   Clow
               'What did you just say?'

        (b)   Wǒ méiyǒu shuō shénme (*láizhe)
               1SG NEG   say what   Clow
               'I didn't say anything.'   (cf. Song Yuzhi 1981: 275)

The low C *ne₁* finally requires a TP complement containing a stative predicate (e.g. an adjective or a verb in the durative aspect):

(31)   [CP [TP Wàibiàn xià-zhe yǔ] ne]   (Chao 1968: 802)
                      outside fall-DUR rain Clow
               'It is still raining outside.'

(32)   [CP[TP Yǒu yībái chǐ] ne   ], [CP [TP shēn dehěn   ] ne   ]   (ibid.)
                have 100   foot Clow   deep extremely Clow
             'It's as much as a hundred feet, it's quite deep.'

To summarize, the low C₁ heads *le, laizhe* and *ne₁* have in common to impose restrictions on their TP complement in terms of the properties of its extended VP.

3.1.2. *C₂ heads expressing the sentence type* (*Force*)*:* ma, ne₂, ba

The SFP *ma* indicates the yes/no question status of a sentence (cf. (33b)):

(33)   (a)   Tā huì shuō zhōngwén
               3SG can speak Chinese
               'He can speak Chinese.'

       (b)   [CP [TP Tā huì shuō zhōngwén] ma]?
                    3SG can speak Chinese   FORCE
               'Can he speak Chinese?'

Note that *ma* is unacceptable in *wh*-questions (unlike *ne₂*, cf. (34) immediately below).
       The SFP *ne₂* is familiar to scholars in general linguistics because it has been claimed to play a crucial role in typing a sentence as question in *wh* in-situ languages such as Chinese (cf. Cheng 1991). This is, however, invalidated by the well-known optionality of *ne₂* in *wh*-questions (cf. (34)) and A-not-A questions (cf. (35)) (contrasting with the unacceptability of *ma* in the same contexts).[8] (For a detailed study of *ne₂*, cf. Pan 2007)

(34)   Nǐ wèn-le   shéi (ne) / (*ma)?
       2SG ask -PERF who FORCE/ FORCE
       '(So) whom have you asked?'

(35)   Tā dǒng   bù dǒng   wèntí (ne) / (*ma) ?
       3SG understand NEG understand problem FORCE / FORCE
       '(So) does he understand the problem?'

Instead, *ne₂* indicates that the question at hand is not a question "out of the blue", but that it is presented as a follow-up of the preceding (linguistic or extra-linguistic) context, as indicated in (36) and (37):

(36)   Nǐ dǒng   le . [C2P [TP Tā dǒng   bù dǒng   ] ne]?
       2SG understand Clow   3SG understand NEG understand FORCE
       'You understand. (But) does he understand?'

(37)   Wǒ wèn-le   Zhāngsān. [C2P [TP Nǐ wèn-le   shéi] ne]?
       1SG ask -PERF Zhangsan   2SG ask -PERF who FORCE
       'I have asked Zhangsan. (And) whom have you asked?'

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8   For recent works challenging Cheng's (1991) *Clausal Typing Hypothesis*, cf. Bruening (2007) and Bruening & Tran (2006).

Ne$_2$ clearly instantiates a Force head C$_2$, as witnessed by its co-occurrence with the low C *le* in the order '*le ne$_2$*' (the opposite order '*ne$_2$ le*' being excluded as expected):

(38)   [$_{CPforce}$ [$_{TopP}$ Nà   [$_{ClowP}$ [$_{TP}$ nĭ wèn shéi] le   ]] ne   ]?
                     in.that.case   2SG ask who   Clow FORCE
       'So whom have you asked?'

Finally, unlike *ma*, *ne$_2$* requires an interrogative TP (cf. the contrast (38) vs. (39))

(39)   [$_{CPforce}$ [$_{TopP}$ Nà   [$_{ClowP}$ [$_{TP}$ nĭ wèn Xiǎolĭ] le]] *ne   / ma]?
                     in.that.case   2SG ask Xiaoli Clow   FORCE / FORCE
       'So have you asked Xiaoli?'

To summarize, *ne$_2$* is a Force head indicating the 'follow-up' nature of the question at hand and selects both yes/no and *wh*-questions.

       The imperative SFP *ba* is called "advisative" by Chao (1968: 807) because of its "softening" effect. Accordingly, an imperative containing *ba* is understood as less harsh an order than the corresponding imperative sentence without *ba*:

(40)   [Kuài diǎnr zǒu] ba !
        fast a.bit go   FORCE
       'Better hurry up and go!'

