Multifunctionality across categories
The case of Gaoping Jin *ge*

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Seeks to offer an opportunity to discuss **multifunctional affixes**.

Three types:

- those affixes that appear to have more than one function within a category
- those that can be used in different categories
- those that can be used both in derivation and inflection

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👉 The particular affix in our study (Jin Chinese *ge*) seems to instantiate all three types.

Jin Chinese is a major non-Mandarin variety of Chinese spoken in northern China, mainly in Shanxi Province ("Jin" means Shanxi) and surrounding regions.

Our data: from **Gaoping** (based on Li 2024)
But *ge* is a shared feature of all Jin varieties.

1. Introduction

2. **Data**

3. Analysis

4. Conclusion

Three main functions (Li 2024):

1. a word-formation prefix (cross-categorial, often diminutive)
2. an aktionsart prefix (on verbs, diminutive-iterative)
3. a degree infix (on ABB adjectives, augmentative-exaggerative)

We have studied ❸ in detail in Song, Cheng & Li (2024) and will mainly focus on ❶❷ here.

1. The word-formation prefix *ge* (diminutive)

This use of *ge* is cross-categorial:

- nouns/classifiers: mostly diminutive in meaning
- verbs/adjectives: also diminutive, but less clear in meaning

Regardless of meaning, this *ge* is required for the relevant words to be well-formed.

(1) A simple example (noun, diminutive)
*Der   yeu   ge   *(**ge**-)dou (-r),   man sengr man sengr.*   [Gaoping Jin]
there have CLF GE √PIT N.DIM slow a bit   slow a bit
'Walk more slowly—there's a small pit over there.'

We gloss *dou* as a root since it can't be used on its own. This makes *ge* a categorizer-like prefix. The rhotic *-r* is an optional nominal marker (usually also diminutive). NB *ge*- and *-r* (more productive) are separately selected by the root.

(2) a. *Va kanzhæ yeu ji   ge *(**ge-**)duei(r), sousin sengr ba!*   [Gaoping Jin]
         I   see   have several CLF GE √PILE careful a bit SFP
         'I saw several small mounds of soil (over there), so be careful!'

     b. *Va jidæ   diou menr shang yeu ge ?(**ge-**)bar   lɛ ya?!*
         I remember the door on   have CLF GE √HANDLE ASP SFP
         'I remember there's a small knob on the door (but can't find it now. Where is it?)!'

(3) a. *Ge va na yi? *(**ge-**)duozhe   shuan!*   [Gaoping Jin]
         give me bring one GE- CLF_bulb-shaped-small-object garlic
         'Get me a small head of garlic!'

     b. *Die *(**ge-**)lianr   di   si nie-zhe.*
         this GE- CLF_small-area land is you-POSS
         'This small piece of land is yours.'

Some classifiers independently carry a rhotic *-r* (or *-zhe*) too.

(4) Nouns

    a. *(ge-)dou(r)* 'pit', *(ge-)duei(r)* 'mound', *?(ge-)ba?(r)* 'knob' ✔ [Gaoping Jin]

    b. *(*ge-)men(r)* 'door', *(*ge-)shu(*r)* 'book', *(*ge-)hua(r)* 'flower', *(*ge-)mou(r)* 'cat' ✗

(5) Classifiers

    a. *(ge-)duozhe* 'for small bulb-shaped objects' [Gaoping Jin]
    (ge-)lianr 'for small pieces of land', *?(ge-)sengr* 'for small amounts' ✔

    b. *(*ge-)jianr* 'for clothes', *(*ge-)bar* 'for holdable objects', *(*ge-)benr* 'for books' ✗

The diminutive reading of *ge-* in V/A is often less clear, but *ge-* is still obligatory when needed.

(6) a. *Tsianteu du zhu la, *(**ge**-)liou shang zheu ba!*   [Gaoping Jin]
     ahead block ASP SFP GE- √DETOUR up go SFP
     'There's a traffic jam ahead. Let's detour a little bit (around it)!' (diminutive reading clear)

    b. *Va diou chongdianqi cheinei yiʔzhe *(**ge**-)chua bu jinge lei?!*
     I this charger why always GE- √STICK not enter SFP
     'Why can't I successfully plug in my charger (despite many attempts)?!' (unclear)

(7) a. *Na shang nian genr *(**ge**-)liou zhizhe!*   [Gaoping Jin]
     pick up that CLF GE- √BEND twig
     'Pick up that slightly bent twig!' (diminutive reading clear)

    b. *Buyou ba niong *(**ge**-)zha moujin he ganzeng moujin fong zhɛ yiʔ chuo!*
     don't DISP that GE- √DREG towel and clean towel put in one place
     'Don't put the dirty towel and the clean towel together!' (unclear)

