Wanting (to have) null verbs: A view from Mandarin and beyond

1 Introduction

Pairs like (1) and (2) pose a puzzle for the syntax-semantics interface, given considerations in (3).

(1) a. Kim began [to read a book].
    b. Kim began [a book].

(2) a. Kim wanted [to read a book].
    b. Kim wanted [a book].

(3) a. **Assumption**: Verbal complements like *to read a book* and nominal complements like *a book* differ from each other in semantic type.
    b. **Desideratum**: Non-polysemous predicates select for a single semantic type regardless of syntactic frame.

Two possible solutions (both taking the verbal complementation as basic):

(4) a. Complicate the semantics: coercion
    \[ ⟨e, st⟩ \]
    \[ \text{want:}⟨et, ⟨e, st⟩⟩ \]
    \[ \text{a book:}⟨e⟩ \rightarrow ⟨et⟩ \]
    b. Complicate the syntax: null structure

Could “*begin-NP*” and “*want-NP*” have different analyses?

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<tr>
<th>Source</th>
<th>Proposal</th>
<th>Predicate(s)</th>
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<td>Ross 1976; McCawley 1979</td>
<td>( \emptyset_{\text{have}} )</td>
<td>want</td>
</tr>
<tr>
<td>Pustejovsky 1995</td>
<td>coercion</td>
<td>want, begin (also enjoy)</td>
</tr>
<tr>
<td>den Dikken, Larson, and Ludlow 1996</td>
<td>( \emptyset_{\text{have}} )</td>
<td>intensional transitive verbs</td>
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<td>Fodor and Lepore 1998</td>
<td>( \emptyset_{\text{have}} )</td>
<td>want</td>
</tr>
<tr>
<td>Egg 2003</td>
<td>coercion</td>
<td>begin</td>
</tr>
<tr>
<td>Harley 2004</td>
<td>( \emptyset_{\text{have}} )</td>
<td>want</td>
</tr>
<tr>
<td>Harves and Kayne 2012</td>
<td>( \emptyset_{\text{have}} )</td>
<td>need</td>
</tr>
</tbody>
</table>

→ Most ‘null structure’ approaches focus on *want*.
→ But Pustejovsky (1995) is explicit in proposing coercion for both “*begin-NP*” and “*want-NP*”.

**Goal for this presentation:**

(5) Present two novel arguments both suggesting that...

a. . . . “*begin-NP*” and “*want-NP*” do not have the same analysis. (weak version)

b. . . . “*want-NP*” involves null structure but “*begin-NP*” does not. (strong version)
2 Coercion in Mandarin

A cross-linguistic split:

<table>
<thead>
<tr>
<th>English</th>
<th>Mandarin</th>
</tr>
</thead>
</table>
| (6) ✓ begin-VP ✓ want-VP ✓ begin-NP ✓ want-NP | (7) ✓ begin-VP ✓ want-VP *

(8) a. ta kaishi [du yi-ben shu].
   he begin read one-CL book
   ‘He began (to read) a book.’

   b. *ta kaishi [yi-ben shu].
      he begin one-CL book
      Intended: ‘He began a book.’

(9) a. ta xiangyao [du yi-ben shu].
    he want read one-CL book
    ‘He wants to read a book.’

   b. ta xiangyao [yi-ben shu].
      he want one-CL book
      ‘He wants a book.’

(10) **Interim conclusion:** “begin-NP” and “want-NP” cannot have the same analysis (at least in Mandarin, maybe universally).

Lin and Liu (2005) generalize that Mandarin lacks Pustejovsky’s (1995) TRUE COMPLEMENT COERCION and SELECTIVE BINDING:

(11) ta kaishi *(du/xie/bian) yi-ben shu.
    he begin read/write/edit one-CL book
    ‘He began (to read/write/edit) a book.’

(12) ta shi yi-ge *(dazi) hen kuai de daziyuan.
    he be one-CL type very fast PRT typist
    ‘He is a fast typist.’

(13) piaoliang de wuzhe beautiful PRT dancer
    ‘a dancer who is beautiful’
    NOT: ‘a dancer who dances beautifully’

Simple explanation of these facts:

(14) a. want-NP is derived via \( \emptyset_{\text{have}} \); begin-NP via coercion.
b. Mandarin lacks interpretive effects that depend on sub-lexical event structure.
c. Mandarin and English both have \( \emptyset_{\text{have}} \).