(41)   [Zánmen jiù   zhème bàn] ba!
        1PL   then so   do FORCE
       'Let's just do it that way!'

3.1.3. *C$_3$ heads expressing the speaker/hearer's attitude*

The outermost, i.e. highest C elements encode the speaker's and/or hearer's attitude, such as *ou* 'warning reminder' and *a* 'astonishment' (cf. (Chao 1968: 803 ; 808). Consisting of a single vowel, these SFP are phonetically fused with a preceding SFP.

(42)   Bù   zǎo l'ou [=le +ou]! Kuài zǒu b'ou [=ba+ou]
       NEG early PART (fusion)   fast go PART (fusion)
       'It's getting late! Hurry up and go!'

(43)   Xiǎo Wáng a!   [Nĭ hái méi shàng chuáng] a ?!
       Xiao Wang PART 2SG still NEG go   bed   ATT
       'Hey, Xiao Wang! Aren't you in bed yet?!'

(44)   [Nĭ yě yào qù] a?
       2SG also want go ATT
       'You are going as well?' (Did I hear you right?)

As can be seen from the examples, the exact meaning of these SFP again is difficult to pin down and strongly depends on the context and intonation.

3.2. *The hierarchy of the sub-projections in the sentence periphery*

As already mentioned above, it is the the rigid relative ordering among SFPs which provides evidence for the analysis of a given SFP as either C_1, C_2, or C_3 in the split CP configuration 'Clow < Force < Attitude'.

The interrogative Force head C_2 *ma* e.g. can only follow, but not precede the low C_1 *le*.

(45)   [CPforce [CPlow [TP Xià yǔ <u>le</u>] ma]] / *ma   <u>le</u> ?
                    fall rain Clow FORCE / FORCE Clow
        'Is it raining?'

Likewise, the Force heads *ba* and *ne$_2$* are only acceptable to the right of C_1 *le*:

(46)   [CPforce [CPlow [TP nǐ   bù yòng gěi qián] le   ] ba]   / *le   ba
                    2SG NEG need give money Clow FORCE Clow FORCE
        'Then you won't need to pay!'   (Chao 1968:807; example slightly changed)

(47)   [CPforce [CPlow [TP Tā dào nǎr   qù] le   ] ne] (*le)?
                    3SG to   where go Clow FORCE Clow
        'So where has he gone?'

Combining the three projections headed by the different C heads with the projections 'even' FocusP and TopicP (cf. Paul 2002, 2005) equally present in the periphery above TP (cf. examples (23), (26), (27)), section 3.1.1 above), we obtain the following architecture for the split CP in Mandarin (abstracting away from linear ordering):

(48)   Attitude > Force > Topic > 'even' Focus > C(low) > TP   (cf. Paul 2006, 2008)

The main difference with respect to Rizzi's (1997) hierarchy:

(49)   Force > Topic > Focus > Fin > TP   (cf. Rizzi 1997)

lies in the presence of the additional head *Attitude* <u>above</u> *Force*. Accordingly, the SFP indicating the sentence type (Force) are not hosted by the highest C head available. This might be linked to the root vs non-root asymmetry of the Chinese C system, in particular to the fact that Chinese lacks a C heading propositional complements of verbs and sentential subjects, comparable to e.g. *that* in English. Consequently, the main "motivation" for Force as the highest head i.e., its accessibility to an external selector, is not given.

Concerning the relative order between Force° and Topic°, e.g. between interrogative force and topic, crosslinguisticially languages allow for both possibilities, i.e. the topic can be within the scope of a yes/no question (as suggested for Chinese) or outside its scope, as in Celtic languages (Alain Rouveret, p.c.).

Discourse-linked *wh*-questions provide evidence for ForceP dominating TopP in Chinese. Unlike standard *wh*-phrases, which must remain in situ, D-linked *wh*-phrases may occur in the topic position (cf. (50)). Like "ordinary" *wh*-phrases, however (cf. (51) - (52); (34) above)), D-linked *wh*-phrases are incompatible with the yes/no question C *ma*. (For further discussion of D-linked questions in Chinese, cf. Paul 2006, Pan 2007.)[9]

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[9]   Note that in contrast to the data provided by Wu Jianxin (1999), the native speakers I consulted obtain Discourse-linked readings only for *wh*-phrases containing *nǎ-ge* 'which' and accordingly disallow movement for "ordinary" *wh*-phrases such as *shéi* 'who', *shénme* 'what' etc.

