

Revisiting Chinese Potential Constructions

Cross-dialectal Variation¹

Chenchen (Julio) Song
cs791@cam.ac.uk

Department of Theoretical and Applied Linguistics
Gonville & Caius College
University of Cambridge

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Modality can be expressed by various syntactic, morphological, and lexical means.

- Auxiliary verbs: *can, might, must...*
- Modal morphology: subjunctive, conditional, optative...
- Lexical means:
 - Adjectives/adverbs: *it is probable, probably, perhaps...*
 - Verbs: *want, guess, suppose...*
 - Particles: GER *doch, denn...*

(de Haan 2006)

#Two major grammatical means: IP-auxiliary & verbal morphology

- IP-auxiliaries: *neng* “can, able”, *hui* “will, would”, *dei* “must, should”, *keyi* “can, may” . . .
- Adverbs: *keneng* “probably”, *dagai* “perhaps, approximately”, *yexu* “perhaps, maybe”, *yinggai* “should, probably” . . .
- Potential Verb Complement (PVC): *de* (cf. Wu & He 2014)

PVC *de* is mainly used in V-C compound verbs.

V = Main Verb; C = Complementary Verb.

chi-bao “eat_V-full_C” → *chi-de-bao* “can eat-full” (resultative)

xiang-chu “think_V-exit_C” → *xiang-de-chu* “can think out” (directional)

chi-wan “eat_V-finish_C” → *chi-de-wan* “can finish eating” (phasal)

(cf. Chao 1968)

PVC *de* has no epistemic meaning; its non-epistemic meanings largely correspond to English “can”. For expository convenience, I use “potentiality” as a cover term for the various readings of PVC *de*.

An alternative to PVC *de*

In quite a few Mandarin dialects, PVC *de* is not used to express potentiality. Instead, we see stacked LEs for this purpose. For example:

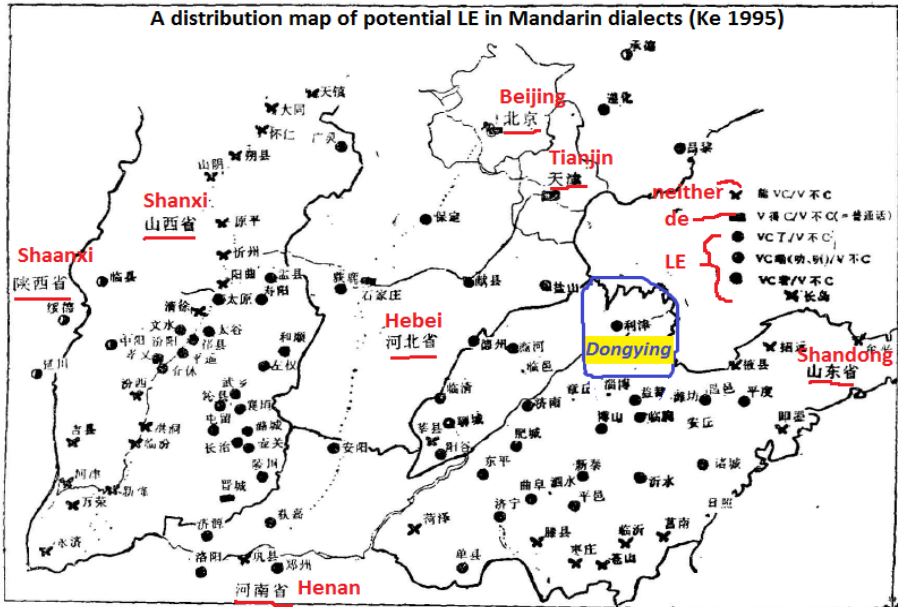
a) *Zhe-jian yifu xi de ganjing.* (Mandarin)
this-CL clothing wash DE clean

b) *Zhe-jianr yishang si gæzing liu liu.* (Dongying)
this-CL clothing wash clean LE LE
“This piece of clothing can be washed clean.”

#Dongying: A Northern Mandarin dialect near the Yellow River Delta.

Potential LE: Typology

A distribution map of potential LE in Mandarin dialects (Ke 1995)



Mainly in Northern Mandarin dialects, especially in Shandong and Shanxi Provinces, also in some regions of Shaanxi, Hebei, and Henan Provinces.

