On AP-地 Manner Adverbs in Mandarin

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Li and Thompson (1981) classify Mandarin adverbs as **movable** vs. **non-movable**. Temporal *jintian* 'today' is movable, occurring both S-medially and S-initially (1a,b). Temporal *yijing* 'already' is non-movable, occurring only S-medially (2a,b):

(1) a. Ta **jintian** zou le.
　　　3sg today leave ASP
　　　'S/he left today'
　　b. **Jintian** ta zou le.

(2) a. Ta **yijing** zou le.
　　　3sg already leave ASP
　　　'S/he already left'
　　b. ***Yijing** ta zou le.

Mandarin manner adverbs also include movable/non-movable forms. *Dasheng* 'loudly' (lit. 'big voice') is movable (3a,b). *Qiaoqiaode* 'quietly' is non-movable (4a,b).

(3) a. Ta zongshi **hen dasheng** gen bieren jianghua.
　　　3sg always very loud to others talk
　　　'S/he always talks to others loudly.'
　　b. Ta zongshi gen bieren jianghua **hen dasheng**.

(4) a. Ta zongshi **qiaoqiaode** gen bieren jianghua.
　　　3sg always quietly-DE to others talk
　　　'S/he always talks to others quietly.'
　　b. *Ta zongshi gen bieren jianghua **qiaoqiaode**.

Qiaoqiaode derives from the AP *qiao* 'quiet' by suffixation of 地 'DE'; compare English *quietly/quiet*. Interestingly, Mandarin manner adverbs sharing this derivation also share the distribution. AP-地 adverbs occur only S-medially (5)-(8):

(5) a. Ta **yanli-de** zebei le wo.
　　　3sg stern-DE reproach ASP I
　　　'S/He reproached me sternly.'
　　b. *Ta zebei le wo **yanli-de**.

(6) a. Lisi **gaoxing-de** bangzhu le wo.
　　　Lisi glad-DE help ASP I
　　　'Lisi helped me gladly.'
　　b. *Lisi bangzhu wo **gaoxing-de**.

(7) a. Ta yinggai **kuaikuai-de** zuowan zuoye.
　　　3sg should quick-DE finish homework
　　　'S/he should finish her/his homework quickly.'
　　b. *Ta yinggai zuowan zuoye **kuaikuai-de**.

(8) a. Ni yao hen **xiaoxin(-de)** kai che.
　　　You should very careful-DE drive car
　　　'You should drive your car very carefully'
　　b. *Ni yao kai che hen **xiaoxin-de**.

In this talk I:

■ review the problem raised by AP-地 adverbs for current theories of adverbial modification,

■ argue that manner adverbs have a uniform low attachment in complement position and hence that S-medial position must be derived,

■ suggest that movement follows from adverbial DE (地) being a concordializing element, similar to nominal DE (的) as analyzed by Larson (2009).

1.0 The Puzzle of AP-地

AP-地 distribution is puzzling under the two most popular accounts of modifier syntax.
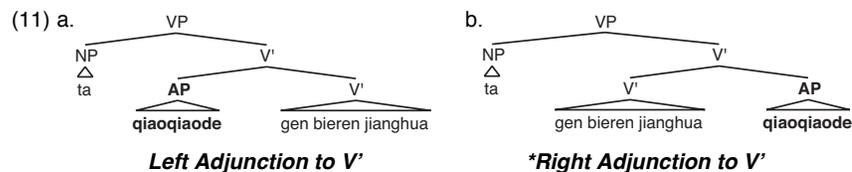
1.1 AP-地 Adverbs as Adjuncts

Adverbs are usually analyzed as V-projection adjuncts (Ernst 2002 a.m.o.). Huang, Li and Li (2009) adopt this view for Chinese manner Advs, giving structure (10a) for (9a), where *hen dasheng* (identified as AP) left-adjoins to V'. Presumably the same analysis applies to (9b); *hen dasheng* right-adjoins to V' (10b):

(9) a. Ta zongshi **hen dasheng** chang minge.
　　　he always **very loud** sing folk song
　　　'He always sings folk songs loudly.'
　　b. Ta zongshi chang minge **hen dasheng**.