(50)   [CPforce [TopP [DP Nǎ   -jiàn yīfu] [TP nǐ yǐjīng chuān-guo]],
                    which-CL dress   2SG already put.on-EXP

        [TopP [DP nǎ   -jiàn yīfu] [TP nǐ háǐ méi chuān-guo]] (*ma)
                which-CL dress   2SG still NEG put.on-EXP   FORCE

        'Which dress have you already tried on and which haven't you tried on yet?'

(51)   Tā mǎi-le   shénme / nǎ   -jiàn yīfu   (*ma)
        3SG buy-PERF what /which-CL dress   FORCE
        'What/Which dress did he buy?'

(52)   (a)   Shéi lái -le   (*ma)
               who come-PERF   FORCE
               'Who came?'

        (b)   Shénme/ nǎ   -jiàn yīfu hěn guì   (*ma)?
               what   / which-CL   dress very expensive   FORCE
               'What/which dress is very expensive?

(53)   [CPforce [TopP [DP Nǎ   -ge xuéxiào] [TP [DP wàiguó xuéshēng] duo]] (*ma)] ?
                    which-CL school   foreign student   much FORCE
        'In which school are foreign students numerous?'

A Force head C$_2$ such as *ma* clearly has scope over TopP, as evidenced by the incompatibility
of *ma* with D-linked *wh*-phrases in that position. This holds both for moved topics (50) as
well as for topics in-situ (cf. (53)).

4. PARTICLES INSTANTIATING THE HEAD OF TOPIC PHRASE

Some of the particles instantiating the functional category Topic (cf. Gasde & Paul 1997) are
homophonous with C elements, e.g. *ne*, *ma, le*:

(54)   [TopP Quèshí [Top'[Top°ne] [TP tā -de nénglì shì bǐ   wǒ qiáng]]]
              indeed   TOP   3SG-SUB ability be compared.with 1SG strong
        'Indeed, his abilities are greater than mine.'

(55)   [TopP [TP Yàoshì míngtiān xià yǔ] [Top'[Top° ma] [TP wǒ jiù   bù qù]]][10]
              if   tomorrow fall rain   TOP   1SG then NEG go
        'If it rains tomorrow, I won't go.'

(56)   Bùguǎn   shì yānzhi le , fěn   le , guō le , féngrènjī   le ,
        irrespective be rouge TOP powder TOP pot TOP sewing.machine TOP

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[10]   For arguments supporting the analysis of conditional clauses as sentential topics in Chinese, cf. Gasde
& Paul (1997).

shénme dōu mài
what   all sell

'No matter whether it's rouge, powder, pots or sewing machines, they sell everything.'

Importantly, the co-occurrence of topic markers and SFP in the same sentence shows Top° to be distinct from C:

(57)   [CP [TopPWǒ ne   [TP shéi lái   tīng   wǒ shuō]] ne   ]?
                    1SG TOP   who come listen 1SG say   FORCE
         'And me, who will listen to what I say ?'

(58)   [CPforce [TopP [Zhèi-ge rén   ] ma [CPlow [TP wǒmen néng kào tā] le   ]] ma   ]?
                    this -CL person TOP   1PL   can   rely 3SG Clow FORCE
         'This person, can we trust her?'

(59)   [CPforce [TopP Hòulái   ne   [TP tā   sǐ -le]] ma   ]?
                    afterwards TOP   3SG die-PERF FORCE
         And afterwards, did he die?'

Accordingly, Top° cannot be analysed as an instance of C triggering the raising of e.g. a DP rather than a TP to its specifier, as suggested by Munaro & Poletto (2006) for North-Eastern Italian dialects. Also note that unlike CP, TopicP is head-initial in Chinese.

Further evidence for the categorial distinctness between Top° and C is provided by so-called "afterthought" constructions (cf. a.o. Chao 1986: 132; Lu Jianming 1980), where the right "dislocated" afterthought part follows all SFPs:[11]

(60)   (a)   [CP Lái -le   ma   ], nǐ gēge   ?   (cf. Lu Jianming 1980)
                    come-PERF FORCE 2SG brother
                 'Has he come, your brother?'

         (b)   [TP Nǐ gēge   lái -le] ma ?
                    2SG brother come-PERF FORCE
                 'Has your brother come?'