The potential LE is widely used in Northern Mandarin varieties. Actually Beijing Mandarin is the exception. (Ke 1995)

This usage is also described in Northern Mandarin textbooks written by foreigners around late 19c. and early 20c. (e.g. Léon Wieger 1912, Joseph Mullie 1932, also see Sergey Yakhontov 1957).

The potential LE is phonologically realized as *lo*, *lao*, *lou*, *liu*, *li*, etc. But its syntactic behavior is largely identical in these varieties.

- (?)VC-LE-LE: rare, but clearly productive in Dongying;
- VC-LE: the most common case;
- V-LE-LE: also very common, especially among older people (Ke 1995, Hou 1999) [and me];
- (?)V-LE: rare, presumably due to haplology (Ke 1995, also see Lu 1957, Zhu 1982)

- a) *Wo zhe-benr shu kǎe dong liu liu.* (Dongying)
I this-CL book see understand LE LE
“This book, I can understand.” (VC-LE-LE)
- b) *Wo zhe-ben shu kan dong lou* (Lingchuan)
I this-CL book see understand LE
“This book, I can understand” (VC-LE)
- c) *Sāe-wǎe fǎe chi liu liu.* (Dongying)
three-CL rice eat LE LE
“Three bowl rice, (I) can eat up.” (V-LE-LE)
- d) *San-wǎn fǎn chi lou (lou).* (Jinan)
three-CL rice eat LE (LE)
“Three bowl rice, (I) can eat up.” (V-LE)

(NB objects topicalized)

The object can also stay in situ.

- a) *Wo ho liu ziu liu.* (Dongying)
I drink LE alcohol LE
“I can drink alcohol.” (V-LE-O-LE)
- b) * *Wo ho ziu liu liu.*
I drink LE alcohol LE
“I can drink alcohol.” (V-O-LE-LE)
- c) *Wo si gæzing liu yishang liu.*
I wash clean LE clothing LE
“I can wash clean the clothes.” (VC-LE-O-LE)
- d) *Wo si gæzing yishang liu liu.*
I wash clean clothing LE LE
“I can wash clean the clothes.” (VC-O-LE-LE)

- ① What are the two LEs?
- ② Where does the potential meaning come from?
- ③ How to explain the different scenarios?

When is potential LE used?

So far we have seen 8 scenarios:

VC-LE-LE, VC-LE, V-LE-LE, V-LE, VC-O-LE-LE, VC-LE-O-LE,
V-LE-O-LE, *V-O-LE-LE

Only one construction is absolutely ungrammatical. We can observe that either a LE or a C **must** be adjacent to V.

Which LE yields the potential meaning?

Pinpointing the potential LE

Fact 1: Although VC-LE-LE is very productive in Dongying, there is some restriction on C.

V-C-LE-LE	Meaning
<i>si-gæzing-liu*(-liu)</i>	“wash-clean-LE-LE→can wash sth. clean”
<i>siang-mingbei-liu*(-liu)</i>	“think-clear-LE-LE→can think sth. clearly”
<i>do-sui-liu*(-liu)</i>	“hit-smash-LE-LE→can hit-smash sth.”
<i>zhu-shu-liu*(-liu)</i>	“boil-cooked-LE-LE→can boil-cooked sth.”
<i>chi-hang-liu(*-liu)</i>	“eat-UP-LE-(*-LE)→can eat up”
<i>shui-zhou-liu(*-liu)</i>	“sleep-TOUCH-LE(*-LE)→can fall asleep”
<i>bei-guo-liu(*-liu)</i>	“memorize-PASS-LE(*-LE)→can memorize”
...	

Pinpointing the potential LE

- VC-LE-LE can only apply to non-grammaticalized C. When C is grammaticalized (C_g), only one LE is allowed (V- C_g -LE).
 - ∴ C_g is merely aspectual.
 - ∴ In V- C_g -LE it is LE that yields the potential meaning.
 - ∴ VC-LE does not have potential meaning, while VC-LE-LE does.
 - ∴ In VC-LE-LE it is the second LE that yields the potential meaning.
- ⇒ **The second LE is the potential LE.**

Then what is the first LE?

What is the first LE?