(10) a.

Left Adjunction to V'

b.

Right Adjunction to V'
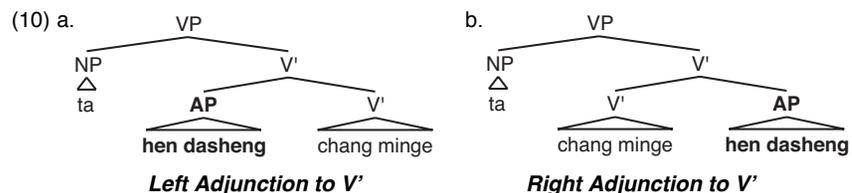
Cetris paribus we expect the same distribution for manner AP *qiaoqiaode* 'quietly'. But although *qiaoqiaode* is allowed on the left (11a), it is excluded on the right (11b).

(11) a.

Left Adjunction to V'

b.

*Right Adjunction to V'

This asymmetry is unexplained on the adjunction account.

1.2 AP-地 Adverbs as Functional Heads

AP-地 Advs are also puzzling on Cinque's (1999) hierarchy of functional projections (see also Laenzlinger 1996). Consider (1)/(2) above. On a C-style account, *jintian* and *yijing* might be analyzed as heads of temporal location phrase (TLP) and temporal priority phrase (TPrP), resp, projected between vP and TP (12a,b):

(12) a. Ta **jintian yijing** zou le.
　　　3sg today already leave ASP
　　　'He/she already left today'

b.
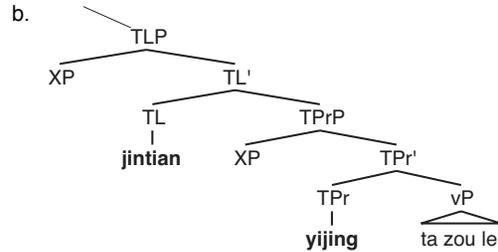
This can capture: (a) fixed order of *jintian* and *yijing*, and (b) their differring "mobility".

Suppose *yijing* obligatorily raises the specifier of its complement (*ta*), but *jintian* makes raising an option. This correctly predicts (13a,b) and excludes (13c):

(13) a. [$_{TLP}$ **jintian** [$_{TPrP}$ ta **yijing** [$_{vP}$ ta zou le]]]   Obligatory raising by *yijing*

b. [$_{TLP}$ ta **jintian** [$_{TPrP}$ ta **yijing** [$_{vP}$ ta zou le]]]   Obligatory raising by *yijing*
Optional raising by *jintian*

c. *[$_{TLP}$ **jintian** [$_{TPrP}$ **yijing** [$_{vP}$ ta zou le]]]   *Non-raising

C's theory predicts: **adverbs of the same category/semantic class should pattern together**. Correct for TLPs; *mingtian* 'tomorrow', *zuotian* 'yesterday', *jinian* 'this year', *qunian* 'last year', *mingnian* 'next year', etc. all pattern identically to *jintian.*

What about Chinese manner Advs? *Dasheng* occurs S-medially/S-finally. Under C's approach, we might analyze this by requiring *dasheng* to raise either the specifier of its complement (*ta*) or the whole complement itself (*ta chang ge*):

(14) a. Ta **hen dasheng** chang minge.
he very loud   sing   folk song
'He sings folk songs loudly.'
b. Ta chang minge **hen dasheng**.
c.
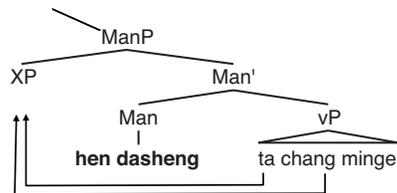
But 地-marked manner Advs behave differently, hence unlike TL, Man cannot be analyzed uniformly. 地-marked Advs are blocked S-finally (15a,b). So they must be required to raise, but allowed to raise only their complement specifiers (15c).