Crucially, particles instantiating Top° are excluded from the right dislocated part, as illustrated by the corresponding afterthought sentences for (54) and (55):

(61)   [CP [TP Tā -de   nénglì shì bǐ   wǒ qiáng]], quèshí (*ne)
                    3SG-SUB ability be compared.with 1SG strong   indeed TOP
         'His abilities are greater than mine indeed.'

(62)   Wǒ bù qù, yàoshì míngtiān   xià yǔ (*ma)
         1SG NEG go if   tomorrow fall rain TOP
         'I won't go, if it rains tomorrowow.'

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[11]   As observed by Chao (1968 : 132), the afterthought part is likely to be read in a faster tempo, the preceding part constituting the main clause.

By contrast, the non-root C *dehuà*, optionally closing off a conditional clause, is retained in the right dislocated part:

(63) (a) [$_{TopP}$ [$_{C(-root)}$ [$_{TP}$ Yàoshì xià yǔ] dehuà] [$_{TP}$ wǒ jiù   bù   qù]]
                              if   fall rain C(-root)   1SG then NEG go
          'If it rains, I won't go.'

      (b) [$_{TP}$ Wǒ bù   qù], [$_{C(-root)}$ [$_{TP}$ yàoshì xià yǔ] dehuà]
              1SG NEG go   if   fall rain C(-root)
          'I won't go, if it rains.'

Accordingly, *dehuà* cannot be an instance of Top°. This is confirmed by the co-occurrence of *dehuà* with a Top° which would be impossible if *dehuà* were a Top° itself. For a topic XP can only be followed by one particle (realizing Top°) at a time, i.e. we never observe several particles in a row as we do for C:[12]

(64) (a) [$_{TopP}$ [$_{C(-root)}$ [Yàoshì xià yǔ] dehuà] [$_{Top°}$ <u>ne</u>] [$_{TP}$ wǒ jiù   bù qù]]
                              if   fall rain C(-root)   TOP   1SG then NEG go
          'If it rains tomorrow, I won't go.'

      (b) Wǒ bù   qù , [$_{C(-root)}$ [yàoshì xià yǔ] dehuà] (* ne)
          1SG NEG go   if   fall rain C(-root)   TOP
          'I won't go, if it rains tomorrow,.'

The preceding discussion thus further corroborates the analysis of *dehuà* as a non-root C proposed in section 2.2 above and demonstrates the categorial distinctness between non-root C and Top°.

5. THE STATUS OF CROSSCATEGORIAL GENERALIZATIONS

The consistent head-final character of CP we observe in Modern Mandarin in fact holds for the CP in Chinese since the emergence of SFP in the 6th c. BC. A first survey (based on joint work with R. Djamouri and B. Meisterernst) likewise shows the existence of a split CP with three subprojections, the lowest of which again interacts with material inside the TP (cf. Djamouri 2001).[13]
     Given that Chinese has been VO since the earliest attested documents in the 14th c. BC (cf. Djamouri 1987; Djamouri/Paul/Whitman 2008), the "disharmonious" situation precluded by the FOFC, viz. VO order and head-final CP, has been extremely stable. (Another "disharmony", i.e. VO order and head-final NP has existed from the 14th c. BC

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[12]   The fact that in the case of multiple topics, Top° can be overtly realized for either the first, second or third topic XP favours an analysis in terms of recursive TopPs rather than multiple specifiers. Note that while some native speakers accept only one occurrence of overt Top° for multiple topics, others allow for one overt Top° per topic XP (cf. Paul 2006 for further discussion).

[13]   Curiously enough, Chinese specialists of Classical Chinese (5th c. - 3rd c. BC) (e.g. Zhu Chengping 1998) state the different meanings associated with SFPs and examine their combinatorial possibilities without seeing the parallel with the three distributional classes of SFP and their rigid relative ordering established for Modern Mandarin.

throughout the history of Chinese until today; cf. Djamouri 1987). Accordingly, a closer look at the general concept of "(dis)harmony" in typology and the FOFC in particular is called for.

5.1. *A closer look at Greenberg's (1966) universals (cf. Whitman 2008)*

Whether a language is harmonious or disharmonious is captured by cross-categorial generalizations such as Greenberg's (1966) Universal 4: "With overwhelmingly greater than chance frequency, languages with normal SOV order are postpositional." As pointed out by Whitman (2008), cross-categorial generalizations such as Universal 4 are characterized by the fact that they refer to the position of elements in distinct domains (here V in S and P in the adpositional phrase, respectively), irrespective of their relationship in a given structure. They are thus fundamentally different from *hierarchical* generalizations specifying the relative order of categories within the same structure, such as Universal 1: "In declarative sentences with nominal subject and object, the dominant order is always one in which the subject precedes the object."