(8) Verbs

    a. *(ge-)liou* 'detour a bit', *(ge-)chua* 'plug in', *(ge-)chuoʔ* 'get wrinkly' ✓   [Gaoping Jin]

    b. *(*ge-)zheu* 'walk', *(*ge-)kan* 'look', *(*ge-)siang* 'think' ✗

(9) Adjectives

    a. *(ge-)liou* 'bent', *(ge-)zha* 'dirty', *(ge-)chuoʔ* 'wrinkled' ✓   [Gaoping Jin]

    b. *(*ge-)haʔ* 'dark', *(*ge-)tian* 'sweet', *(*ge-)leng* 'cold' ✗

This *ge-* is required for some words to be well-formed.

- It is cross-categorial: N, Cl, V, A.
- The requirement of *ge-* is an idiosyncratic property of the root.
- The intuitive meaning of *ge-* is "smallness" (clearer in N/Cl than in V/A).

This *ge* means 'do something with reduced force but increased frequency' or 'repeatedly but slightly do something within a short time'. It is limited to verbs.

(10)   a.   *Buyou zhε   tsang shang **ge**-hua!*   [Gaoping Jin]
           don't   be.at wall   on   ᴀᴋᴛ-draw
           'Don't scribble on the wall!'

       b.   *Ge   va   **ge**-shan zhu dier   feng!*
           give me   ᴀᴋᴛ-fan   ᴀsᴘ a bit   wind
           'Keep fanning me (to help me cool down)!'

       c.   *Jizhu   buyou zhou ta   qi va ner   **ge**-fan   ge a!*
           remember   don't let   him go I   there ᴀᴋᴛ-search go sғᴘ
           'Remember not to let him dig around in my room!'

This *ge-* is very productive in central Shanxi but less productive elsewhere (Ma 1995).
 Ex. *ge-siang* 'think', *ge-cheʔ* 'eat', *ge-zheu* 'walk', *ge-kan* 'look' (✗Gaoping Jin, ✓Central Jin)
So, at least in Gaoping Jin, the aktionsart *ge-* is still **derivational**.

3. The degree infix *ge* (exaggerative)

This use is limited to ABB adjectives, where A is an adjectival base and BB is a reduplicated vivid depictive element (**ideophonic** according to Van Hoey 2023).

(11)   ABB (vividly augmentative) vs. A-*ge*-BB (exaggerative)   [Gaoping Jin]
   haʔ-dongdong 'dark-BB; pitch-dark'   *haʔ-ge-dongdong* 'so pitch-dark!!'
   nan-yiengyieng 'blue-BB; brightly blue'   *nan-ge-yiengyieng* 'so brightly blue!!'
   tian-ziʔziʔ 'sweet-BB; pleasantly sweet'   *tian-ge-ziʔziʔ* 'so pleasantly sweet!!'
   neng-shoushou 'cold-BB; quite cold and chilly'   *neng-ge-shoushou* 'so cold and chilly!!'

This *-ge-* is more productive in Gaoping Jin than in other Jin varieties. In Gaoping Jin, it is the closest to an inflectional affix among all the uses of *ge* we have seen.

See Song, Cheng & Li (2024) for a dedicated study, though our analysis here is slightly different.

The multifunctional affix *ge* in Jin Chinese has three uses (Li 2024):

1. a word-formation prefix (cross-categorial, often diminutive)
2. an aktionsart prefix (on verbs, diminutive-iterative)
3. a degree infix (on ABB adjectives, exaggerative)

In Gaoping Jin, ❶❷ are derivational, while ❸ is closer to inflectional. Function-wise, ❶❷ are both essentially diminutive, while ❸ is not. Thus, ❷ can be treated as a special case of ❶.

Seeks to offer an opportunity to discuss **multifunctional affixes**.

Three types:

- those affixes that appear to have more than one function within a category ➜±dim. in ❶
- those that can be used in different categories ➜N/V/A/Cl, dim./exag.
- those that can be used both in derivation and inflection ➜❶❷/❸

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👉 The particular affix in our study (Jin Chinese *ge*) seems to instantiate all three types.

Question: How come a single form *ge* can shoulder so many functions?

It is not that *ge* is specified for so many functions in the lexicon. Instead, *ge* is an underspecified element that just spells out the shared abstract core of all those functions.