Fact 2: Both VC-LE-LE and V-LE-LE in Dongying can be paraphrased with the IP-modal *neng* “can”, but some hidden differences emerge after the paraphrasing.

Potential LE	IP-modal	Meaning
<i>si-gæzing-liu-liu</i>	<i>neng si-gæzing(-liu)</i>	“can wash sth. clean”
<i>siang-mingbei-liu-liu</i>	<i>neng xiang-mingbei(-liu)</i>	“can think sth. clearly”
<i>do-sui-liu-liu</i>	<i>neng do-sui(-liu)</i>	“can hit-smash sth.”
<i>gæ-liu-liu</i>	<i>neng gæ*(-liu)</i>	“can get sth. done”
<i>chi-liu-liu</i>	<i>neng chi*(-liu)</i>	“can get sth. eaten”
<i>mai-liu-liu</i>	<i>neng mai*(-liu)</i>	“can get sth. sold”
...		

What is the first LE?

- After the paraphrasing, VC-LE-LE can lose both LEs, while V-LE-LE can only lose the second LE.
 - Also note the meaning of V-LE-LE. It is “can bring about the completion of V” instead of “can V”, i.e. perfective.
 - In VC-LE-LE, VC does not necessarily mean “get VC-ed”, but VC often has a natural telic reading. VC-LE necessarily means “get VC-ed”.
 - In the paraphrasing of VC-LE-LE, the loss of the first LE is optional. When it remains, there is an emphasis on the result state.
- ⇒ **In both cases, the first LE is likely to be an aspect marker.**

What is the first LE?

Fact 3: VC-LE-LE and V-LE-LE in Dongying also differ in their negative forms.

Positive	Negative	Meaning
<i>si-gæzing-liu-liu</i>	<i>si-bu-gæzing(*-liu)</i>	“can('t) wash sth. clean”
<i>siang-mingbei-liu-liu</i>	<i>xiang-bu-mingbei(*-liu)</i>	“can('t) think sth. clearly”
<i>do-sui-liu-liu</i>	<i>do-bu-sui(*-liu)</i>	“can('t) hit-smash sth.”
<i>gæ-liu-liu</i>	<i>gæ-bu-liao</i>	“can('t) get sth. done”
<i>chi-liu-liu</i>	<i>chi-bu-liao</i>	“can('t) get sth. eaten”
<i>mai-liu-liu</i>	<i>mai-bu-liao</i>	“can('t) get sth. sold”
...		

What is the first LE?

- No LE can occur in the negative form of VC-LE-LE. The first LE must be retained in the negative form of V-LE-LE, but it must retrieve its full pronunciation.
 - This suggests that the aspect marker LE is ATB-ly incompatible with negation, and that the full-tone LE in V-*bu*-LE is something else.
 - Also note that the above-mentioned negative forms are identical to those in standard Mandarin.
- ⇒ **The first LE in V-LE-LE is C_g , while the full-tone LE in its negative form V-*bu*-LE is more like an ordinary C.**

There is further evidence for this.

What is the first LE?

Fact 4: V-C_g-LE and V-LE-LE behave alike in Dongying in both IP-paraphrasing and negation. NB the phonological change (e.g. *hang*→*shang*, *liu*→*liao*).

Original	IP-paraphrasing	Negation	Meaning
<i>chi-hang-liu</i>	<i>neng chi-hang</i>	<i>chi-bu-shang</i>	“can('t) eat up”
<i>shui-zhou-liu</i>	<i>neng shui-zhou</i>	<i>shui-bu-zhao</i>	“can('t) fall asleep”
<i>bei-guo-liu</i>	<i>neng bei-guo</i>	<i>bei-bu-guo</i>	“can('t) memorize”
<i>gæ-liu-liu</i>	<i>neng gæ-liu</i>	<i>gæ-bu-liao</i>	“can('t) get sth. done”
<i>chi-liu-liu</i>	<i>neng chi-liu</i>	<i>chi-bu-liao</i>	“can('t) get sth. eaten”
<i>mai-liu-liu</i>	<i>neng mai-liu</i>	<i>mai-bu-liao</i>	“can('t) get sth. sold”
...			

⇒ The first LE in V-LE-LE is syntactically equivalent to C_g.

