On the difference between *showing* and *exhibiting*: Morphosyntax, morphophonology, and English double objects.

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Not long ago, in a galaxy not far away:

Mary opened it.
Shortly thereafter: VP-internal subjects

[Diagram of a linguistic tree structure showing the sentence "Mary opened it" with the following nodes: IP, I', I°, VP, V', V°, NP, and the words "Mary", "opened", and "it" placed accordingly.]
Nowadays: VPIS with split VP

```
NP
  IP
    vP
      t
    VP
      NP
        it
  I'
  I°
  vP
    V
      v°
      V
      t_v
  opened
```

Mary

open it
Plan of talk

1. Review evidence for split-vP
   1. syntactic
   2. semantic
   3. morphological
2. Apply bipartite structure to verb-particle and resultative constructions
3. Extend analysis to account for failure of Latinate verbs to dative-shift in English
1: Split-vP: syntax

- Larson 1988: ditransitive verbs
- With VPIS, no room for third argument:

```
VP
  DP  V'
    Subj  V  DP
        Ag_0 (Ag_0, Th_0, Go_0)
        Subj  V  DP
          Th_0  Obj
            Go_0
              PP
```

Mary gave the book to John?
1: Split-vP: syntax

- No ternary branching. Adjoin to V’?

```
VP
  /   \\    \\
DP  V'    PP
  / \    / \
Subj V'  PP
     / \\
    V   \\
  /   |
Ag₀  Th₀
```

PP Goal
c-commands
DP theme — wrong!

Mary gave the book to John?
1: Split-vP: syntax

- Barss and Lasnik 1986

  a. John showed Bob₁ to himself₁ (in the mirror)
  b. *John showed himself₁ to Bob₁ (in the mirror)
  c. Mary gave nothing to anyone
  d. *Mary gave anything to no one
  e. The cruel boss denied [each paycheck]₁ [to its₁ owner]
  f. *The cruel boss denied [his₂ paycheck] [to each owner₂]

DP theme
  c-commands
  PP Goal!
1: Split-vP: Syntax

Larson’s solution:
Split VPs

Mary gave a book to John
Questions

• How can one verb project two VPs?
• How can the verb assign its external theta role ‘late’, after movement?
• What is the nature of the upper VP?
  ◆ Larson: Upper VP is purely structural — scaffolding for the external argument, that’s all.
2. Split-vP: Semantics

- Modification relations are structural

1. Mary [made [[John happy] again]]
2. Mary [[made [John happy]] again]

- In (1), John was just previously happy, nothing to do with Mary
- In (2), Mary had made him happy before
2. Split-vP: Semantics

Mary made John happy again

SC (='Small Clause')

PredP

A°
2. Split-vP: Semantics

Mary made John happy again
2. Split-vP: Semantics

- McCawley, Lakoff, Ross: Generative Semantics
- Scope ambiguity with apparently monomorphemic change-of-state verbs

1. Mary opened the door again
   1. The door had been open before (nothing to do with Mary)
   2. Mary had opened the door before
2. Split-vP: Semantics

- Von Stechow 1995
- To capture this scope ambiguity without resorting to bizarre type-shifting operations in lexical entry of *again*, need bipartite verb structure
- Separate resultant state (‘John happy’/‘the door open’) from causative event
2. Split-vP: Semantics

Mary CAUS the door open again

(ALC, Oct. 19, 2007)
2. Split-vP: Semantics

Mary CAUS the door open again
2. Split-vP: Semantics

- Upper VP now associated with a semantics (‘cause’)
- Selects external argument on its own, assigns theta-role to it
- Lower VP denotes resultant state—endpoint of change-of-state predicate
2. Split-vP: Semantics

- Endstate can be modified by separate temporal adverbials
- Generative semanticists, Beck and Johnson (2004)
  1. Mary opened the window for five minutes
     *(Window is open for 5 minutes)*
  2. Mary gave John the car until Sunday
     *(John has the car until Sunday)*
2. Split-vP: Semantics

\[
\begin{align*}
&\text{VP1} \\
&\quad \text{DP} \\
&\quad \quad \text{V'} \\
&\quad \quad \quad \text{V1°} \\
&\quad \quad \quad \quad \text{CAUS} \\
&\quad \quad \quad \quad \text{the window open} \\
&\quad \quad \quad \quad \quad \text{for 5 minutes} \\
&\quad \quad \quad \quad \quad \text{VP2 (='Small Clause')} \\
&\quad \quad \quad \quad \quad \text{DP} \\
&\quad \quad \quad \quad \quad \quad \text{V'} \\
&\quad \quad \quad \quad \quad \quad \quad \text{V2°} \\
&\quad \quad \quad \quad \quad \quad \quad \quad \text{PP}
\end{align*}
\]

