

# Mandarin Ziji and Identity

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## 1 Reflexive breakdown to primitives

We will use the term reflexive referring to only semantic interpretation, where the arguments are marked identical. Therefore, in the canonical Subject Verb Object frame, the identity is between subject and object. Our definition plus the clause environment yields the following pattern, which is extensively studied in Faltz (1977).

### 1.1 Pattern and Problem

A common starting point is to treat Mandarin *ziji* and pronominal compounds like *ta-ziji* as reflexives in the Binding Theory sense, i.e. anaphors governed by Principle A. Under this view, we expect their distribution to be predictable from antecedent licensing (typically local), with long-distance binding requiring additional mechanisms.

However, this approach undergenerates once we include environments where *ziji*/*ta-ziji* do not perform an “act of reference” in the sense of Faltz (1977), most clearly in intensifier uses. These uses are not straightforwardly captured by a Principle-A-only theory, and they complicate the architecture in which local binding is treated as the default while long-distance binding is treated as the marked case in theoretical and experimental literature.

The broader goal is to capture as many distributional facts as possible with the least stipulation. The intensifier data sharpen the question because they suggest that *ziji* is not merely a device for tracking an argument’s reference.

- (1) John ziji wancheng-le zuoye.  
John SELF finish-PFV homework

‘John himself finished the homework.’

- (2) John ta-ziji wancheng-le zuoye.  
 John 3sg-SELF finish-PFV homework

‘John himself finished the homework.’

If (1)–(2) is the same morpheme in a different distribution, then *ziji/ta-ziji* are not simply doing Principle A “binding work” in an argument position, yet the same morphosyntactic material participates in canonical anaphoric environments. A theory that treats *ziji/ta-ziji* only as anaphors will therefore fail to predict their distribution in these non-anaphoric configurations.

A further empirical and methodological question is why discussions often foreground *ziji* and *ta-ziji* while setting aside *wo-ziji* and *ni-ziji*. If *wo-ziji/ni-ziji* share the relevant distributions in Principle-A contexts and also pattern with non-argumental intensifier uses, then they may be diagnostic for the internal composition of X-*ziji* forms and for the division of labor between anaphoricity and intensification. There are more extended lists pairing with *ziji* as well.

Forms	English	Dutch	German	Norwegian
SICH	— (no dedicated 3rd-person co-indexation with subject)	<i>zich</i> (special 3rd-person co-indexation with subject)	<i>sich</i> (3rd person + polite Sie); 1st/2nd use ordinary object forms reflexively ( <i>mich/dich/uns/euch</i> )	<i>seg</i> (3rd person sg/pl); 1st/2nd use ordinary object forms reflexively ( <i>meg/deg/oss/dere</i> )
SELF (pronoun + self/zelf/selbst/selv)	myself, yourself, himself, herself, itself, ourselves, yourselves, themselves, oneself	-zelf suffix: <i>mezelf</i> , <i>jezelf</i> , <i>onszelf</i> , <i>uzelf</i> , etc.; in 3rd person subject coreference, -zelf attaches to <i>zich</i> → <i>zichzelf</i>	(pronoun) + <i>selbst/selber</i> : <i>mich selbst</i> , <i>dich selbst</i> , <i>sich selbst</i> , <i>uns selbst</i> , <i>euch selbst</i> , etc. (optional intensifier; not required to mark reflexivity)	(pronoun) + <i>selv</i> : <i>meg selv</i> , <i>deg selv</i> , <i>seg selv</i> , <i>oss selv</i> , etc. (optional intensifier/contrast marker in standard Mainland Scandinavian usage)

Table 1: CM anaphor forms and intensifiers in English, Dutch, German, and Norwegian.

## 2 Brief on the Toolkit in this talk

Three diagnostics for reflexive strategies (after Faltz 1977).

1. Subject-Antecedence (SA) condition. A reflexive strategy is SA iff the antecedent of the reflexive must be the subject of the clause (i.e., nonsubject antecedents are excluded in the basic test).

Diagnostic frame: John talked to Bill about himself.