(15) a. Ta zongshi **qiaoqiao-de** gen bieren jianghua.
3sg always quietly-DE to others talk
'S/he always talks to others quietly.'
b. *Ta zongshi gen bieren jianghua **qiaoqiaode**.

c.
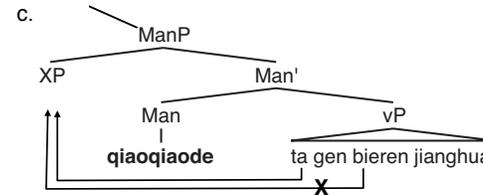
This behavior must trace to 地, given uniform S-medial position for all 地-marked Advs. 地 must somehow exclude whatever feature allows raising of vP with *dasheng* in (12c). It is unclear how 地 could act in this way.

2.0 The Position of Manner Advs

Larson (2004, 2014): manner Advs project neither as V-adjuncts nor heads/specs of functional cats, but rather as **low V complements**. This seems required for (16a), where Adv is apparently selected by V (*word*/*phrase*) (16b):

(16) a. John worded/phrased the letter *?(**carefully/tactfully/thoughtfully**).
b.
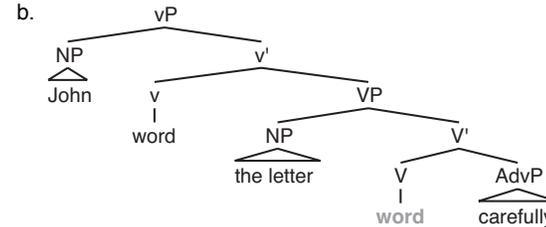
But evidence exists for uniform low position, even when Adv isn't required.

2.1 Manner Adv incorporation

Rivero (1992) notes Mod Greek regularly allows incorporation of manner (& directional) Adv. (17a,b) shows incorporation with *férete* 'behave', which selects manner Adv. (18a,b) shows incorporation with *vráso* 'boil', which doesn't. See also (19).

(17) a. I   Maria férete **kaka**   stin   adelfi tis
DEF Mary behaves **badly** to+DEF sister hers
'Mary behaves badly to her sister'
b. I   Maria **kako**férete   stin   adelfi tis
DEF Mary **badly**+behaves to+DEF sister hers

(18) a. To fagitó tha vrási
The food FUT boil
'The food will boil'
b. To fagitó tha vrási **sigá**
'The food will boil **slowly**'
c. To fagitó tha **sigo**vrási

(19) **Manner Adv**   **Adv-V**   (Rivero 1992)

argá	'slowly'	***argo**masó*	'(I) chew slowly'
dískola	'hard'	***disko**logenó*	'give birth with difficulty'
gorgá	'fast'	***gorgo**petó*	'fly fast'
kaká	'badly'	***kako**logó*	'talk badly'
kalá	'well'	***kalo**vlépo*	'see well'
krifá	'secretly'	***krifo**geló*	'chuckle'
psilá	'lightly'	***psilo**zalízome*	'feel slightly dizzy'
sfixtá	'tightly'	***sfixta**ngaliázo*	'embrace tightly'
sigá	'softly'	***sigo**tragudó*	'sing softly'
stravá	'slanted'	***stravo**kitó*	'look sideways'

Manner-Adv incorporation is not peculiar to MG. Similar facts are reported for other Lgs. (see Alexiadou 1997, Anderson 1992, Bach 1996, Langacker 1979).

Baker (1988) argues that incorporation requires the head-complement relation. This implies (20) (cf. 16):

(20) [$_{V'}$ V [$_{AdvP}$ **Adv**]] ➔ [$_{V'}$ **Adv**-V [$_{AdvP}$ Adv]]

2.2 Generic Interpretation and the Mapping Hypothesis

Middles typically require a postverbal predicate (an adverb or adjunct PP) and are perceived as odd/incomplete without one (21a–c). Why is this?

(21) a. These flowers grow ?*(**quickly**)
b. The clothes iron ?*(**well**)
c. Bread cuts ?*(**easily**).

2.2.1 Condoravdi (1989)

Middles involve structured, generic event quantification.