Mary
Split-vP: Semantics

- Marantz 1984: External arguments are semantically separate from the verb
- Verb+object combinations undergo semantic drift, idiomatization, independently of subject
- Verb+subject combinations do not do so (independently of object)
2. Split-vP: Semantics

- Marantz 1984:
  - kill a bug = cause the bug to die
  - kill a conversation = cause the conversation to end
  - kill an evening = while away the time span of the evening
  - kill a bottle = empty the bottle
  - kill an audience = entertain the audience to an extreme degree
2. Split-vP: Semantics

- Marantz 1984: ‘Impossible’ idioms
- *A bug killed the boy* = “The boy got drunk”
- *The juice killed the boy* = “His parents sent the boy to military school”
2. Split-vP: Semantics

- Kratzer 1996: considers pattern within a Montagovian semantics
- Concludes that if the verb composes directly with both subject and object, idiomatization possibilities should be symmetrical
2. Split-vP: Semantics

- Kratzer 1996:
- Only way to capture notion that V+O can idiomatize but V+S cannot is if S is not selected for by V, but rather by a separate predicate
- Neo-Davidsonian Agent(x, e)
2. Split-vP: Semantics

- Kratzer 1996:
- Verb composes with an event argument
- Agent-introducing predicate composes with an event argument
- An operation identifying the two events as identical, ‘Event Identification’, unifies the representation
2. Split-vP: Semantics

- Kratzer 1996:
- \( \exists e \ [\text{Cause}(e, \text{Mary}) \ & \ [\text{Open}(e, \text{the door})] \)
- “There is an event. Mary is the cause of the event, and the event is an opening of the door”
- Verb itself selects for object
- Little v° selects for external arg.
3. Split-vP: Morphology

- Hale and Keyser 1993, …, 2002
- Argue for a split-vP
- Initial motivation: Languages like Jemez, where verbs are routinely morphologically complex:

  a. sæ'-a  
  work-do  
  ‘work’

  b. zæi'-a  
  song-do  
  ‘sing’

  c. se-/a  
  word-do  
  ‘speak’
3. Split-vP: Morphology

- Evidence of this type from languages I am familiar with
- First: Japanese causative/inchoative verb pairs
- Hundreds!
- Share a root; causative or inchoative variant indicated by different suffixes
- Catalogued by Jacobsen 1992
### 3. Split-vP: Morphology

<table>
<thead>
<tr>
<th>I: e/Ø</th>
<th>hag-e-ru</th>
<th>hag-ø-u</th>
<th>‘peel off’</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 pairs</td>
<td>hirak-e-ru</td>
<td>hirak-ø-u</td>
<td>‘open’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II: Ø/e</th>
<th>ak-ø-u</th>
<th>ak-e-ru</th>
<th>‘open’</th>
</tr>
</thead>
<tbody>
<tr>
<td>44 pairs</td>
<td>hikkom-ø-u</td>
<td>hikkom-e-ru</td>
<td>‘draw back’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III: ar/e</th>
<th>ag-ar-u</th>
<th>ag-e-ru</th>
<th>‘rise’</th>
</tr>
</thead>
<tbody>
<tr>
<td>71 pairs</td>
<td>aratam-ar-u</td>
<td>aratam-e-ru</td>
<td>‘improve’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IV: ar/Ø</th>
<th>hasam-ar-u</th>
<th>hasam-ø-u</th>
<th>‘catch between’</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 pairs</td>
<td>husag-ar-u</td>
<td>husag-ø-u</td>
<td>‘obstruct (jam?)’</td>
</tr>
</tbody>
</table>
### 3. Split-vP: Morphology

