

Nandao-Questions as a Special Kind of Rhetorical Questions

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Introduction

Unlike other question forms which are ambiguous between ordinary questions (OQ) and rhetorical questions (RQ) (cf. Sadock 1979, Han 2002), *nandao*-Questions (*nandao*-Q) in Mandarin **necessarily have RQ readings** (1, 2).

- (1) Nandao zhe jiushi shichang jingji (me)?
Nandao this be market economy Q
"Is this market economy?"
(=This isn't market economy.)
- (2) Nandao shui bang-guo ni (ma)?
Nandao who help-EXP you Q
"Who helped you?"
(=No one helped you.)

The Distribution of Nandao

* Nandao + declaratives

- (3) *Nandao Lisi hui lai.
Nandao Lisi will come
(Attempted) "Lisi will come."
(N/A: Lisi will not come.)
- (4) Zhangsan xiangxin (*nandao) Lisi hui lai.
Zhangsan believe nandao Lisi will come
"Zhangsan believes that Lisi will come."

✓ Nandao + Yes/No Questions (Y/N-Q)

Nandao can turn Y/N-Q to Y/N-RQ.

- (5) Zhe jiushi shichang jingji (me)?
This be market economy Q ⇒ (1)
"Is this market economy?"

* Nandao + A-not-A Questions (A-not-A-Q)

- (6) *Nandao Zhangsan chi-mei-chi fan?
Nandao Zhangsan eat-not-eat rice
(Attempted) "Did Zhangsan have meal or not?"

* Nandao + WH-Q

- (2) is not a true WH-Q.

a. * nandao + weishenme "why"

- (7) *Nandao Zhangsan weishenme qu xuexiao?
Nandao Zhangsan why go school
(Attempted) "Why does Zhangsan go to school?"
(N/A: There is no reason for Zhangsan to go to school.)

WH-words as indefinite pronouns: *shui* "someone", *shenme* "something", etc.;

WH-word with only interrogative meaning: *weishenme* "why" (cf. Li and Thompson 1981).

(7) suggests: (2) is not a WH-RQ, but a Y/N-RQ with indefinite pronoun ("Is there anyone who helped you?"); *Nandao* cannot turn WH-Q into WH-RQ.

b. * nandao + ne

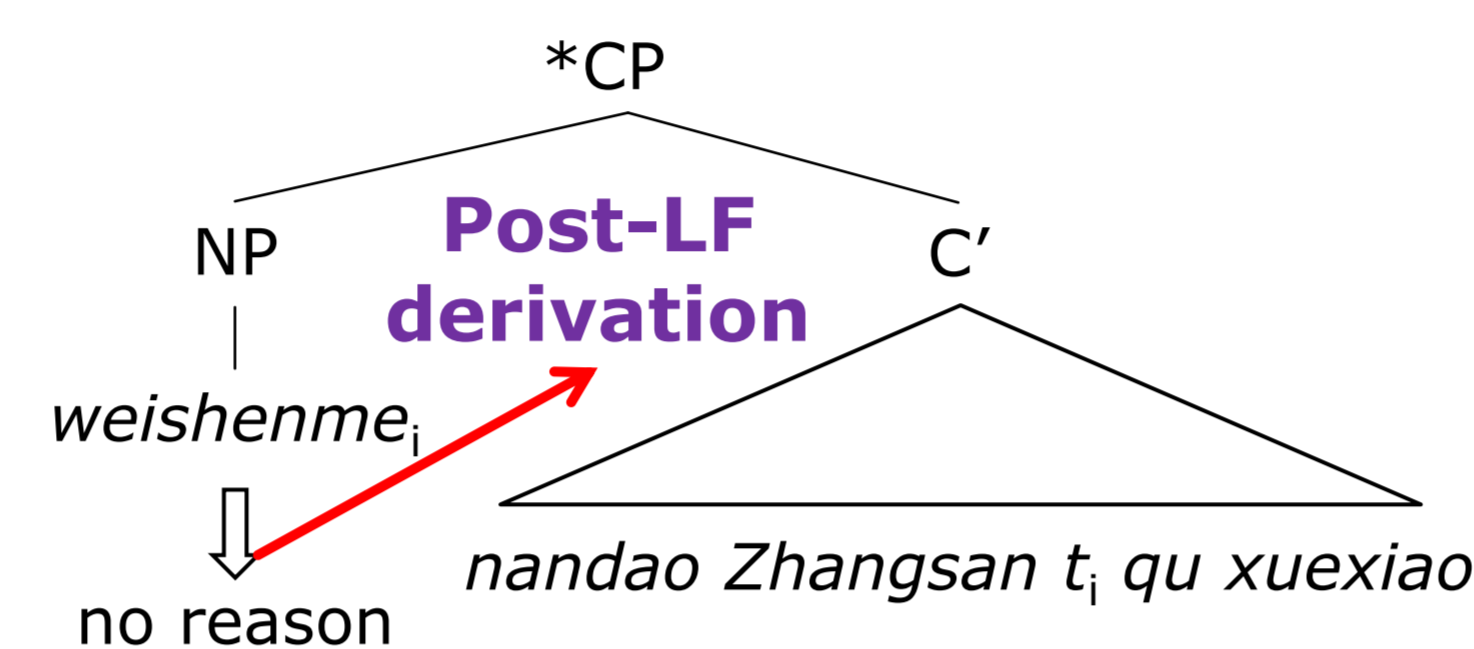
Ne: a typical WH-Q particle.