As argued for by Whitman (2008: 235), hierarchical universals are absolute when applied at an appropriate level of representation. If e.g. subjects originate in the specifier of a projection containing the object and if specifiers always precede heads, Universal 1 follows:

(65)   [S Specifiers [VP precede heads and complements]]

Cross-categorial generalizations, by contrast, are <u>not</u> exceptionless, as they should be if they were due to an imperative of Universal Grammar. Instead, they turn out to be of a statistical nature, because they result from well-documented patterns of language change, which are, however, neither necessary nor favoured from the standpoint of acquisition or performance. In other words, exceptions to "harmonious" situations, illustrated e.g. by the presence of OV order and prepositions in Persian (66), are precisely what we expect; they arise when the historical origin of an item is different from that observed in the languages having served as the basis for the generalization. Adpositions are a case at hand; if they result from the reanalysis of V, as in the case of Chinese prepositions, they should pattern with V, contrary to adpositions with a non-verbal origin, as in the case of Chinese postpositions:[14]

(66)   [PP be mán] dād   (Windfuhr 1987: 534; from Whitman 2008: 240, (9))
           to me   give
       '*Pro* gave it to me.'

(67)   Tāmen [PrepP cóng měiguó] lái
       3SG   from America come
       'They come from the US.'

(68)   [PostpP Zhuōzi shàng] yǒu yī-tái pòsuì de diànnǎo
               table   on   have 1-CL broken SUB computer
       'On the table is a broken computer.'   (Whitman's 2008: 240 (10a, b))

The FOFC turns out to be a borderline case of a cross-categorial generalization. It is a "borderline case", because in the majority of cases the categories whose internal structure is referenced indeed co-occur within the same structure in a given hierarchical configuration. However, the FOFC is nevertheless a cross-categorial, hence statistical generalization, for its

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[14]   For the difference between locative nouns and postpositions in Chinese, cf. Ernst (1988).

ban on e.g. head-final CP in VO languages is claimed to hold in general, hence also in structures displaying OV order, as in the case of *object preposing* to a TP-internal position above adverbs and negation in Chinese (cf. Paul 2002 and references therein):

(69)   [$_{CP}$ [$_{TP}$ Wǒmen gùgōng   [$_{vP}$ yǐjīng   qù-guo] le   ]
                1PL   imperial.palace   already go-EXP   Clow
        'We have been to the imperial palace before.'

The FOFC is thus not a principle of UG, but a statistical generalization. It is therefore not surprising at all, but in fact expected, to find languages that do not comply with it, such as Chinese, Vietnamese and Niger-Congo languages (e.g. Gbe, Yoruba), which all show VO order and e.g. a sentence-final interrogative C. Accordingly, Hawkins (1990) and Dryer (1992) are both wrong in claiming that VO languages do not feature head-final complementisers.[15]

    On the contrary, the stability of head-final CP as well as head-final NP and VO word order observed for Chinese nicely confirms Whitman's (2008) point that cross-categorial generalizations do <u>not</u> arise from imperatives of UG, a view in line with the rejection of the Head Parameter as a component of UG by Kayne (1994) and Newmeyer (2005).

5.2. *Kayne (1998) on C and P*

Kayne (1998) attemps to motivate Dryer's (1992: 102) claim that head-final CP patterns with OV, and restates it as a general ban on the structure in (70):

(70) * V [IP C][16]

While first pointing out that it is far from evident that the internal order within CP should correlate with the internal order in VP, in a second step he proceeds to derive the above correlation. The central assumption adopted by Kayne as the basis of his reasoning is that CP is <u>not</u> a constituent of the familiar type; in particular, C can <u>not</u> be merged directly with IP, but serves as an attractor of IP. Another crucial step is that Kayne proposes to extend the generalizations obtained for <u>prepositional</u> Cs (such as English *to* in *He tried to sing*) to <u>all</u> Cs (an extension which might turn out to be problematic for the analysis of languages other than English).[17]