(22) a. Γe[Con(e) & growing(f, e)] **(quick(e))**
("Generally, for contextually relevant events involving the growing of these flowers, those events are quick")
b. Γe[Con(e) & ironing(c, e)] **(well(e))**
c. Γe[Con(e) & cutting(br, e)] **(easy(e))**

The "main clause" gives the restriction on quantification; its content is <u>presupposed</u>. The "adjunct" gives the quantificational scope; its content is what is <u>asserted</u>.

Surprising Conclusion: The adjunct is required because in generic quantification of this kind, it constitutes the main assertion semantically!

Condoravdi's semantic proposal seems applicable to a much broader class of generic quantifications, not just middles:

(23) a.i.   Olga dances **beautifully**.
ii.   Γe[Con(e) & dancing(o, e)] **(beautiful(e))**
b.i.   John writes letters **carefully**.
ii.   Γe[Con(e) & writing(j, l, e)] **(careful(e))**

c.i.   Alices donates money to charities **cheerfully**.
ii.   Γe[Con(e) & donating(a,m,c,e)] **(cheerful(e))**

2.2.2   Mapping to Syntax

Diesing's Mapping Hypothesis (1992) matches parts of quantification to syntactic position; high material (IP) goes to Q-restriction; low material (VP) goes to Q-scope. Larson (2004) adopts the following variant, following Cheirchia (1995):

Mapping Hypothesis: Lowest material from VP is mapped to the nuclear scope. The residue is mapped into a restrictive clause.

Under MH, Condoravdi's semantic proposal implies a low position for manner Advs in generics, including middles:

(24)

Quant	**Restrictive Clause**	**Nuclear Scope**
Γe	[Con(e) & growing(f, e)]	(quick(e))
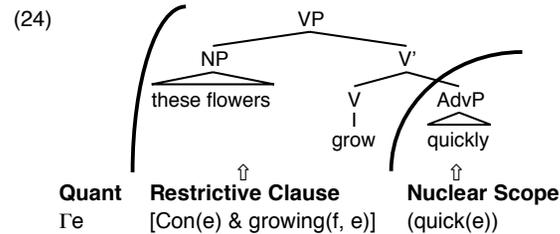
Combining Condoravdi's semantic analysis + MH, **generics become a probe into structure**. The predicate understood as the nuclear scope (the main assertion) should be analyzed as the lowest phrase in vP/VP:

(25)

Quant	**Restrictive Clause**	**Nuclear Scope**
Γe	[Con(e) & writing(j,l,e)]	(careful(e))
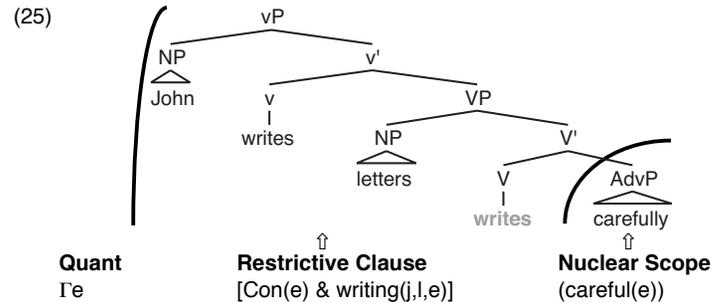
3.0 Manner Adv Position in Mandarin Generics

Mandarin speakers report a postverbal preference for AP/Adv in generics.

(26) a. Lisi jiang-hua **hen dasheng**.
Lisi talk   very big-voice
'Lisi (always) talks loudly'

b. Ta   zoulu **hen xiaosheng**.
   3sg   walk   very little-voice
   'S/he (always) walks very quietly'
c. Zhe-xie hua   zhang(-de) **hen kuai**.
   these   flower grow(-de)   very fast
   'These flowers grow quickly; the growing of these flowers is quick'

(27) a. Lisi **kuaikuai-de** zoulu.
        'Lisi is walking quickly'/??'Lisi walks quickly'
     b. Zhangsan **qiaoqiao-de** shuo hua.
        'Zhangsan is speaking quietly'/??'Zhangsan speaks quietly'

Read as generics something seems to be "missing" in (27a,b).