Ma/Me: Y/N-Q particles. (cf. *ibid.*)

- (8) Nandao shui bang-guo ni ma/*ne?
Nandao anyone help-EXP you Q Q
"Who helped you?"
(=No one helped you.)

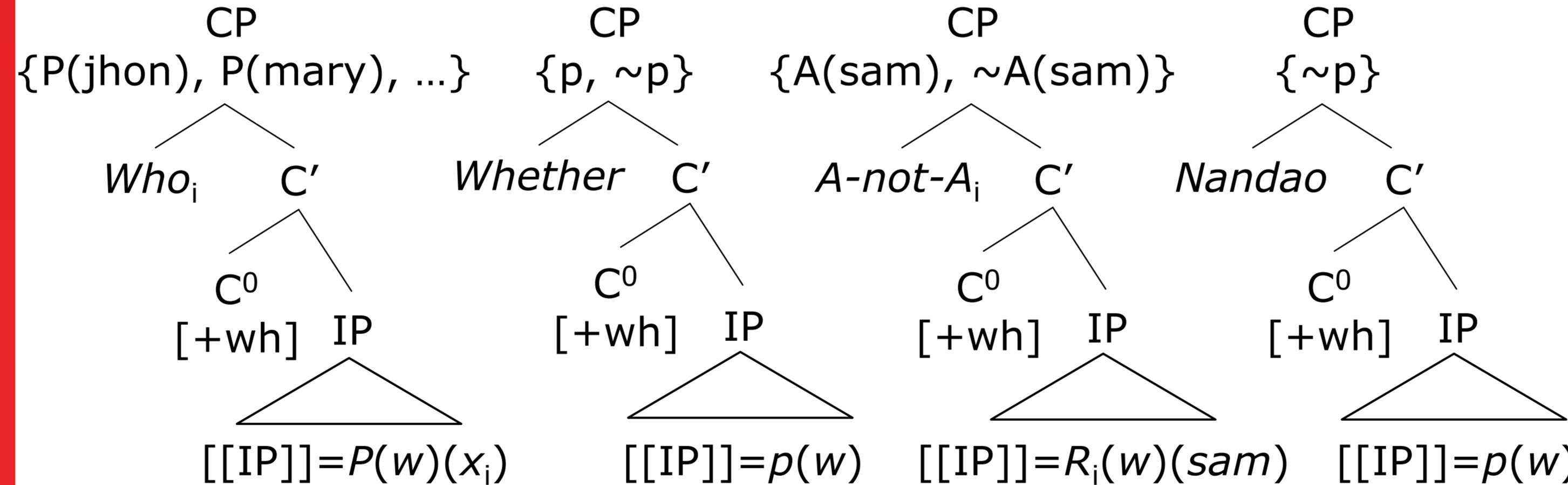
The Puzzle

- Standard theories of RQ (cf. Sadock 1979, Han 2002) treat RQ reading as a pragmatic result, but the necessary RQ reading of *nandao*-Qs seems to suggest that some RQs need a semantic solution.
- Even we follow Han (2002)'s framework, we cannot explain why *nandao* is incompatible with WH-Qs. In her framework, the polarity reversal reading of *weishenme* in (7) can be perfectly derived from the WH-word denoting the bottom element in its denotational domain, i.e. "no reason".