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[15]   For Dryer (1992: 102), referring to his own work (Dryer 1980) as well as Hawkins (1990: 225), "[…] in fact it may be an exceptionless universal that final complementizers are found only in OV languages. […] complementizers are therefore verb patterners, while the Ss they combine with are object patterners." Note that WALS, which serves as a checking ground for the FOFC, does not list Chinese as an exception. This might be due to the fact that WALS does not provide results for the category C as such, but rather for the relative order between so-called "adverbial subordinators" and the clause as well as for the position of polar question particles etc. Somewhat surprisingly, French is classified as a language with a sentence-initial question particle, the "particle" alluded to being *est-ce que* (cf. WALS, feature 92), which in a way makes it the mirror image of Chinese. Given that *est-ce que* also occurs in *wh*-question and is then preceded by the *wh*-phrase (cf. Munaro & Pollock 2005), its description as a sentence-<u>initial</u> <u>polar</u> question particle appears patently inadequate. Caution is therefore necessary when using WALS.

[16]   Note that Kayne does not provide any bracketing, but it emerges from the ensuing discussion that C is to be construed with the IP complement of the verb, hence C is meant to be an embedded C here.

[17]   On the same page, though, Kayne introduces the caveat that "[…] C in this discussion is not intended to cover all Q-particles" (p. 7).

(71)   The derivation for *tried to sing* is as follows (Kayne 1998: (37)):
(i)   merger of *tried* and *sing*:   tried sing
(ii)   merger of *to* with *tried sing*:   to tried sing
(iii)   attraction of infinitival IP by *to*: $sing_i$ to tried t_i
(iv)   merger of W and attraction of *to* by W: to_j W $sing_i$ t_j tried t_i
(v)   attraction of VP to Spec,W: [tried t_i $]_k$ to_j W $sing_i$ t_j t_k

The configuration in (70) cannot be derived starting from (i), because after step (iii), it would require attraction of VP by C without C's prior raising to W. This attraction to a second and higher specifier is, however, excluded, either because second attraction is only to a lower specifier or because heads can only have one specifier (Kayne 1998: 7). Kayne then explicitly applies these considerations to root-only SFP such as *ne* in Chinese and obtains the impossibility of C in embedded postverbal contexts in Chinese, i.e.'*V [IP ne]', as a subcase of (70).[18]

Several questions arise, though. First of all, how can a <u>root</u> C in sentence-final position be derived if C cannot be directly merged with IP/TP?[19] Second, as we have seen in section 2.2 above, there <u>are</u> cases of embedded head-final CP precisely illustrating the (illicit) structure in (70), i.e. V [$_{CP[-root]}$ IP C]. In fact, Kayne (1998, footnote 13) himself mentions languages with an embedded final Q (such as Nweh) and concludes that in these cases the final Q "must be able to be introduced below V". As far as I understand, to introduce a non-root C below the matrix V amounts, however, to merge this C with its complement, as suggested above for the Chinese non-root C *de* in the propositional assertion construction.

Even if for the sake of the argument we abstract away from the non-root C in Chinese, while Kayne (1998) succeeds in deriving root only for sentence typing C such as *ne* in complement clauses selected by a matrix V, I do not see how this account can be carried over to explain the unacceptability of C in sentential <u>subjects</u>:

(72)   *[Tā   lái   ] ma   ]] bù   zhòngyào
         3SG come FORCE NEG important

(73)   (a)   [Tā   lái   bù   lái   ] bù   zhòngyào
                 3SG come NEG come NEG important
                'Whether he comes or not is not important.'

        (b)   *[Tā   lái   bù   lái   ] ne   ]] bù   zhòngyào
                 3SG come NEG come FORCE   NEG important

These interrogations once again underline the impossibility of deriving cross-categorial generalizations from general principles of grammar, given that they are not part of UG.

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[18]   "The Chinese WH *ne*, which is limited to root contexts (cf. a. Li 1992), actually does fit in, the reason being that a final Q-particle in a root context has no matrix V to interact with and is therefore compatible with (36) [= (70), WP]. In fact, if Chinese *ne* is introduced above the matrix VP (when there is one), then its impossibility in embedded <u>postverbal</u> contexts, i.e. in '*V IP *ne*' follows from the above proposal (as a subcase of (36) [= (70), WP]." (Kayne 1998: 7; emphasis mine).

[19]   There seems to be no other possibility but to first construe the TP, merge C with TP and then have TP raise to Spec, CP in order to obtain the desired surface order. Likewise, in the case of several particles in a row 'C_1 C_2…' (e.g. [[TP *le*] *ma*] it is probably inevitable to merge the lower CP with the higher C head first before raising it to the specifier position of that higher CP.