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Background: The Chinese languages are highly analytic, where there are few grammatical markers in general. But the **structural particles** are a notable exception. They have existed since the Old Chinese period.

- Old Chinese (before 4th century): *tjɯ* (之), *tjaːʔ* (者)
- Middle Chinese (4th–12th centuries): *tiei* (底)
- Modern Chinese (after 12th century): *ɡə* in Mandarin (officially romanized as *de*, 的/地/得)

The structural particles shoulder many structural functions, the shared abstract core of which is sort of a modificational relation at the phrasal level.

Take the Mandarin version *de* for example.

(12) a. *Lili **de** mama*
          Lili POSS mother
          'Lili's mother'

    b. *piaoliang **de** fangzi*
          pretty MODI.N house
          'pretty house'

    c. *bu xuexi **de** xuesheng*
          not study REL student
          'students who don't study'

(13) a. *dasheng **de** du*   [Mandarin]
          loud MODI.V read
          'read loudly'

    b. *hei **de** xiaren*
          dark DEG scary
          'scarily dark'

    c. *pao **de** kuai*
          run DEG fast
          'run fast'

Overall, *de* is a **syntactic linker**, linking a modifier and the base it modifies. The modifier may be a specifier, an adjunct, or a complement.

Idea: *ge* is a "structural particle" at the word-internal level—it extends/modifies the root/base within the categorization domain.

This is reminiscent of the **defective categorizer** in Song (2019), which is an unvalued version of the normal categorizers in root syntax and minimally fulfills the formal syntactic purpose of a categorizer by providing the root with a functional shell.

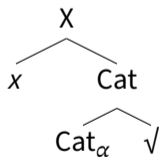The original use scenario of Cat is the derivation of modifier-head compounds:

blackboard[CAT: N]

- Cat[CAT: __]
  - Cat[CAT: __]
  - √BLACK
- N[CAT: N]
  - n[CAT: N]
  - √BOARD

dry-clean[CAT: V]

- Cat[CAT: __]
  - Cat[CAT: __]
  - √DRY
- V[CAT: V]
  - v[CAT: V]
  - √CLEAN
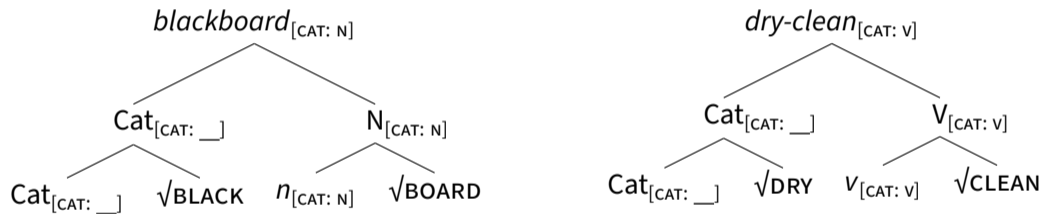
Cat gets its categorial value via Agree. The shared [CAT] feature then labels the whole structure. As a result, the Cat-introduced material is essentially adjoined to the normally categorized head.

Hypothesis: *ge* spells out Cat. But we must adapt the original Cat schema a little because:

- While A-*ge*-BBs can be analyzed as compounds, *ge*-Xs cannot.
- The original Cat does not distinguish different semantic types of modification.

Adaptation: (i) Cat introduces either a modifier or the word base itself. In the latter scenario, the normal categorizer (x) is rootless. (ii) Cat has different flavors (α), defined by extra features.

$$
\begin{array}{c}
\text{X} \\
\diagup \diagdown \\
x \qquad \text{Cat} \\
\diagup \diagdown \\
\text{Cat}_{\alpha} \quad \sqrt{}
\end{array}
$$

NB *ge* is only specified for [CAT]—it can spell out all flavors of Cat by the Subset Principle.

The etymology of *ge* is unknown. A popular hypothesis (see, e.g., Xing 1987, Bai 1995) is that it is a residue of Old Chinese consonant clusters (e.g., OC *groːŋs* 'alley' ➔ Jin *ge-lang*, Sagart & Jin 1987). During the Disyllabification Trend (5th–12th c.), *ge* became a disyllabification strategy and got reanalyzed as a derivational prefix. Its diminutive reading developed by analogy.