Interpretation: if himself can be understood as referring to Bill (the nonsubject coargument), the strategy is non-SA; if only John is possible in the intended configuration, it is SA.

2. Strict Clause (SC) condition. A reflexive strategy is SC iff reflexivization is obligatory whenever the antecedent (typically the subject) and the target NP are strictly in the same clause; i.e., a nonreflexive pronoun is disallowed under intended subject-coreference in such same-clause configurations.

Diagnostic frame: John saw a snake near him.

Interpretation: if intended coreference with the subject forces a reflexive form in the locative/oblique phrase and a plain pronoun is not permitted, the strategy is SC. If a plain pronoun is allowed with subject-coreference and the extra part to the pronoun (e.g., hem zelf used in Dutch for this diagnostic frame) has only contrastive effect, the strategy is non-SC.

3. Clause-Mate (CM) condition. A reflexive strategy is CM iff reflexivization may apply only when the antecedent and the reflexive are in the same clause.

Diagnostic frame: \*John said that Mary kissed himself.

Diagnostic frame: \*John asked Mary to kiss himself.

Diagnostic frame: \*John fell in love with the woman who kissed himself.

Interpretation: if the reflexive inside the embedded clause/relative clause cannot take the matrix subject as antecedent, the strategy is CM. If long-distance antecedence is possible, the strategy is non-CM.

## 2.1 CM diagnostics: which forms are clause-mate anaphors?

Goal. Given the form inventory in Table 1 (SICH-type vs. SELF-type reflexive marking), we now ask which forms satisfy Faltz's CM condition, i.e. which reflexive strategy may apply only when antecedent and reflexive are in the same clause.

Step 1: local identification frame (John hit himself). We first fix the maximally local transitive frame in order to identify the candidate reflexive forms for the object position across the four languages (SICH form vs. SELF form).

- (3) a. John hit himself.  
John hit.pst him-self  
'John hit himself.'
- b. Jan sloeg zichzelf.  
Jan hit.pst anph-self  
'Jan hit himself.'

- c. Hans schlug sich (selbst/selber).  
Hans hit.pst anph (SELF)  
'Hans hit himself.'
- d. Jon slo seg (selv).  
Jon hit.pst anph (SELF)  
'Jon hit himself.'

Aside on “NP emphatics” in German. German *selbst/selber* is optional as an NP-emphatic/additive element, but it does not replace the SICH-anaphor: in object reflexivization, *sich* is the anaphoric core, and *selbst/selber* is an optional layer.

- (4) a. Hans selbst schlug sich.  
Hans self/int hit.pst anph  
'Hans himself hit himself.'

Step 2: CM test proper (non-clausemate antecedence frames). We now probe whether the reflexive can be antecedeted by the matrix subject across a clause boundary. If this is impossible (ungrammatical, or only the embedded subject can antecede), then the strategy is CM.

English (SELF only). Conclusion for English: the SELF strategy is CM.

German SE (*sich*): CM. In German, *sich* in an embedded clause cannot take the matrix subject as antecedent. If *sich* occurs in the embedded clause, it is bound by the embedded subject (or yields a clash with the intended matrix-antecedent reading).

- (5) a. #Hansi sagte, dass Maria sich gekuesst hat.  
Hans said that Maria anph kissed has  
# intended: 'Hansi said that Maria kissed him.'
- b. #Hansi bat Maria, sich zu kuessen.  
Hans asked Maria anph to kiss  
# intended: 'Hansi asked Maria to kiss him.'
- c. #Hansi verliebte sich in die Frau, die sich gekuesst hat.  
Hans fell.in.love anph in the woman who anph kissed has  
# intended: 'Hansi fell in love with the woman who kissed him.'

Conclusion for German: sich is a CM anaphor.

Dutch SE/SELF (zich, zichzelf): CM (with predicate-sensitive SE vs. SELF choice). For the CM question, the crucial point is that embedded reflexive forms do not take matrix antecedents. (Independently, Dutch often requires zichzelf rather than sich with many transitive predicates, but this is orthogonal to CM.)