It is therefore no coincidence that it is "mixed" languages such as Chinese which are often cited as "exceptions" to otherwise valid (cross-categorial) generalizations. Kayne e.g. mentions Chinese as the only exception to the ban on the structure in (74) (Kayne 1998: (43)) aiming to capture Dryer's (1992: 83) observation that prepositional languages are overwhelmingly VO:

(74)   *P DP V[20]

The reason for the "exceptional" behaviour of Chinese in this case is not the mixed origin of its adpositions, but rather reveals a problem inherent in cross-categorial generalizations, viz. the failure of taking into account the <u>function</u> of the XP at hand. In other words, while PPs in Chinese "pattern" with objects when being arguments and hence occur in postverbal position (cf. (75a)), they do not when functioning as adjuncts, in which case they must appear in preverbal position (cf. (75b)):

(75)   (a)   Tā song-le   yibai-kuai qian   [PP gěi xiǎohái]
              3SG give -PERF 100 -CL   money   to child
              'He gave hundred dollars to the children.'

        (b)   Tā [PP gěi xiǎohái] jiǎng-le   jǐ   -ge gùshi (*[PP gěi xiǎohái])
              3SG   to child   tell -PERF several-CL story   to child
              'He told the children several stories.'

To summarize, cross-categorial generalizations such as the FOFC reflect common patterns of language change and cannot be derived from general principles of UG. Accordingly, it is precisely expected that not all languages comply with it.

6. HISTORICAL ORIGIN OF SFP IN CHINESE AND THE FEATURE MAKE-UP OF C

Since the FOFC is a statistical generalization based on a widespread (albeit not the only possible) pattern giving rise to complementisers, it is interesting to examine the origin of SFP in Chinese. This might allow us to narrow down the application domain of the FOFC to the set of languages having in common a particular historical derivation of their C elements and to exempt languages such as Chinese which show a different historical origin for C.

A first survey yields a rather heterogeneous picture. Some SFPs, e.g. *ne* are first attested as such, i.e. as SFPs, although with a different pronunciation due to subsequent sound changes: *ne* < *ni* < *li* (cf. Pan 2007: 81ff). For some others, a verbal origin is proposed as e.g. in the case of *ma* (< *wu* NEG 'not have'; cf. Wang Li 1958; Aldridge (this volume) and references therein) and *le* (<*lai* 'come') (cf. a.o. Chao 1968: 246, footnote 31). In some cases, however, the search for the "origin" seems difficult. For example the low C *láizhe* in modern Mandarin discussed in section 3.1.1 above is currently written as the combination of the verb *lái* 'come' and the durative aspect suffix *-zhe*. Very probably, however, this does not represent its etymology, because *lái* 'come' as a telic verb is incompatible with the durative

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[20]   Kayne (1998: 8-9) derives the ban on the structure in (74) by assuming that like C, P is <u>not</u> merged with its complement, but is introduced above VP and attracts its object DP. Concerning his speculation that the exception to (74) constituted by Chinese "would disappear if the P's in question were actually V's in a serial verb construction" (Kayne 1998: 8), this is not a viable way out. For prepositions are clearly different from verbs since the earliest available documents in the 14th c. BC (cf. Djamouri & Paul 2009 for extensive discussion).

aspect -*zhe*. It is therefore more likely that this written representation was chosen based on the homophony between the SFP, on the one hand, and the combination of verb plus durative aspect, on the other.

Even if we succeeded in determining the historical origin of the SFP, this still does not solve the task of determining the feature make-up of C in the synchronic grammar, because the reanalysis as C gives precisely rise to a new item, necessarily different from the "original" source.[21] To know the exact feature make-up of C is crucial, though, given that the FOFC is stipulated to be suspended in the case of heads involving categorial distinctness. In other words, a "nominal", but not a "verbal" head-final CP is allowed to dominate a head-initial TP.[22]

However, it is not evident why C elements are required to have either V or N as categorial features. What is the kind of feature theory this follows from? How can we determine the alleged verbal vs. nominal nature of C without referring to (non-) compliance with the FOFC? While e.g. Stowell (1981) and Grimshaw (1991/2005) consider C as verbal, more recent works suggest a parallel between CP and the nominal domain, more precisely with its "equivalent" among the functional categories, i.e. DP. Given that unlike (the head-final) NP, DP is head-initial in Chinese (with the demonstrative pronouns *zhè* 'this', *nà* 'that' as D°, cf. A. Li 1999, Simpson 2005), the parallel between CP and DP cannot give us any conclusive evidence for or against the nominal nature of CP in Chinese, either.[23]