(15) \[ \begin{array}{c}
             \langle e, st \rangle \\
             \text{begin:} \langle et, \langle e, st \rangle \rangle \\
             \text{a book:} \langle e \rangle \rightarrow \langle et \rangle \\
             \text{want} \emptyset_{\text{have}} \text{a book}
             \end{array} \]

(16) \[ \begin{array}{c}
             \langle e, st \rangle \\
             \text{begin:} \langle et, \langle e, st \rangle \rangle \\
             \text{a book:} \langle e \rangle \\
             \text{want} \emptyset_{\text{have}} \text{a book}
             \end{array} \]
3 Embedded subjects (in Mandarin and beyond)

3.1 Restructuring and predicate type

**Restructuring effects:** In some languages, certain control structures behave as though they constitute just a single clause with respect to particular syntactic phenomena.


(17) a. Gianni cominciava a vedere lo.  
   ‘Gianni was beginning to see it.’

b. Gianni lo cominciava a vedere.  
   ‘Gianni was beginning to see it.’

**German long passives** (Höhle 1978; Bayer and Kornfilt 1990; Kiss 1995; Wöllstein-Leisten 2001; Wurmbrand 2001; Sabel 2002; Reis and Sternefeld 2004; Schmid, Bader, and Bayer 2005; Lee-Schoenfeld 2007):

(18) weil der Wagen zu reparieren begonnen wurde  
   ‘because the wagon was begun to repair’  
   (Wurmbrand 2001:329)

Wurmbrand (2001): There is widespread crosslinguistic agreement in what kinds of predicates tend to exhibit restructuring effects:

<table>
<thead>
<tr>
<th>Predicate type</th>
<th>Example</th>
<th>German</th>
<th>Dutch</th>
<th>Italian</th>
<th>Spanish</th>
<th>Japanese</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPECTUAL</td>
<td>begin</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>MODAL</td>
<td>be able</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>IMPLICATIVE</td>
<td>manage</td>
<td>+</td>
<td>+</td>
<td>±</td>
<td>±</td>
<td>+</td>
</tr>
<tr>
<td>FACTIVE</td>
<td>hate</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>PROPOSITIONAL</td>
<td>claim</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
</tbody>
</table>

Restructuring ability by predicate type and language, excerpted and adapted from Wurmbrand 2001:342

(Restructuring diagnostics used by Wurmbrand for this table: German: long passives; Dutch: verb raising and Infinitivus Pro Particípio effect; Italian and Spanish: clitic climbing; Japanese: lack of embedded tense marking)

3.2 Restructuring and embedded subjects

A correlation obtains between a predicate’s crosslinguistic ability to restructure and its inability to embed an overt subject (even in languages like English and Mandarin which arguably lack restructuring effects):

(20) a. *Kim began *(for) Sandy to eat / that Sandy ate*.  
    b. *Kim was able *(for) Sandy to eat / that Sandy ate*.  
    c. *Kim managed *(for) Sandy to eat / that Sandy ate*.  

(21) a. Kim **claimed** that Sandy is tall.  
    b. Kim **believed** Sandy to be tall.  
    c. Kim **hated** for Sandy to leave.
(22) a. zhangsan kaishi (*lisi) chi fan.
Zhangsan begin Lisi eat food
‘Zhangsan began to eat.’  

b. zhangsan hui (*lisi) chi fan.
be.able
‘Zhangsan can/will eat.’

c. zhangsan deyi (*lisi) chi fan.
manage
‘Zhangsan managed to eat.’

(23) a. zhangsan renwei lisi chi le fan.
Zhangsan believe Lisi eat PRF food
‘Zhangsan believes that Lisi ate.’

b. zhangsan houhui lisi chi le fan.
regret
‘Zhangsan regrets that Lisi ate.’

(24) Restructuring  
<table>
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<td>−</td>
<td>+</td>
<td>+</td>
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(25) Generalization: Only non-restructuring predicates admit (overt) embedded subjects.

3.3 A solution


(27) Tense > Asp<sub>inceptive</sub> > Mod<sub>ability</sub> > Asp<sub>success</sub> > v

(28) a. begin ∈ Asp<sub>inceptive</sub>
    b. be able ∈ Mod<sub>ability</sub>
    c. manage ∈ Asp<sub>success</sub>

(29) (30)

(31) Structure in (29) accounts for...
    a. Restructuring effects (i.e., overt signals of monoclausality)
    b. Impossibility of embedded subjects. (Inflectional heads are uniformly raising; they do not introduce arguments.)
3.4 want as counterexample

But *want* restructures AND admits overt embedded subjects:

(32) Gianni lo vuole mangiare.
    ‘Gianni wants to eat it.’