- (6) a. #Jani zei dat Maria zichzelfi kuste.  
Jan said that Maria anph-self kissed  
# intended: ‘Jani said that Maria kissed him.’
- b. #Jani vroeg Maria om zichzelfi te kussen.  
Jan asked Maria comp anph-self to kiss  
# intended: ‘Jani asked Maria to kiss him.’
- c. #Jani werd verliefd op de vrouw die zichzelfi kuste.  
Jan became in.love on the woman who anph-self kissed  
# intended: ‘Jani fell in love with the woman who kissed him.’

Conclusion for Dutch: the relevant reflexive strategies are CM (no matrix-antecedence for embedded zich/zichzelf).

Norwegian SE (seg): non-CM in Faltz’s sense (finite-bound, but not strictly clause-mate). Mainland Scandinavian SE-anaphors allow sentence-mate antecedence into non-finite domains. The following minimal pair makes this explicit: seg is acceptable with a matrix antecedent across a non-finite boundary, but not across a finite boundary.

- (7) a. Joni ba meg om [IP[-FIN] aa snakke om segi].  
Jon asked me about to talk about anph  
‘Joni asked me to talk about himi.’
- b. \*Joni var ikke klar over [IP[+FIN] at vi hadde snakket om segi].  
Jon was not aware that we had talked about anph  
intended: ‘Joni was not aware that we had talked about himi.’

Conclusion for Norwegian: seg fails CM, but it is finite-bound. Unlike English, seg selv is not obligatory as a CM anaphor in SELF form.

Interim summary for the four languages (CM). English SELF is CM. Dutch and German SE (and their SE+SELF variants) behave CM with respect to sentence-level clause boundaries. Norwegian seg is not CM (finite-bound, hence sentence-mate into non-finite domains).

## 2.2 Mandarin Chinese CM diagnostics

Given space limitations, we will offer the conclusion directly: Mandarin's CM anaphor can take the form of *ziji* 'SELF' and *pronoun-ziji* 'pronoun-SELF'. However, when we place them under clauses that are more complex, they fail CM, such as within relative clauses.

## 2.3 Reinhart–Reuland Predicate-Based Reflexivity

1. What is the problem Reuland is solving? Goal: explain why languages systematically differentiate between (i) simplex SE-anaphors (SICH form) and (ii) SELF-anaphors (SELF form), and why this differentiation tracks verb types and predicate reflexivity.
  2. Two routes to “argument identity”
    - (A) Coreference (discourse route). Two DPs can be interpreted as the same individual via discourse mechanisms.
    - (B) Binding (syntactic route). A dependent element is interpreted as a bound variable; dependency is computed in syntax.

Design/economy claim. If binding is available, grammar prefers syntactic dependency over discourse coreference.

3. SE-anaphors: what they are, and what they do not do SE-anaphors (*zich/sich-form*) are referentially defective. They must be bound, but they do not contribute a reflexivizing operator.
4. The arity consequence (the number of a predicate's semantic arguments) If maximal local transitive frame interpretation yields only one semantic object, then:
  - If the predicate is lexically one-place: OK.
  - If the predicate is lexically two-place: crash.

Dutch:

- (8) a. Willem schaamt zich.  
           Willem shame.prs anph  
           ‘Willem is ashamed.’ (shame( $x$ ); one-place)
- b. \*Willem haat zich.  
           Willem hate.prs anph  
           intended: ‘Willem hates himself.’ (hate( $x, x$ ); two-place)

Intended contrast: shame( $x$ ) is one-place, so one semantic object suffices. But hate( $x, x$ ) is two-place; if chain yields only one semantic object (Reuland 2001; Reinhart & Reuland 1993), the predicate fails to receive two semantic arguments.

5. SELF-anaphors: “protection” that preserves arity SELF-anaphors (zichself, himself) contain extra self material.

- Protective effect. self introduces extra semantic structure so the predicate still receives two semantic arguments under binding.
- Canonical schema.  $x R f(x)$  rather than collapsing to one semantic object.
- Empirical signature (Dutch). Dutch allows zichself with transitive predicates:

- (9) a. Willem haat zichself.  
           Willem hate.prs anph-self  
           ‘Willem hates himself.’

but not:

- (10) a. \*Willem haat zich.  
           Willem hate.prs anph  
           intended: ‘Willem hates himself.’