<table>
<thead>
<tr>
<th>V: r/s</th>
<th>ama-r-u</th>
<th>ama-s-u</th>
<th>‘remain’</th>
</tr>
</thead>
<tbody>
<tr>
<td>27 pairs</td>
<td>hita-r-u</td>
<td>hita-s-u</td>
<td>‘soak’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VI: re/s</th>
<th>arawa-re-ru</th>
<th>arawa-s-u</th>
<th>‘show (up)’</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 pairs</td>
<td>hana-re-ru</td>
<td>hana-s-u</td>
<td>‘separate from’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VII: ri/s</th>
<th>ka-ri-ru</th>
<th>ka-s-u</th>
<th>‘borrow/(lend)’</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 pairs</td>
<td>ta-ri-ru</td>
<td>ta-s-u</td>
<td>‘suffice/(supplement)’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VIII: ø/as</th>
<th>hekom-ø-u</th>
<th>hekom-as-u</th>
<th>‘dent’</th>
</tr>
</thead>
<tbody>
<tr>
<td>38 pairs</td>
<td>her-ø-u</td>
<td>her-as-u</td>
<td>‘decrease’</td>
</tr>
</tbody>
</table>

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### 3. Split-vP: Morphology

<table>
<thead>
<tr>
<th>IX: e/as</th>
<th>bak-e-ru</th>
<th>bak-as-u</th>
<th>‘turn into/bewitch’</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 pairs</td>
<td>bar-e-ru</td>
<td>bar-as-u</td>
<td>come/bring to light</td>
</tr>
<tr>
<td>X: i/as</td>
<td>ak-i-ru</td>
<td>ak-as-u</td>
<td>‘tire’</td>
</tr>
<tr>
<td>8 pairs</td>
<td>dek-i-ru</td>
<td>dek-as-u</td>
<td>‘(be) create(d)’</td>
</tr>
<tr>
<td>XI: i/os</td>
<td>horob-i-ru</td>
<td>horob-os-u</td>
<td>‘(fall to) ruin’</td>
</tr>
<tr>
<td>6 pairs</td>
<td>ok-i-ru</td>
<td>ok-os-u</td>
<td>‘get up’</td>
</tr>
<tr>
<td>XII: Ø/se</td>
<td>abi-ø-ru</td>
<td>abi-se-ru</td>
<td>‘pour over’</td>
</tr>
<tr>
<td>6 pairs</td>
<td>ki-ø-ru</td>
<td>ki-se-ru</td>
<td>‘put on’</td>
</tr>
</tbody>
</table>
### 3. Split-vP: Morphology

<table>
<thead>
<tr>
<th>Group</th>
<th>Example 1</th>
<th>Example 2</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>XIII</td>
<td>e/akasobi-e-ru</td>
<td>obi-(y)akas-u</td>
<td>(Be) scare(d)</td>
</tr>
<tr>
<td>4 pairs</td>
<td>hagur-e-ru</td>
<td>hagur-akas-u</td>
<td>‘stray/evade’</td>
</tr>
<tr>
<td>XIV</td>
<td>or/e</td>
<td>kom-or-u</td>
<td>kom-e-ru</td>
</tr>
<tr>
<td>2 pairs</td>
<td>nukum-or-u</td>
<td>nukum-e-ru</td>
<td>‘warm’</td>
</tr>
<tr>
<td>XV</td>
<td>are/e</td>
<td>sut-are-ru</td>
<td>sut-e-ru</td>
</tr>
<tr>
<td>3 pairs</td>
<td>wak-are-ru</td>
<td>wak-e-ru</td>
<td>divide</td>
</tr>
<tr>
<td>XVI</td>
<td>Misc</td>
<td>nigiwa-ø-u</td>
<td>nigiwa-s-u</td>
</tr>
<tr>
<td>25 pairs</td>
<td>nob-i-ru</td>
<td>nob-e-ru</td>
<td>‘extend’</td>
</tr>
</tbody>
</table>

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3. Split-vP: Morphology

• Evidence of this type from languages I am familiar with
• Next: Hiaki (Yaqui) causative/inchoative verb pairs
• Again, many -- at least several dozen.
• Share a root; causative or inchoative variant indicated by different suffixes
• Catalogued by Jelinek 1996, 2001
## 3. Split-vP: Morphology