These data are straightforward under the proposals above. (26a-c) allow a low position for AP, as expected under MH (28). But (27a,b) are problematic (29):

(28)

Quant	Restrictive Clause	Nuclear Scope
Γe	[Con(e) & talking(l, e)]	(loud(e))

(29)

Quant	Restrictive Clause	Nuclear Scope	BACKWARDS!
Γe	[Con(e) & walking(l, e)]	(quick(e))	
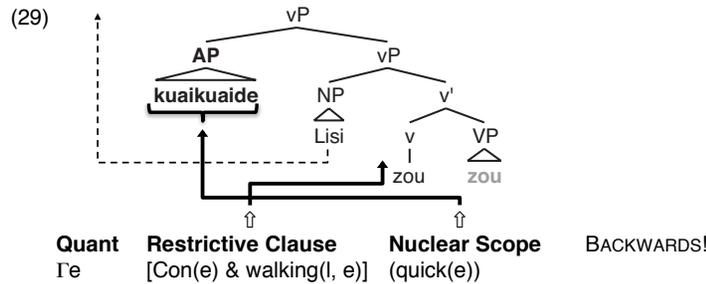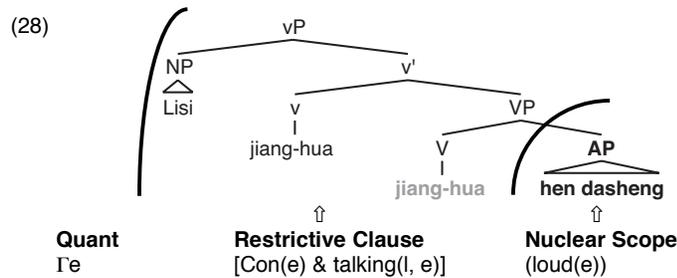
(29) violates MH; the syntax-semantics mapping is the <u>opposite</u> of what we expect. Nonetheless, Mandarin <u>does</u> show generics with manner AP in preverbal position; presence of postverbal material seems to aid this (30)/(31): (cf. 27a,b):

(30) a. Zhangsan **zixi-de**   zuo shi.
        Zhangsan meticulous-DE do work
        'Zhangsan does work meticulously'
     b. Zhe-ge mianbao **hen hao/rongyi** qie.
        this   bread   very good/easy cut
        'This bread cuts well/easily.

(31) a. Lisi changchang/zongshi **kuaikuai-de** zou guo   dating.
        Lisi always   quick-DE   walk through hallway
        'Lisi always walks through the hallway quickly'
     b. Lisi changchang/zongshi **qiaoqiao-de** shuo hua.
        Lisi always   quiet-DE   speak word.
        'Lisi always speaks quietly.'

But now our MH problem returns. Again the mapping comes out <u>backwards</u> (32):

(32)

QUANTIFIER	RESTRICTION	SCOPE
ALL(e)	[Con(e) & walking-through-hallway(l, e)]	(quick(e))
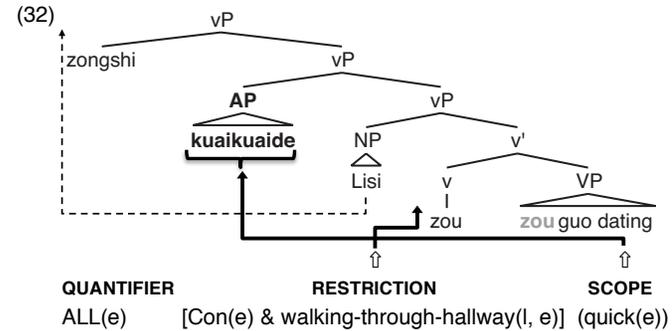
What's going on?

4.0 Mandarin AP-地 as Concordial

Suppose Mandarin manner Advs project uniformly into low position (28), <u>but</u> AP-地 raises obligatorily to vP edge. MH can be satsified by interpreting the <u>low</u> copy (33).