### 3 Hole-Gast’s wisdom: Identity Function

Head-adjacent SELF and referentiality/givenness (distributional boundary condition): Gast (following Siemund’s discussion) states the head-adjacent condition as follows: the head DP must be in the propositional background; this is satisfied if the DP is definite, or if it is an indefinite with a definite restriction set (“given indefinite”). This is why head-adjacent SELF is typically degraded with non-specific indefinites, unless the discourse supplies a salient restricted set.

- (11) a. He himself will come.  
       b. John himself will come.  
       c. The president himself will come.  
       d. # A president himself will come.  
       e. # Some presidents themselves will come.  
       f. # All presidents themselves will come.

Head-adjacent *ziji* in Mandarin (DP-internal intensifier): Working generalization: when *ziji* is head-adjacent (adnominal), it targets a referential DP and contributes an identity function:

$$[\![\text{ziji}_{\text{adn}}]\!]^0 = \lambda x. x \quad (\text{with a presuppositional domain restriction})$$

Its ordinary meaning is truth-conditionally inert ( $\text{ID}(x) = x$ ), but when *ziji* is focused it triggers alternatives that are accessed via the intensified DP (kinship, hierarchy, entourage, etc.). This produces the familiar “related alternative” (centrality) profile of head-adjacent SELF.

Mandarin indefinite boundary case: a givenness/contrast effect:

- (12) a. Yi-ge tongxue ziji zhidao-le wenti.  
           one-CL classmate SELF know-asp problem  
           # Intended out of the blue: ‘A classmate himself knew the answer/problem.’  
       b. Ling yi-ge tongxue bu zhidao.  
           other one-CL classmate NEG know  
           ‘Another classmate did not (know it).’

((a) improves when the discourse makes a restricted set salient and supplies an overt alternative as in (b), approximating Gast’s “given indefinite” configuration.)

Subject position vs. object position : Hole uses *benren* in object position and notes that adnominal *ziji* is degraded for many speakers when adjoined to non-subjects (his fn. 7).

- (13) a. +Women budan kandao-le mingxing-de fuqin,  
           we       not.just see-asp   star-gen     father  
           ‘We did not only spot the father of the movie star, ...’  
       b. ...hai pengdao-le mingxing benren.  
           still   meet-asp   star       SELF  
           ‘...we also bumped into the movie star herself.’

(Adjusted: an “only” contrast instead of “not only ... also”):

- (14) a. +Women meiyou kandao mingxing-de fuqin,  
we neg.have see star-gen father

‘We did not spot the father of the movie star, ...’

- b. ...zhishi pengdao-le mingxing benren.  
...only meet-asp star SELF

‘...we only bumped into the movie star herself.’

Attributive (possessive) use: This is structurally DP-internal intensification feeding a possessive modifier. It does not require a clausemate antecedent; the possessor DP is independently referential.

- (15) Wo you ta ziji-de yaoshi.  
I have he SELF-gen key

‘I have his own key.’

Head-distant (exclusive) SELF: event-related semantics and the alternative set: For the head-distant use, the relevant contrast is not between the intensified DP and its “entourage” (head-adjacent centrality), but between propositions with different agent assignments. In a Kratzer-style Voice system, Hole’s idea can be stated as: exclusive SELF composes at (or near) Voice/v, taking the agent relation as argument and returning it unchanged (identity), while focus evokes alternative functions mapping the agent relation to other thematic relations (causer, beneficiary, assisted-involvement, etc.).

A convenient English baseline:

- (16) a. You wash your clothes yourself.

Typical excluded (alternative) propositions under Hole-style Voice alternatives: (i) ‘You make someone wash your clothes.’ (causer alternative) (ii) ‘Someone helps you wash your clothes.’ (assistance alternative) (iii) ‘Someone washes your clothes for you.’ (beneficiary/for-you alternative)

Gast’s diagnostic for exclusive SELF: secondary thematic relation under negation: Gast’s minimal pair isolates the head-adjacent vs. head-distant contrast. The head-distant variant carries a focus presupposition (secondary thematic relation) that the subject referent stands in some non-agentive relation R to the event, and this presupposition is stable under negation.