- In Dongying (and presumably also other Northern Mandarin varieties), the second/final LE in the various potential LE constructions is the potential LE.
- When there are two LEs, the first LE in VC-LE-LE is an aspect marker, while the first LE in V-LE-LE is equivalent to grammaticalized C_g .

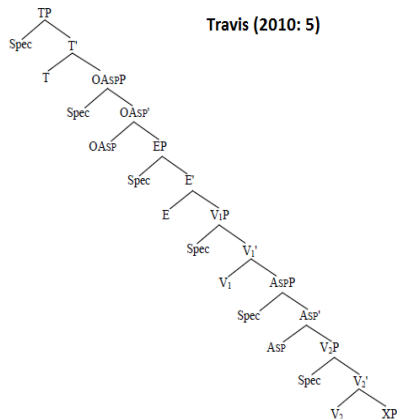
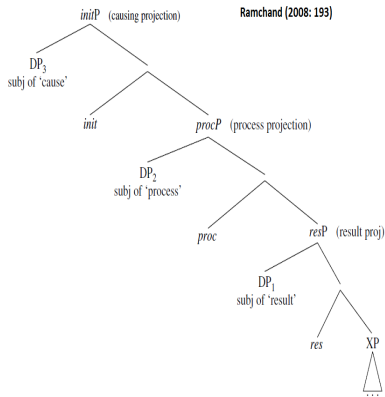
We need a theoretical framework to model these points.

Since Vendler (1957), linguists have distinguished two types of aspect: viewpoint/grammatical aspect & situation/lexical aspect/Aktionsart (also see Comrie 1976 and Smith 1991).

Grammatical Aspect	Lexical Aspect
Perfective	State
Imperfective	Activity
Continuative	Achievement
Progressive	Accomplishment
Experiential	(Semelfactive)
...	-

Split-aspect

From similar perspectives, researchers (e.g. Ramchand 2008, Travis 2010) have worked out various versions of Inner Aspect.



Based on the Vendlerian split-aspect, these models nicely derive the situation/lexical aspect in various syntactic ways.

However, **such a two-way division of aspect seems a bit simplistic.**

Kieferian Aktionsart

Kiefer (1997, 2010) treats “Aktionsart” as a different category.

“While aspect has to do with the internal temporal constituency of events, aktionsart is the modification of verb meaning by morphological means. An aktionsart may, but need not affect aspect.” (Kiefer 2010)

Typical examples of Kieferian Aktionsarten are:

Hungarian	Meaning	Aktionsart
<i>meg-ír-ni</i>	“MEG-write-to→to write (and finish)”	perfective
<i>ki-pihen-ni</i>	“out-rest-to→to thoroughly rest”	saturation
<i>olvas-gat-ni</i>	“read-GAT-to→to skim-read”	iterative
<i>el-sír-ni</i>	“EL-cry-to→burst into tears”	ingressive
<i>be-jár-ni</i>	“in-go-to→to go all around”	total
<i>agyon-bicikliz-ni</i>	“on brain-cycle-to→to cycle to death”	exhaustive
...		

Vendler-Aktionsart	Kiefer-Aktionsart
Closed group	Open group
One dimension (temporal)	Multiple dimensions
Often w/o dedicated morphology	Often with dedicated morphology

Problems:

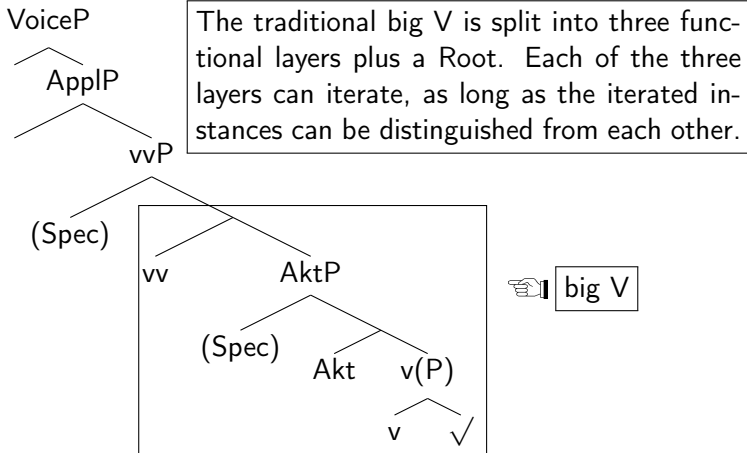
- They overlap (at least in achievement, accomplishment, and semelfactive).
- Some Kieferian Aktionsart preverbs are indeed just aspect markers, e.g. HUN *meg* in *meg-írni* “to write (PFV)”.