So, the core function of the word-formation *ge* is modifying the root (both phonologically and semantically) before categorization. This is similar to the role of De Belder et al.'s (2014) Lex.
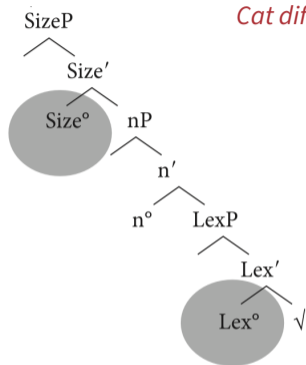
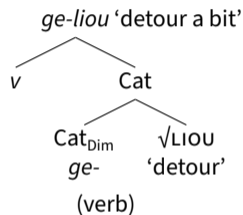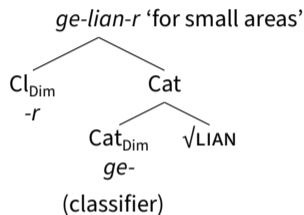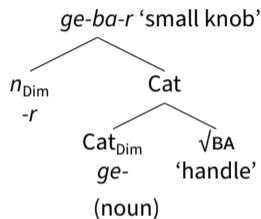*Cat differs from Lex in that it is explicitly defined as a (special) categorizer.*
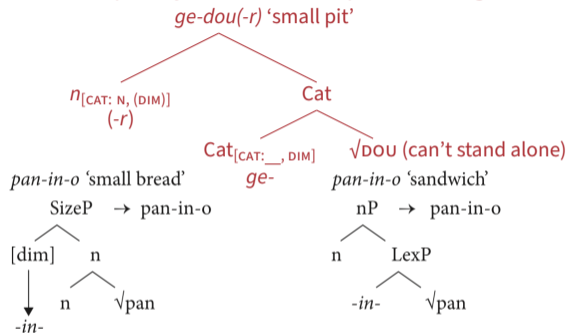
(De Belder et al. 2014: 151, 162)

LexP … is not exclusively reserved for diminutives … [but] is more generally a position for root augmentation. *(De Belder et al. 2014: 163)*
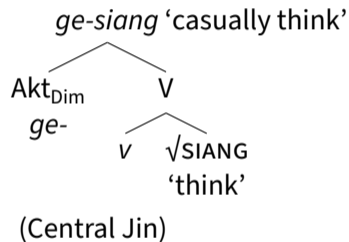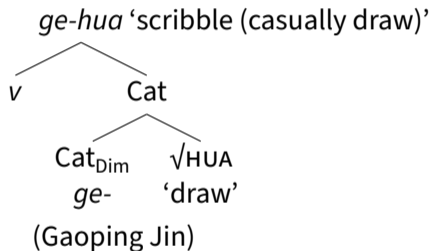
ge-ba-r 'small knob'

- n_{Dim}
- *-r*
- Cat
  - Cat_{Dim} *ge-* (noun)
  - √BA 'handle'

ge-lian-r 'for small areas'

- Cl_{Dim}
- *-r*
- Cat
  - Cat_{Dim} *ge-* (classifier)
  - √LIAN

ge-liou 'detour a bit'

- *v*
- Cat
  - Cat_{Dim} *ge-* (verb)
  - √LIOU 'detour'

ge-zha 'dirty'

- *a*
- Cat
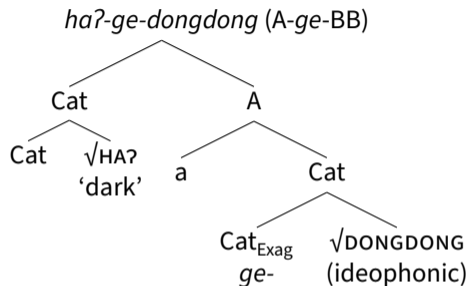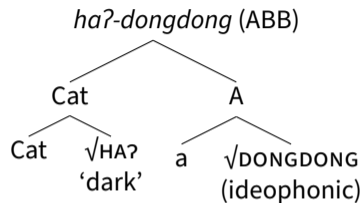 - Cat *ge-* (adjective)
  - √ZHA 'dreg'
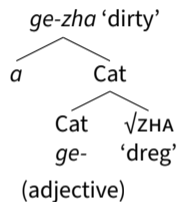
Since this *ge-* is systematically attached to roots, our data lend support to the root-based approach to classifiers (Acedo-Matellán & Real-Puigdollers 2019, Song 2019).