(33)

ALL(e)	[Con(e) & speaking(l, e)]	(quiet(e))
QUANTIFIER	RESTRICTION	SCOPE

This view inverts Li and Thompson (1981). Rather than being non-moveable, AP-地 <u>must</u> raise S-medially (cf. **Lisi zongshi shuo hua **qiaoqiao-de*).

Why is movement required with AP-地?

4.1 The Category of Moveable Manner Adverbials

Li (1985,1990) suggests surface postV position is open only to **nominal** adverbials. Despite AP label by Huang, Li and Li (2009), moveable *dasheng* and *xiaosheng* are plausibly nominal ('big voice'/'little voice') (34a). Similarly for moveable *xiaoxin* (= *xiao* ('small') + *xin* ('heart')) 'care' (34b), *qinlao* 'dilligence' (32c), *naixin* (= *nai* ('endure') + *xin* ('heart') 'patiently', (34d), *xinku* (= *xin*('spice') + *ku*('bitterness') 'hard' (34e) and *zhencheng* (= *zhen* ('true') + *cheng* ('honesty') 'sincerely' (34f):

(34) a. Ta chang minge   **hen dasheng**.
        He sing folk songs very loudly
        'He sings folk songs loudly'
     b. Ta kaiche **hen xiaoxin**.
        he drive   very carefully
        'He drives carefully'/'He drives with care'
     c. Ta zuoshi **hen qinfen**.
        he work   very diligently
        'He works dilligently'/'He works with dilligence'
     d. Ta huida wenti   **hen naixin**.
        He answer question very patiently
        'He answers questions patiently'/'He answers questions with patience'
     e. Ta gongzuo **hen xinku**.
        he work   very hard
        'He works hard'/'He works with effort'
     f. Ta duidai bieren **hen zhencheng**.
        He treat   others very sincerely
        'He treats others sincerely'/'He treats others with sincerity'

Nominal manner adverbs always allow, and usually prefer/require DE (地) S-medially. But like other 地-marked adverbs they are forbidden S-finally. Cf. (34a-f) and (35a-f):

(35) a. Ta **dasheng ??(-de)** chang minge/chang minge **dasheng(*-de)**.
     b. Ta **xiaoxin ??(-de)** kaiche/ kaiche **xiaoxin(*-de)**.
     c. Ta **qinlao ??(-de)** zuoshi/zuoshi **qinlao(*-de)**.
     d. Ta zongshi **naixin ??(-de)** huida wenti/ huida wenti **hen naixin(*-de)**.
     e. Ta **xinku ??(-de)** gongzuo/ gongzuo **xinku(*-de)**.
     f. Ta **zhencheng ??(-de)** duidai bieren/ **zhencheng(*-de)**.

Thus DE (地) enables pre-V occurrence, but <u>inhibits</u> post-V occurrence. Li (1985,1990) proposes nominal adverbs are **case**-licenced in post-V position. If this is correct, DE's effect is plausibly related to case.

4.2 Assignment vs. Concord

Both Ns and As inflect for case in many Lgs. Traditional Grammar: Ns are **assigned** case; As get case by **concord/agreement**.

Proposal: Suffixing 地 creates a "concordial"/adjectival element – one requiring case, but able to receive it only by agreement. This compels raising to a position between a case probe (e.g., T) and a goal (e.g., *Lisi*).

(36)

4.3 Case Features & Agreement (Pesetsky and Torrego 2007)

Features come in four varieties, according to whether they are valued/unvalued, interpretable/uninterpretable (37).

(37)

	INTERPRETABLE	UNINTERPRETABLE
VALUED	iFval	uFval
UNVALUED	iF	uF

(38) … uF[ ] … uF[ ] … ⇒ **AGREE** ⇒ … uF[3] … uF[3] …

Only features **both** interpretable & valued are legible at the interface. (39a-d) will be legible, but (40a-e) will not:

(39) a. iFval[ ]   b. iF[n] … uFval[n]
     c. iF[n] … uF[n] … uFval[n]   d. iF[n] … uF[n] … uF[n] … uFval[n]

(40) a. uFval[ ]   b. uF[n] … uFval[n]
     c. iF[ ]   d. iF[n] … uF[n]
                                    e. iF[ ] … uFval[ ]

Thus: Interpretable F will need to agree with valued F.
       Valued F will need to agree with interpretable F.
       Uninterpretable, unvalued F will need to agree with <u>both</u>.