<table>
<thead>
<tr>
<th>buwaša</th>
<th>&quot;cook&quot;</th>
<th>buwašo</th>
<th>&quot;cook, ripen&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>chakukta</td>
<td>&quot;bend&quot;</td>
<td>chakukte</td>
<td>&quot;bend&quot;</td>
</tr>
<tr>
<td>chašta</td>
<td>&quot;drip&quot;</td>
<td>chašte</td>
<td>&quot;leak&quot;</td>
</tr>
<tr>
<td>chihakta</td>
<td>&quot;smash&quot;</td>
<td>chihakte</td>
<td>&quot;shatter&quot;</td>
</tr>
<tr>
<td>hamta</td>
<td>&quot;break&quot;</td>
<td>hamte</td>
<td>&quot;break&quot;</td>
</tr>
<tr>
<td>heokta</td>
<td>&quot;melt&quot;</td>
<td>heokte</td>
<td>&quot;melt&quot;</td>
</tr>
<tr>
<td>chu'akta</td>
<td>&quot;stick on&quot;</td>
<td>chu'akte</td>
<td>&quot;adhere&quot;</td>
</tr>
<tr>
<td>chukta</td>
<td>&quot;cut loose&quot;</td>
<td>chukte</td>
<td>&quot;come loose&quot;</td>
</tr>
<tr>
<td>chu'upa</td>
<td>&quot;finish&quot;</td>
<td>chupe</td>
<td>&quot;come to end&quot;</td>
</tr>
<tr>
<td>ko'okta</td>
<td>&quot;pull apart&quot;</td>
<td>ko'okte</td>
<td>&quot;come undone&quot;</td>
</tr>
</tbody>
</table>
### 3. Split-vP: Morphology

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>kowiikta</td>
<td>&quot;make crooked&quot;</td>
<td>kowiikte</td>
<td>&quot;get crooked&quot;</td>
</tr>
<tr>
<td>kitokta</td>
<td>&quot;deform&quot;</td>
<td>kitokte</td>
<td>&quot;shrivel&quot;</td>
</tr>
<tr>
<td>kotta</td>
<td>&quot;break&quot;</td>
<td>kotte</td>
<td>&quot;break&quot;</td>
</tr>
<tr>
<td>kutta</td>
<td>&quot;tighten&quot;</td>
<td>kutte</td>
<td>&quot;get tight&quot;</td>
</tr>
<tr>
<td>kuuta</td>
<td>&quot;stir&quot;</td>
<td>kuute</td>
<td>&quot;mix&quot;</td>
</tr>
<tr>
<td>luuta</td>
<td>&quot;use up&quot;</td>
<td>luute</td>
<td>&quot;run out&quot;</td>
</tr>
<tr>
<td>mana</td>
<td>&quot;place before&quot;</td>
<td>mane</td>
<td>&quot;be before&quot;</td>
</tr>
<tr>
<td>mohta</td>
<td>&quot;grind&quot;</td>
<td>mohte</td>
<td>&quot;break up&quot;</td>
</tr>
<tr>
<td>mohakta</td>
<td>&quot;take apart&quot;</td>
<td>mohakte</td>
<td>&quot;crumble&quot;</td>
</tr>
<tr>
<td>nasonta</td>
<td>&quot;damage&quot;</td>
<td>nasonte</td>
<td>&quot;get damaged&quot;</td>
</tr>
</tbody>
</table>
3. Split-vP: Morphology

<table>
<thead>
<tr>
<th>patta</th>
<th>&quot;shut&quot;</th>
<th>patte</th>
<th>&quot;shut&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>pesta</td>
<td>&quot;burst&quot;</td>
<td>peste</td>
<td>&quot;burst&quot;</td>
</tr>
<tr>
<td>pitta</td>
<td>&quot;press&quot;</td>
<td>pitte</td>
<td>&quot;settle down&quot;</td>
</tr>
<tr>
<td>pohta</td>
<td>&quot;boil&quot;</td>
<td>pohte</td>
<td>&quot;boil&quot;</td>
</tr>
<tr>
<td>potta</td>
<td>&quot;stretch out&quot;</td>
<td>potte</td>
<td>&quot;rise, expand&quot;</td>
</tr>
<tr>
<td>rauta</td>
<td>&quot;rinse&quot;</td>
<td>raute</td>
<td>&quot;rinse&quot;</td>
</tr>
<tr>
<td>resta</td>
<td>&quot;spread out&quot;</td>
<td>reste</td>
<td>&quot;spread out&quot;</td>
</tr>
<tr>
<td>revekta</td>
<td>&quot;break apart&quot;</td>
<td>revekte</td>
<td>&quot;come apart&quot;</td>
</tr>
<tr>
<td>riuta</td>
<td>&quot;split&quot;</td>
<td>riute</td>
<td>&quot;split&quot;</td>
</tr>
<tr>
<td>ropta</td>
<td>&quot;sink&quot;</td>
<td>ropte</td>
<td>&quot;sink&quot;</td>
</tr>
</tbody>
</table>
### 3. Split-vP: Morphology