The Syntax of Nandao

- As the polarity reversal effect will necessarily appear when *nandao* is added to Y/N-Q, so it should appear in LF. Also, it takes a question or a proposition and negates it, so its position should be above IP.
- Unlike *whether* or Y/N operator in Y/N-Qs, *nandao* can only exhibit a negative meaning in *nandao*-Q. I propose that in *nandao*-Qs, there is no covert *whether* or Y/N operator in SpecCP, and **the SpecCP will be filled by nandao**.
- In this sense, like *who* and *whether*, *nandao* in Mandarin is a WH-word with [+wh] feature. A comparison of Four WH-structures is presented below. (The structure of A-not-A-Q is adapted from Huang (1991).)

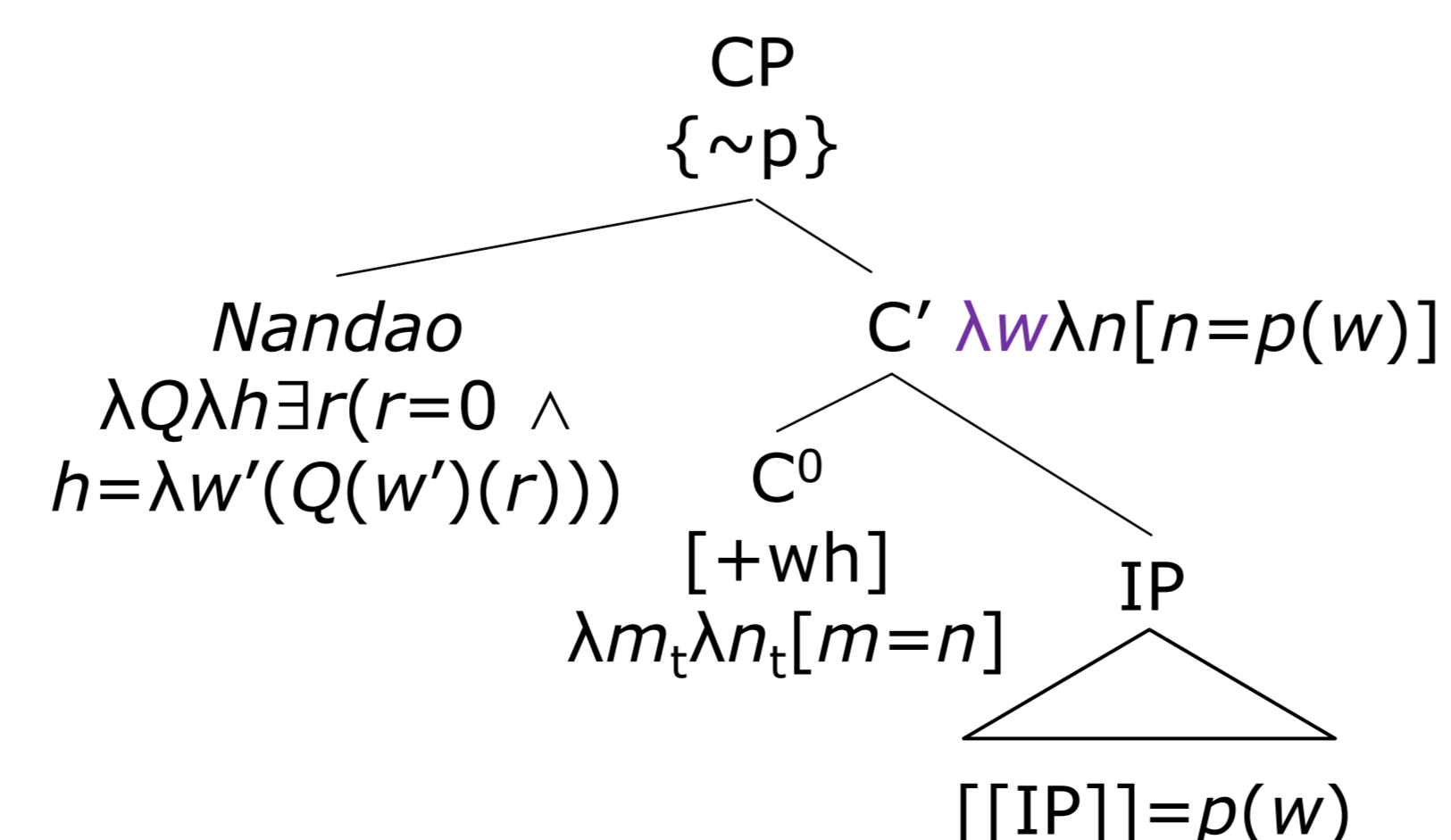


The Semantics of Nandao

Nandao is a WH-word which takes a question of a single proposition and turns it into a set with the proposition of the opposite polarity. To be specific, having an existential *r* in the semantics ranging over only the truth value of 0 in the spirit of Guerzoni (2003) and George (2011), *nandao* is a function that takes an argument of type $\langle s, \langle t, t \rangle \rangle$ and yields a singleton set of proposition.

$$(9) [[nandao]] = \lambda Q_{\langle s, \langle t, t \rangle \rangle} \lambda h_{\langle s, t \rangle} \exists r_t (r=0 \wedge h = \lambda w' (Q(w')(r)))$$

(10)



$$CP: \lambda Q \lambda h \exists r (r=0 \wedge h = \lambda w' (Q(w')(r))) (\lambda w \lambda n [n=p(w)]) \Rightarrow \{ \lambda w' (p(w')=0) \} \Rightarrow \{ \sim p \}$$

Explanation of the Mandarin Data

* Nandao + declaratives

As *nandao* is a WH-word which needs to check [+wh] feature at SpecCP in LF, it cannot appear in declaratives which do not have this feature.

* Nandao + WH-Q/A-not-A-Q

Both *nandao* and WH-words in WH-Q (e.g. *who*) have [+wh] features. If they co-occurred in the same clause, they might form a multiple WH-Q. Following Dayal (1996)'s functional dependency requirement for normal multiple WH-Qs, we can create a negative identity function between *who* and *nandao* for (8).