- (17) a. Yesterday the boss himself wiped the floor of Mary's office.  
 b. Yesterday the boss wiped the floor of Mary's office himself.

- (18) a. The boss himself did not wipe the floor of Mary's office.  
 b. The boss did not wipe the floor of Mary's office himself.

the inference in (b): even if the boss did not do the wiping, the sentence still suggests that the boss had a salient relation to that eventuality (e.g., responsibility, interest, having initiated it, having demanded it, etc.).

### 3.1 What Hole 2008 lacks

An indication of inanimate head DP with exclusive SELF (Gast): Against a strict “intentional agent” requirement, Gast shows that exclusive SELF can co-occur with inanimate heads. Such cases are rare in corpora, but they become comparatively available in reflexive predication, where English itself can conflate reflexive marking and exclusive SELF.

- (19) a. Ten thousand years ago a star destroyed itself in a supernova explosion.  
 b. The star was not destroyed by a black hole, it destroyed itSELF.  
 c. This silver polishes itSELF.  
 d. Your argument answers itSELF.

Non-agentive predicate reminder (also from Gast’s discussion of head-distant SELF):

- (20) a. John wanted his secretary to slip on the banana peel, but finally he slipped himself.

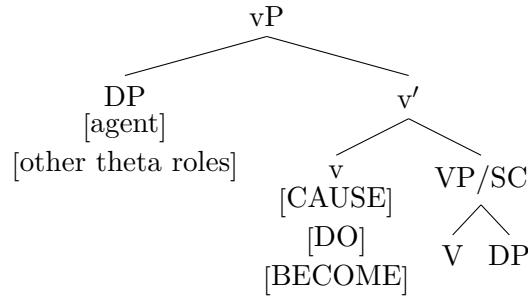
Mandarin head-distant *ziji* is not a floated head-adjacent intensifier (Hole’s hermit argument): If head-distant *ziji* were just a positional variant (floating) of head-adjacent *ziji*, it should pattern with the head-adjacent centrality requirement. Hole’s contrast suggests it does not.

- (21) a. Ta zhihao ziji zuo mei-jian shiqing.  
 he must SELF do every-CL matter  
 ‘He must do everything himself’  
 b. # Ta ziji zhihao zuo mei-jian shiqing.  
 he SELF must do every-CL matter  
 # ‘He himself must do everything.’

Mandarin head-distant *ziji* in non-agentive environments (Hole’s lack of inanimate head, unaccusative, plus circumstantial modals cases): These are the “unexpected” environments for a strictly agentive Voice-head implementation.

- (22) a. Na-xie mutou ziji luo-xia-lai le.  
           that-some wood SELF fall-down-come prt  
           ‘Those logs came down all by themselves.’
- b. Akiu yexu ziji yao gen wo shui na-zhang chuang.  
       Akiu maybe SELF want with me sleep-in that-CL bed  
       ‘Akiu may, on his own accord, be willing to share that bed with me.’

One way to reconcile these environments with an event-structural account is to assume a more articulated verbal spine (e.g., separating a causative layer from an agentive/do layer), so that head-distant *ziji* can target different event-related heads. This makes it possible to model different animacy requirements (agentive v/Voice vs. causative v) while maintaining an identity core for *ziji*.



### 3.2 How do we know non-argumental uses of *ziji*

As hinted in the above sections, we need to check event types and head nouns, their theta roles, and how alternative involvement in the eventuality can be computed.

### 3.3 Case One: Stative Complements in Mandarin

#### 1. Patterns for the V-DE construction

- (23) Structures of the V-DE construction
- a. [S NP [VP [VP V-de] AdvP]]
  - b. [S<sub>1</sub> NP [VP V-de [S<sub>2</sub> Ø PredP ]]] (Ø = null element)
  - c. [S<sub>1</sub> NP<sub>1</sub> [VP V-de [S<sub>2</sub> NP<sub>2</sub> PredP ]]] (PredP = VP/AdjP)

## 2. Head-adjacent uses of *ziji* in V-DE complements

This handout section targets head-adjacent *ziji*, instantiated in the surface template in (24). In these configurations, the post-de constituent XP is typically predicative, describing either (i) the manner or profile of the event (AdvP-type, matching (23a)), or (ii) a predicate in a de-clause whose subject is null (Ø) or overt (NP<sub>2</sub>), matching (23b) and (23c). The empirical goal is to keep these *ziji* cases in view as head-adjacent intensification in a family of V-DE structures.