(i) Gaoping Jin: same as word-formation *ge-*; (ii) Central Jin: a separate aktionsart head

ge-hua 'scribble (casually draw)'

```
        v        Cat
              /      \
      Cat_Dim      √HUA
       ge-         'draw'
      (Gaoping Jin)
```

ge-siang 'casually think'

```
   Akt_Dim        V
    ge-        /      \
            v      √SIANG
                   'think'
      (Central Jin)
```

In Central Jin, *ge-* has undergone a further step of grammaticalization in the verbal domain.

haʔ-dongdong (ABB)

- Cat
  - Cat
  - √HAʔ 'dark'
- A
  - a
  - √DONGDONG (ideophonic)

haʔ-ge-dongdong (A-*ge*-BB)

- Cat
  - Cat
  - √HAʔ 'dark'
- A
  - a
  - Cat
    - Cat$_{Exag}$ *ge-*
    - √DONGDONG (ideophonic)

We treat ABBs as modifier-head compounds (inspired by Liu 2013). Accordingly, we combine the original Cat schema and our adapted schema in our analysis of A-*ge*-BBs. Although the A-*ge*-BB construction is very productive in Gaoping Jin, it is not fully productive, so we still treat *ge* as a derivational affix.

The analysis for ABB/A-*ge*-BB here is an updated version of that in Song, Cheng & Li (2024).

There are some *ge*-BBs in Jin Chinese, which do not necessarily have A-*ge*-BB counterparts.

(14) *ge-chuaichuai*   'describing a vivid state of, e.g., fatness, clumsiness'   [Gaoping Jin]
 ge-sheusheu   'describing a vivid state of, e.g., chilliness, windiness'
 ge-rangrang   'describing a vivid state of, e.g., crowdedness, swarming'
 ge-zhengzheng 'describing a vivid state of, e.g., being spruced up, energetic'

Such items describe general vibes and are quite vivid, but without A(BB) counterparts, it is hard to say whether they are exaggerated (no point of reference!). We analyze these items in the same way as other *ge*-Xs, with a flavor-neutral Cat.

NB only some BBs have this form, so this *ge*- is derivational.

ge-chuaichuai
- *a*
- Cat
  - Cat *ge-*
  - √CHUAICHUAI (ideophonic)
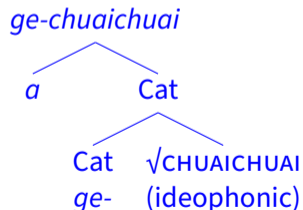
There are also *ge*-infixed compound nouns, which usually have *ge*-less versions in Mandarin.

(15) **Gaoping Jin**   **Mandarin**
   tu-ge-duei(r)   'earth-GE-pile; mound'   *tu-dui(r)*
   hua-ge-duor   'flower-GE-flower.shape; flower'   *hua-duo(r)*
   shan-ge-var   'mountain-GE-den; mountain area'   *shan-wo(r)*
   reu-ge-dunr   'meat-GE-pillar; someone chubby (cute)'   *rou-dunr*

Such items are special in that their morphosyntactic heads feel semantically secondary—or at least not as primary as the head of a normal modifier-head compound (e.g., *hua-dian* 'flower-shop'). We can derive this effect by letting both lexical components of the compound be introduced via Cat.
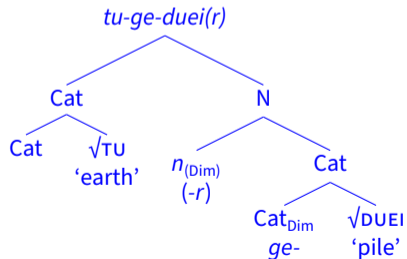
This is like a nominal version of A-*ge*-BB.

Overview

In this study, we have examined the multifunctional *ge* in Gaoping Jin Chinese, which is

1. a word-formation prefix (cross-categorial, often diminutive) ➔ Cat/Cat_{Dim}
2. an aktionsart prefix (on verbs, diminutive-iterative) ➔ Cat_{Dim}
3. a degree infix (to ABB adjectives, exaggerative) ➔ Cat_{Exag}

We have analyzed *ge* as the exponent of a defective categorizer Cat in all three uses (though of different flavors). Cat serves to modify/extend the root within the categorization domain.

Takeaway: sometimes multifunctionality can be explained by underspecification—less is more!

Thank you!

📄 Bai, Y.
On *ge* in Jin Dialect
Linguistic Research 1, 57–59, 2005

📄 De Belder, M., N. Faust & N. Lampitelli
On a low and a high diminutive: evidence from Italian and Hebrew
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📄 Li, S.
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Journal of Shanxi Datong University 3, 38–43, 1995

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Parameters of variation in the syntax of diminutives
Proceedings of the 2007 annual conference of the Canadian Linguistic Association, A34, 2007