$$\lambda p \exists f (\text{Dom}(f) = \text{people} \wedge \forall x (f(x) \in \{0\}) \wedge p = \lambda p' \exists x (p' = (x \text{ helped you} = f(x))))$$

Although the compositional semantics is good, the sentence is unacceptable.

This suggests that we need a further restriction on normal multiple WH-Qs.

Multiple WH-feature Question Restriction (MWHQR):

x and its functional dependent element *f(x)* should be thematic arguments within the question nucleus denoted by the IP.

As *nandao* is an IP adjunct operating on propositional level, it doesn't satisfy MWHQR. Thus, *nandao* and *who* cannot form a multiple WH-Q.

Following Huang (1991), I regard A-not-A as a WH-word denoting a set of complementary properties, e.g. $\{ \lambda w \lambda x A(w)(x), \lambda w \lambda x \sim A(w)(x) \}$. As both A-not-A and *nandao* don't satisfy MWHQR, they cannot form a multiple WH-Q either.

* Nandao-Q cannot be embedded

Nandao-Qs are neither like questions nor like declaratives, having the syntactic form of OQs and the semantics of declaratives. Interestingly, they cannot be embedded.

(4) shows that *nandao*-questions cannot be embedded by [-wh] selecting verbs, e.g. *xiangxin*. This can be explained by the incompatibility of [+wh] feature of *nandao* with the [-wh] requirement of V.

But, surprisingly, *nandao*-Q cannot even be embedded under [+wh] selecting word like *wen* "ask", as shown in (11).

- (11) *Zhangsan wen Lisi nandao chi fan le me.
Zhangsan ask Lisi nandao eat rice PERF Q
(Attempted) "Zhangsan ask Lisi that Lisi didn't have meal."

Pragmatically, a [+wh] selecting verb needs the embedded clause to denote multiple answers: there is no reason to enquire a degenerate question that has only a single answer (Veneeta Dayal, p.c.)

So what are nandao-Qs good for?

By Quine's Innovation (Schwarzschild 1996), a singleton set is identified with its individual member. So, $\{ \sim p \} = \sim p$. What else can a *nandao*-Q be but a rhetorical question?

Acknowledgement

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