

Non-verbal wh-question in Mandarin and limited ellipsis

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Background and Goal The limited ellipsis of a demonstrative or expletive subject and a copula may occur when an appropriate discourse context is given where the speaker can make a deictic gesture and where the existence predicate can be taken for granted (Merchant 2004). Since discourse context can be realized in other ways other than gestures, we may expect that other kinds of discourse context can also license limited ellipsis. Examining the non-verbal wh-question in Mandarin (hereafter **NVWQ**) as a case of limited ellipsis, this paper argues the D-linked presupposition of wh-N phrases is an “appropriate discourse context” to license the ellipsis of the existence predicate V_{BE} .

The NVWQ in Mandarin The NVWQ in Mandarin denotes a question where the verb is absent and the subject is directly followed by a wh-N(oun) phrase where the wh-word *shenme* ‘what’ combines with a noun (1-2). Semantically, this NVWQ asks what type of noun the subject is.

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| (1) Zhangsan shenme shenfen
Zhangsan what identity
‘What identity is Zhangsan?’ | (2) Lisi shenme xiangfa
Lisi what idea
‘What idea does Lisi have?’ |
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The NVWQ in question has three noticeable properties: (i) the absent verb can be retrieved and the retrieved verbs are only limited to the copular verb *shi* ‘be’ and the verb *you* ‘have’. Substantive verbs like *chi* ‘eat’ and *chuan* ‘wear’ are not available in NVWQ; (ii) the verb *shi* and the verb *you* can freely alternate with each other in NVWQ (3-4); (iii) different from *wh*+N phrases, bare *wh*-words cannot occur in NVWQ (5-6). Only when the copular verb *shi* ‘be’ is inserted are these sentences saved (7-8).

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| (3) Zhangsan shi/you shenme shenfen
Zhangsan BE/HAVE what identity
‘What identity is Zhangsan?’ | (4) Lisi shi/you shenme xiangfa
Lisi BE/HAVE what idea
‘What idea does Lisi have?’ |
| (5) *Zhangsan shui
Zhangsan who
‘Who is Zhangsan?’ | (6) *suoni shenme
Sony what
‘What is Sony?’ |
| (7) Zhangsan shi shui
Zhangsan BE who
‘Who is Zhangsan?’ | (8) suoni shi shenme
Sony BE what
‘What is Sony?’ |

NVWQ as the full clause with V_{BE} as its verb The NVWQ in Mandarin syntactically patterns with BE-verbed full clauses rather than small clauses and the BE verb is not elided by gapping.

NVWQ is not a small clause. Evidence I NVWQ can take the past-tense final particle *laizhe*, which is impossible for small clauses but perfectly acceptable with BE-verbed full clauses (Tang 2001). **Evidence II** NVWQ is similar to BE-verbed full clauses in being compatible with the modal adverb probably (9), which is again impossible for small clauses (10). **Evidence III** NVWQ can occur with the sentential negation marker *mei* ‘not’ (11) while small clauses are not compatible with any sentential negation markers (12).

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| (9) Zhangsan dagai shenme shenfen
Zhangsan probably what identity
‘What identity does Zhangsan have?’ | (10) *jintian dagai xingqiri
today probably Sunday
‘Today is probably Sunday.’ |
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(11) Zhangsan mei shenme shenfen
 Zhangsan not what identity
 ‘What identity does Zhangsan not have?’

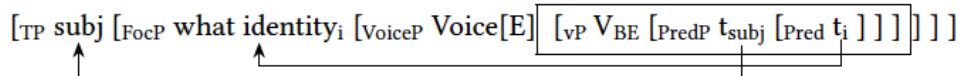
(12) *jintian bu/mei xingqiri
 today not Sunday
 ‘Today is not Sunday.’

NVWQ is also not gapping. **Evidence I** NVWQ in Mandarin can occur without a linguistic antecedent as the first conjunct to license the ellipsis of verb while an antecedent is necessary for traditional gapping in Mandarin. **Evidence II** The verbs in gapping constructions could be any verbs that occur in the antecedent, whereas the verbs in NVWQ can only be *shi* ‘be’ and *you* ‘have’. **Evidence III** NVWQ can appear in subordinate constructions while gapped structure cannot.

The analysis Since NVWQ is not compatible with a small clause or gapping analysis, we need an analysis that can account for the fact that NVWQ contains a verbal category and verbal ellipsis is licensing by some mechanism other than gapping. I argue that the NVWQ in Mandarin is a case of limited ellipsis, and the ellipsis of a copular verb (existence predicate) is due to the D-linked nature of wh-N phrase (Pesetsky 2000; den Dikken and Giannakidou 2002). Evidence for the D-linked status of NVWQ in Mandarin comes from out-of-the-blue utterances. When uttered without context, NVWQ is less acceptable. (More syntactic evidence of its D-linked nature is discussed in Pan(2014)). Following standard assumptions of D-linked phrases, I assume that wh-N phrases are existential/indefinite, a property bare wh-words have. Crucially, D-linked wh-phrases are presuppositional, a property not shared by bare wh-words. This property of wh-N phrases presupposes the existence of a set of entities with the property N in the previous discourse D (13a). As a result, wh-N phrase provides the appropriate discourse context, licensing the ellipsis of existence predicate. Syntactically, the derivation proceeds according to the pseudo-gapping analyses of Aelbrecht (2010) and Gengel (2007): the [E]-feature is proposed to on the licensing head Voice to be responsible for deleting its complement (vP) at PF (the boxed part); the subject and the wh-N phrase move out of vP to the specs of TP and the sentence-internal FocP respectively.

(13) Zhangsan shenme shenfen? ‘What identity is Zhangsan?’

- a. **presupposes:** that there exists a set of identities $X \subseteq D: \exists X \text{ identity}(X)(w)$
- b. **denotes:** $\lambda p. \exists x \in X [p(w) \wedge \text{identity}(x)(w) \wedge p = \lambda w(\text{BE}(x)(\text{Zhangsan})(w))]$



Explaining the properties The current analysis makes predictions about what phrase cannot license and what other elements can be elided. These two predictions are both borne out and explain the properties of NVWQ. (i) **Non-D-linked phrases cannot license the ellipsis of a copula.** Compared to wh-N phrases, bare wh-words, which are not D-linked, are existential but not presuppositional (14) (den Dikken and Giannakidou 2002). Without presupposing the X’s existence in the previous discourse, they cannot provide an appropriate discourse context and thus cannot occur in NVWQ. (**NVWQ property iii**)

(14) $[[\text{what}]](w) = \lambda Q \exists x [\text{thing}(x)(w) \wedge Q(x)(w)]$ (Not presuppositional)

(ii) **Other variants of BE can also be elided.** It is widely held that the verb HAVE is the the verb BE plus something else (Adger and Ramchand, 2003; Baker, 2003; Myler, 2018; a.o.). In line with Myler (2018), I argue that HAVE is an allomorph of V_{BE}: HAVE is the V_{BE} in the environment of a transitive Voice head and V_{BE} is realized as BE elsewhere(15). Since two syntactic environments are both available in NVWQ, we correctly predict that both HAVE and BE can be elided at the same position with the presence of D-linked wh-N phrases. (**NVWQ property i and ii**)

(15) a. $V_{BE} \leftrightarrow \text{you ‘have’/ Voice}_{\{D\}} ______$ b. $V_{BE} \leftrightarrow \text{shi ‘be’}$