<table>
<thead>
<tr>
<th>ro'akta</th>
<th>&quot;roll over&quot;</th>
<th>ro'akte</th>
<th>&quot;roll along&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>sihho'ota</td>
<td>&quot;sprinkle&quot;</td>
<td>sihho'ote</td>
<td>&quot;drizzle&quot;</td>
</tr>
<tr>
<td>sipa</td>
<td>&quot;cool&quot;</td>
<td>sipe</td>
<td>&quot;cool&quot;</td>
</tr>
<tr>
<td>siuta</td>
<td>&quot;tear&quot;</td>
<td>siute</td>
<td>&quot;tear&quot;</td>
</tr>
<tr>
<td>teita</td>
<td>&quot;trip&quot;</td>
<td>teite</td>
<td>&quot;trip&quot;</td>
</tr>
<tr>
<td>tohta</td>
<td>&quot;discolor&quot;</td>
<td>tohte</td>
<td>&quot;fade&quot;</td>
</tr>
<tr>
<td>topakta</td>
<td>&quot;turn over&quot;</td>
<td>topakte</td>
<td>&quot;flip over&quot;</td>
</tr>
<tr>
<td>totta</td>
<td>&quot;bend&quot;</td>
<td>totte</td>
<td>&quot;collapse&quot;</td>
</tr>
<tr>
<td>tuhta</td>
<td>&quot;press&quot;</td>
<td>tuhte</td>
<td>&quot;settle&quot;</td>
</tr>
<tr>
<td>tuucha</td>
<td>&quot;put out (fire)&quot;</td>
<td>tuuke</td>
<td>&quot;go out&quot;</td>
</tr>
</tbody>
</table>
### 3. Split-vP: Morphology

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>veeta</td>
<td>&quot;burn&quot;</td>
<td>veete</td>
<td>&quot;burn&quot;</td>
</tr>
<tr>
<td>vi'ita</td>
<td>&quot;twist&quot;</td>
<td>vi'ite</td>
<td>&quot;twist&quot;</td>
</tr>
<tr>
<td>vohtta</td>
<td>&quot;pour out&quot;</td>
<td>vohte</td>
<td>&quot;drop out&quot;</td>
</tr>
<tr>
<td>vutta</td>
<td>&quot;undo&quot;</td>
<td>vutte</td>
<td>&quot;come undone&quot;</td>
</tr>
<tr>
<td>weeyya</td>
<td>&quot;carry&quot;</td>
<td>weeye</td>
<td>&quot;move&quot;</td>
</tr>
<tr>
<td>wiokta</td>
<td>&quot;untangle&quot;</td>
<td>wiokte</td>
<td>&quot;untangle&quot;</td>
</tr>
<tr>
<td>wiuta</td>
<td>&quot;spend&quot;</td>
<td>wiute</td>
<td>&quot;run out&quot;</td>
</tr>
<tr>
<td>wohokta</td>
<td>&quot;dig; puncture&quot;</td>
<td>wohokte</td>
<td>&quot;get a hole in&quot;</td>
</tr>
<tr>
<td>woita</td>
<td>untie</td>
<td>woite</td>
<td>&quot;come untied&quot;</td>
</tr>
<tr>
<td>wo'ota</td>
<td>spill&quot;</td>
<td>wo'ote</td>
<td>&quot;spill&quot;</td>
</tr>
</tbody>
</table>
3. Split-vP: Morphology

- Evidence of this type from languages I am familiar with
- Next: Persian (Farsi) complex predicates
- Nearly all the ‘verbs’ in the language
- Consist of a nonverbal root with a light verb; whole has verbal meaning
- Catalogued by Karimi 2001
3. Split-vP: Morphology