⇒ We cannot totally separate Kieferian Aktionsart from “aspect”, though it is not exactly the kind of “situation/lexical/inner aspect/Aktionsart” in the literature either. We need a more refined split-aspect system.

AktP hypothesis

In Song (2015, 2016), I proposed an AktP for Kieferian Aktionsart items. Akt uses existing or new materials to modify the basic verbal situation.

#Distributed Morphology (cf. Embick & Noyer 2007)

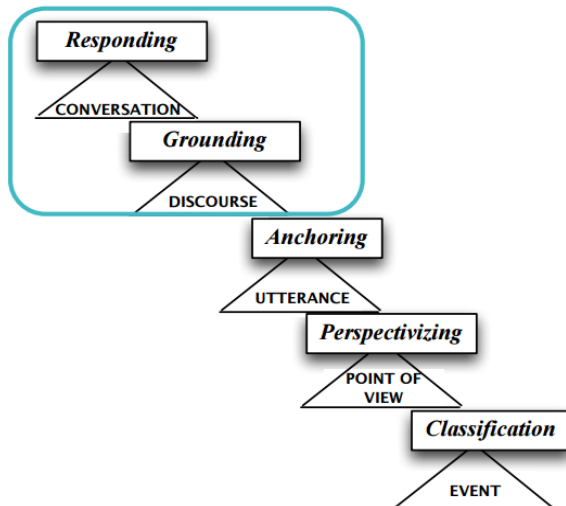


Some implications:

- ① Several domains in a clause (compare Wiltschko 2014, 2016), i.e.
 - Split-V forms a word-internal domain; the lexical verb is built up here.
 - VoiceP (1st word-external phase) encloses the event domain.
 - Split-V domain + VoiceP domain = Wiltschko's classification domain.
 - IP (the extended projection of V) is the inflectional domain.
 - Wiltschko's perspectivizing + anchoring domains.
 - CP (2nd word-external phase) is the discourse domain.
 - Wiltschko's grounding + responding domains.

AktP hypothesis

Wiltschko's (2016) five clausal domains:



- ② A revised split-aspect system:
- **Grammatical aspect** stays the same (AspP).
 - **Lexical aspect/Aktionsart** is encoded in the lexical verb (split-V).
 - **Situation aspect** is encoded in the entire event domain (VoiceP).
 - Its domain scope includes but is larger than lexical aspect.
 - “Viewpoint aspect” ≠ “grammatical aspect”; aspectual viewpoint can be expressed by both grammatical and lexical means.
 - I dispense with this term to avoid confusion.
 - Aspect = Time/space/degree/density/etc. properties (objective or subjective) of event situation.

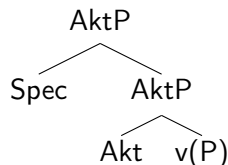
- ③ Vendler-Aktionsart vs. Kiefer-Aktionsart:
 - Both are situation aspect, and both have a focus on lexical aspect.
 - Vendler cares more about the v(P) level, where the aspectual information is yielded by the Root concept plus the verbalizer(s).
 - Kiefer cares more about the AktP level, where the aspectual information is yielded by v-√ plus Akt-items.
 - As we go higher, more aspectual information can still be added (up till AspP).
- ④ So a verb (or more exactly an event situation) has four possible steps to form its aspect (though not equally applied in different languages):
 - ① v-√, e.g. v-√EAT is intrinsically an activity.
 - ② AktP, e.g. *eat up* becomes an accomplishment-activity.
 - ③ VoiceP, e.g. *eat up three apples* becomes a “confirmed” accomplishment.
 - ④ AspP(-TP), e.g. *has eaten up three apples* becomes a perfective accomplishment.

In Song (2015, 2016), I studied the Chinese compound verbs and analyzed the C in V-C compounds as Akt-items. (For the current purpose let's temporarily abstract away from their source materials.)