Assumption: Only <u>un</u>valued features probe.

4.4 Mandarin Manner Adverbs

(41)   [T' T [vP ta   [v' v [VP jiang-hua [NP **dasheng**]]]]]
            iNOM[1] uNOMval[1]   iACC[2]   uACCval[2]
        AGREE! └──────────┘   └──────────────────────────┘ *AGREE! LEGIBLE!*

(42)   [NP α]   ⇔   [XP α–地]
       uCASEval[ ]   uCASE[ ]

(43) [T' T [vP ta [v' v [vP jiang-hua [XP **dasheng-地**]]]]]
      iNOM[1]   uNOMval[1]   iACC[2]   uACC[2]
    AGREE! └──────────┘   └────────────────┘   ***AGREED, but***
                                         ILLEGIBLE (no Val)!

(44) [T' T [vP ta [v' v [vP jiang-hua [XP **dasheng-地**]]]]]
      iNOM[1]   uNOMval[1]   uNOM[2]
    AGREE! └──────────┘   **X**   └   ***NO AGREE!***

(45) [T' T [XP **dasheng-地**] [vP ta [v' v [vP jiang-hua dasheng-地]]]]]]
      iNOM[1]   uNOM[1]   uNOMval[1]
    AGREE! └──────────┘└────────────┘   ***LEGIBLE!***

4.5 Mandarin Nominal 的

Larson (2009) proposes nominal 的 (46) is also a concordializing element:

(46)   Ta   mai le   piaoliang **de** yifu
       3SG buy ASP pretty   DE clothes
       "He bought some attractive clothes"

(47) [XP α–的]
      uCASE[ ]

(48) [T' T [vP ta [v' v [vP mai [DP [XP **piaoliang-的**] [NP   yifu   ]]]]]]
      iNOM[1]   uNOMval[1]   iACC[2]   uACC[2]   uACCval[2]
    AGREE! └──────────┘   └──────────────┘└──────────┘

If this is correct, then "concordiality" operates in both Mandarin DPs and TPs.

5.0   Summary

- Mandarin exhibits manner adverbs that <u>can</u> occur post-V (moveable), and manner adverbs that <u>must</u> occur pre-V (non-moveable).
- This distribution is mysterious under current theories of adverbial syntax.
- There is distributional evidence (incorporation) and semantic evidence (generics-MH) for a uniform <u>low</u> position for manner adverbials.
- If so, pre-V position for manner adverbs in Mandarin must be <u>derived</u>.
- Why <u>can</u> nominal manner adverbs in Mandarin remain *in situ*?
  Why <u>must</u> 地–marked manner adverbs raise?
- Proposal here (following Y.H. Li): This is a **case** fact.
- Nominal manner adverbs can remain *in situ* because they are valued for case.
- 地–marked manner adverbs must raise to agreement position because they are unvalued for case.
- Attachment of 地 seems to create a "concordial" phrase (one unvalued for case).
- 地 in the TP domain appears to function similarly to 的 in the DP domain.

Appendix: Potential counterexamples to the claim that postV manner adverbials are uniformly nominal (ZHANG Chong (pc.))

i.   a. Ta zuoshi hen **jinshen**.   > *jin*('cautious')*shen*('cautious') A+A
       he work   very cautious
       'He works cautiously'
   b. Ta **jinshen-de** zuoshi

ii. a. Ta miandui tiaozhan   hen **yonggan**.   > *yong*('courage')*gan*('dare') A+V
       he face   challenges very courageous
       'He faces challenges courageously'
   b. Ta **yonggan-de** miandui tiaozhan.

iii. a. Ta xiezi hen **liaocao**.   > *liao*('messy')*cao*('messy') A+A
       he write very messily
       'He writes (characters) messily'
   b. Ta **liaocao-de** xiezi.

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