(33) John wants (for) Sandy to eat.

(34) zhangsan xiangyao lisi chi fan.
    Zhangsan wants Lisi eat food
    ‘Zhangsan wants Lisi to eat.’

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<tr>
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<th>Restructuring</th>
<th>Embedded subject</th>
</tr>
</thead>
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<td>begin</td>
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(35) Restructuring Predicate type

(36) Proposal:

a. *want* is unique among restructuring predicates in being able to take $\emptyset_{have}$ as its main verb.

b. $\emptyset_{have}$ can embed both nominal complements (37) and verbal complements (38). (cf. Cinque 2006:61 for a similar suggestion about Italian *volere* ‘want’):

(37) TP
    DP
    | John_t
    T
    \_ ModP
    | Mod
    | want
    t_1
    VP
    | V'
    | DP
    | $\emptyset_{have}$
    | a book

(38) TP
    DP
    | John_t
    T
    \_ ModP
    | Mod
    | want
    t_1
    VP
    | V
    vP
    | $\emptyset_{have}$
    | Bill to read a book

By positing $\emptyset_{have}$ as an available complement to *want*, we resolve the exceptionality of *want* in (35).

But crucially, given the asymmetry in (39)–(40), *begin-NP* must not involve $\emptyset_{have}$.

    b. John wants Bill to read a book.

    b. *John began Bill to read a book.
Two important remaining questions:

a. What is the semantics of ∅ have that allows it to combine with both N and V complements?

b. Why can want but not begin embed ∅ have?

Sæbø 2009:

- *have* maps clausal meanings onto functions from individuals to clausal meanings:

\[
[\text{have}] = \lambda \phi \lambda x. \phi
\]  

(Sæbø 2009:376)

- In order not to be superfluous, the introduced argument must bind a (possibly silent) variable:

\[
\begin{align*}
(42) & \quad \mu_i f = \lambda \phi \lambda z. \phi[f[i \mapsto z]] \\
(43) & \quad \text{a. Most cars have their engine in the front.} = \text{Most cars}_1 \lambda x. \text{their}_1 \text{ engine in the front} \\
& \quad \text{b. John has a boat} = \text{John}_1 \lambda x. \text{a boat (belonging to him}_1) \\
\end{align*}
\]

If we extend this approach to ∅ have, the sentences in (44) have structures like (45):

\[
\begin{align*}
(44) & \quad \text{a. John wants Bill to read a book.} \\
& \quad \text{b. John wants a book.} \\
(45) & \quad \text{a. John}_1 \text{ wants } t_1 ∅ \text{ have [Bill to read a book]} \\
& \quad \text{b. John}_1 \text{ wants } t_1 ∅ \text{ have [a book (belonging to him}_1)] \\
\end{align*}
\]

In both cases, the semantic function of ∅ have is simply to introduce an argument.

Node-by-node translation for *John wants a book* (ignoring T/Asp), given denotations in (46):

\[
\begin{align*}
(46) & \quad \text{a. } \left[∅ \text{ have}\right] = \left[\text{have}\right] = \lambda \phi \lambda x. \phi \\
& \quad \text{b. } \left[μ_i f\right] = \lambda \phi \lambda z. \phi[f[i \mapsto z]] \\
& \quad \text{c. } \left[\text{want} (d)\right] = \lambda \phi \forall w' \in \text{BEST}_{\text{desire}} (\text{DOX} (d, w)) : \phi (w') \\
& \quad \text{(where } d \text{ must be bound by closest } c\text{-commanding argument; see Grano In prep.)} \\
& \quad \text{(Formalization of desire semantics based on Heim 1992; von Fintel 1999; Hacquard 2008)}
\end{align*}
\]
4 Conclusions

- Mandarin coercion facts and crosslinguistic distribution of embedded subjects and restructuring both point toward view that “want-NP” involves null clausal structure but “begin-NP” does not.

- Broader implication: Not all syntax-semantics mismatches are resolved in the same way. The choice between a (semantic) type-shifting/coercion approach and a (syntactic) null structure approach should be adjudicated on a case-by-case basis.

References