Non-grammaticalized Akt-item = Spec-AktP

Grammaticalized Akt-item = Akt-head

(In BPS this is yielded by the nature of the Root, i.e. complete vs. defective.)



Akt-markers C_g :

- In standard Mandarin this is a fairly small inventory, mainly including *le*, *zhe*, *guo*, *jian*, etc.
- In Dongying, this inventory is slightly larger, mainly including *liu*, *zhou*, *guo*, *hang*, *dong*, etc.

(Mandarin *le*, *zhe* = Dongying *liu*, *zhou*)

NB The Akt-*le*, *zhe*, *guo* are different from their Asp counterparts.

Conclusion from last section:

- 1st LE in VC-LE-LE is an aspect marker.
- 1st LE in V-LE-LE is syntactically equivalent to grammaticalized C_g .

Under the AktP hypothesis, we can simply identify the first LE in V-LE-LE as an Akt-head. Then what is the first LE in VC-LE-LE?

To figure this out, we need to first pin down the position of the second (potential) LE.

The grammaticalization path of LE in Mandarin Chinese is $V \rightarrow \text{Akt} \rightarrow \text{Asp}$ (cf. Song 2015). So the second LE in the potential LE construction could be Akt or Asp.

*Is it Asp? **No!***

Fact 5: In Dongying, phonological contraction is compulsory between Asp-LE and Sentence Final Particles (SFPs), but forbidden between potential LE and SFPs.

- a) *Wo he liu ziu liu æ/*liæ.*
I drink LE alcohol LE SFP
“(Yes/FYI) I can drink alcohol.”
- b) *Wo he liu ziu liæ/*liu æ.*
I drink LE alcohol LE-SFP
“(Yes/FYI) I have drunk alcohol.”
- c) *Ni si gæzing (liu) yishang liu ao/*liao?*
you wash clean (LE) clothing LE SFP
“(Tell me) Can you wash clean the clothes?”
- d) *Ni si gæzing (liu) yishang liao/*liu ao?*
you wash clean (LE) clothing LE-SFP
“(Tell me) Have you washed clean the clothes?”

In order for two elements to be phonologically contracted, they need to be transferred together (Sato 2012). Fact 5 suggests that probably the potential LE and SFP are in two different phases.

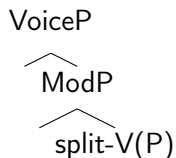
This means **potential LE is within VoiceP** (not Asp). Therefore, the first LE in VC-LE-LE is also within VoiceP (not Asp either).

Then what is the category of the potential LE?

The only place for LE in VoiceP is Akt, but then we have two identical Akt-LEs in the same phase. Syntax cannot distinguish them!

(cf. Richards 2010)

I tentatively propose a low ModP between Voice and split-V. It harbors potential LE and similar elements in Northern Mandarin dialects (cf. Simpson 2001 for a similar proposal for Southeast Asian languages).



Proposing a low ModP

As such, this potential LE should be a further grammaticalization from the Akt-LE (before it hits Asp).

Diachronically this seems to be true, e.g.

“This is a grammaticalization from ‘realization’ to ‘potentiality’... C items that express ‘realization’ first get bleached to merely having ‘potentiality’ meaning, then one of such items hops out of the VC compound and becomes a modality marker... in some Shanxi dialects it is LE, in standard Mandarin it is DE, in some Hebei dialects it is ZHE...” (Ke 1995)

So the wide use of potential LE in Northern Mandarin dialects is probably due to its wide use as a perfective Akt-marker.

In this study, we have. . .

- noticed a potential LE construction in Northern Mandarin dialects;
- examined dialect data for its syntactic behavior;
- proposed a model to account for it.





In particular:





- The potential LE construction is concerned with two LEs.
- The first LE is simply an Akt-marker (replaceable by other Akt-heads).
- The second LE is still within VoiceP, and probably a low Mod-marker.

Thus, we have found a modality marker from aspectual source, which is typologically rare (cf. Bybee et al. 1994).

- Why typologically rare? Why Chinese?
- The linearization of potential LE and object?
- The featureal make-up of low Mod and its cross-linguistic tenability?
- The relation between low Mod and Voice (=Chomskyan v)?
- ...

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