The non-root C *dehuà* in conditional clauses is a good case illustrating the different problems just raised. Assuming its etymology to be 'subordinator *de*' plus *huà* 'word' and postulating its island status (on a par with that of complex DPs containing a relative or a complement clause), we would expect extraction from the TP complement of *dehuà* to be barred, on a par with extraction from the relative clause in the DP headed by *huà* 'words' in (76a). This prediction is, however, not borne out, as shown by the acceptability of (77b):

(76) (a)   Wǒ méi tīngdào [DP [CP [TP tā duì   nǐ shuō] de   ] (huà)]
             1SG NEG hear   3SG towards 2SG say   C(-root) word
             'I haven't heard the words he spoke to you/what he said to you.'

      (b)   *[PP Duì   nǐ] [TP wǒ méi tīngdào [DP [CP [TP tā tPP shuō] de   ] (huà)]
             towards 2SG   1SG NEG hear   3SG   say   C(-root) word

(77) (a)   [TopP [CP(-root)[TP Nǐ duì   Lǐsì yǒu yìjiàn   ] dehuà]
                   2SG towards Lisi have prejudice C(-root)

[TopP nà   [TP wǒmen bìxū zhǎo   lìngwài yī-ge rén   ]]]
    then   1PL   need search else   1 -CL person

'If you are prejudiced against Lisi, we need to look for somebody else.'

(b)   [TopP [PP Duì   Lǐsì] [CP(-root)[TP nǐ tPP yǒu yìjiàn   ] dehuà]
        towards Lisi   2SG   have prejudice C(-root)

[TopP nà   [TP wǒmen bìxū zhǎo   lìngwài yī-ge rén   ]]]
    then   1PL   need search else   1 -CL person

'If you are prejudiced against Lisi, we need to look for somebody else.'

Note that the same observation also holds for the non-root C *de* in the propositional assertion pattern discussed in section 2.2 above. Again, extraction from the complement of *de* is possible here and clearly contrasts with the non-extractability from a (head-less) relative clause (cf. Paul & Whitman 2008: section 6.3 for further discussion):[24]

(78)   [TopP [PP Duì   nǐ] [TP tā shì [DeP [yīdìng huì tPP hǎo yī-bèizi   ] de]]]
         towards 2SG   3SG be   certainly will   good 1-generation DE
        '(It is the case that) he will certainly be good to you for an entire lifetime.'

(79)   (a)   *[TopP [PP Duì   nǐ]i, tā   hèn [DP [ti huì tPP hǎo yī-bèizi   de] (rén)]]
            towards 2SG 3SG hate   will   good 1-lifetime DE people
            (*'[To you]i, he hates people/those who will be good ti an entire lifetime.')

(b)   Tā   hèn [DP [[duì   nǐ] huì hǎo yī-bèizi   de] (rén)]
        3SG hate   towards 2SG will good 1-lifetime DE people
        'He hates people/those who will be good to you for an entire lifetime.'

This illustrates that the categorial identity of the "original" item might not be carried over to the new item and that the precise feature make-up must be determined within the synchronic grammar itself.

7. CONCLUSION

The present article has demonstrated in great detail that Chinese - both in the present and the past - does not comply with the FOFC, in particular not with its ban on the combination of VO order and head-final CP. This is not surprising once we realize that the FOFC is a statistical generalization and not due to an imperative of Universal Grammar. Furthermore, the concept of "harmony", being itself based on cross-categorial generalizations, cannot be

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[24]   Irrespective of whether *de* in complex DPs is analysed as a non-root C or rather as *n*, it is clearly different from *de* in the propositional assertion, as witnessed by the different extraction possibilities. (For an analysis as *n* of the probable precursor of *de*, i.e. *zhě*, cf. Aldrige 2009). Also note that *de* in complex DPs not only subordinates relative and complement clauses to the head noun, but any kind of modifier (PP, NP, QP, AP and adverbs) (cf. Paul 2007 for further discussion). Last, but not least, the non-root C *de* in the propositional assertion construction selects a non-finite TP, as witnessed by the obligatory raising of the subject to the matrix subject position, while the non-root C closing off the relative clause selects a finite TP complement, another important difference between the two.

part of the language design, either; accordingly, the importance both functional and formal typological studies have attributed to it must be relativized.

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