- (24) Subject *ziji* V-de XP

### 2.1. Type (23a): non-predicative V-DE with AdvP

- (25) Piet *ziji* pao-de feikuai.  
 Piet self run-de fast  
 ‘Piet himself ran fast.’

Here the post-de phrase is an AdvP that characterizes the running eventuality, corresponding to (23a).

### 2.2. Type (23b): predicative V-DE with a null element (Ø) in the de-clause

- (26) Piet *ziji* shui-de shu.  
 Piet self sleep-de deep  
 ‘Piet himself slept deeply / was sound asleep.’
- (27) Piet *ziji* lei-de shui bu zhao.  
 Piet self tired-de sleep neg attain  
 ‘Piet himself was so tired that he couldn’t fall asleep.’

In (26) and (27), the de-clause is predicative but its internal subject is not overt. This aligns with the Ø-option summarized in (23b).

### 2.3. Type (23c): predicative V-DE with an overt NP<sub>2</sub> in the de-clause

- (28) Piet ziji den-de wo feichang jiaoji.  
 Piet self wait-de 1sg very anxious  
 ‘Piet himself waited; I was very anxious.’
- (29) Zhangsan ziji qi-de lian dou hong-le.  
 Zhangsan self angry-de face emph red-perf  
 ‘Zhangsan himself was so angry that his face even turned red.’

In (28) and (29), the de-clause contains an overt NP<sub>2</sub> (wo ‘1SG’ and lian ‘face’), which is the nominal that the following predicate is construed with. This is the overt-NP<sub>2</sub> option in (23c).

Focus particle shi and substitution by ta-ziji. For the head-adjacent ziji sentences in (25)–(29), adding the focus particle shi does not yield grammatically minimally-different pairs (on the intended construals). In addition, ziji can be substituted by the complex form ta-ziji without changing the basic V-DE structural type assignments (with any interpretive differences to be diagnosed independently).

### 3.4 Case Two: causative-intransitive alternation

- (30) a. Zhe-ba yaoshi kai na-dao men.  
 this-cl key open that-cl door  
 ‘This key opens that door.’
- b.?? Zhe-ba yaoshi ziji kai na-dao men.  
 this-cl key self open that-cl door  
 Intended: ‘This key open that door by itself / this key itself (and not something else) open that door.’
- c. Zhe-ba yaoshi ziji da-kai na-dao men.  
 this-cl key self hit-open that-cl door  
 ‘This key itself open that door.’

English baseline:

- (31) a. The key opens the doors. (instruments)  
       b. The wind opens the door. (cause)  
       c. The door opens. (theme)  
       d. Max opened the door. (agent)

In Mandarin, in causative-intransitive alternation, when using *ziji*, there is a need to introduce the V-V which might carry some layer of v in lexicon. In English, the instrument example can have itself at the end.

## 4 Consequences

*ziji* is uniformly an identity-based form; *ziji* can adjoin to nominals and events, and *ta ziji* adjoins only to nominals. *ziji* can reflexive-mark predicates, hence local binding; this does not preclude intensification of arguments and their roles in events. In Mandarin, null arguments (Li 2014; Huang 1984), *ta*, and other object nominals are not default-coindexed with the subject, hence the need for an extra device in creation of CM anaphor.

## 5 Appendix

- (32) a. Predicates of mental activity such as know or believe are usually regarded as stative predicates, but they do allow exclusive SELF. Is V-DE stative complement too special a type?  
       b. *ziji*, pronoun-*ziji*, and NP-*ziji* only access nominals introduced into linguistic discourse in contrastive reflexive contexts, where Pan used reflexive in the Binding Principle A sense.