- ‘Simple’ (word-sized) verbs have for the most part disappeared from the lg.; only remain in elevated registers
- Verbal concepts all expressed as complex predicates.
- Formerly morphologically complex forms have divided into two syntactic pieces
3. Split-vP: Morphology

<table>
<thead>
<tr>
<th>lasidan</th>
<th>las zadan</th>
<th>'to flirt’</th>
</tr>
</thead>
<tbody>
<tr>
<td>flirtation doing</td>
<td></td>
<td></td>
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<tr>
<td>raghsidan</td>
<td>raghs kardan</td>
<td>'to dance’</td>
</tr>
<tr>
<td>dance doing</td>
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<td></td>
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<tr>
<td>agahanidan</td>
<td>agah kardan</td>
<td>'to inform’</td>
</tr>
<tr>
<td>informed making</td>
<td></td>
<td></td>
</tr>
<tr>
<td>aghazidan</td>
<td>aghaz kardan</td>
<td>'to start’</td>
</tr>
<tr>
<td>start doing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>English</th>
<th>Dari</th>
</tr>
</thead>
<tbody>
<tr>
<td>kotak zadan beating hitting</td>
<td>kotak xordan beating colliding ‘to get beaten’</td>
</tr>
<tr>
<td>'to beat'</td>
<td>‘to get beaten’</td>
</tr>
<tr>
<td>xar kardan donkey doing</td>
<td>xar shodan donkey becoming</td>
</tr>
<tr>
<td>to fool</td>
<td>to be fooled</td>
</tr>
<tr>
<td>dust dâshtan friend having</td>
<td>to love</td>
</tr>
</tbody>
</table>

N+LV
3. Split-vP: Morphology

sabok kardan
light making
'to degrade' (tr)

sabok shodan
light becoming
‘to degrade’ (intr)

pahn kardan
wide making
'to widen’ (tr)

pahn shodan
wide becoming
‘to widen' (intr)

derâz keshidan
long pulling

’

to lie down, to take a nap'

A+LV
3. Split-vP: Morphology

birun kardan
out doing
'to dismiss, to fire (someone)'

bâlâ âvardan
up bringing
'to vomit'

bâlâ keshidan
up pulling
'to steal'
3. Split-vP: Morphology

be yâd dâshtan
to memory having
'to have in memory'

bejâ âvardan
to place bringing
'to recognize'

be bâd dâdan
to wind giving
'to waste'

PP+LV
3. Split-vP: Morphology

- In these cases, the verb root corresponds to the small clause predicate (the lower V°)
- The changing morphology for the causative vs. the inchoative structures reflects the change from a CAUSE V° to a non-external argument-selecting BECOME or HAPPEN V°
3. Split-vP: Morphology

[Diagram of a syntactic tree with nodes labeled DP, vP, v°, SC, CAUSE, and Pred°. The diagram shows the sentence "Mary caused the door to open." with morphological tags.]
3. Split-vP: Morphology

vP in Japanese sentence like *Taro tired Satoshi*. 
3. Split-vP: Morphology

vP in Hiaki sentence like *Jose broke the glass*
3. Split-vP: Morphology

vP in Persian sentence like *Kimea widened X*
II: Bipartite English verbs

- English has morphologically bipartite verbs
- They’re significantly different than the Japanese, Persian or Hiaki ones, though
- (English has a few like those, too, like clarify, with a root and a bound verbalizing morpheme).
- Not a common type of bipartite verb in English
II: Bipartite English vPs

- English bipartite verbs: verb-particle constructions

  *throw the garbage out*
  *pick the paper up*
  *push the needle in*
  *pass the dish around*
  *fight the attackers off*
  *paste the stamp on*
  *

  *throw out the garbage*
  *pick up the paper*
  *push in the needle*
  *pass around the dish*
  *fight off the attackers*
  *paste on the stamp*
II: Bipartite English vPs

- Verb-particle constructions
- *Particle*, not verb root, represents endstate

1. (After letting him in only an hour before,) Mary threw the cat out again.
2. Mary threw the cat out for two hours (then she let him in again).

   1. In (1), what’s happening again is the cat being out
   2. In (2), what lasts for two hours is the cat being out
II: Bipartite English vPs

Mary → vP (CAUSE) → v’ (throw) → SC (the cat) → Pred° (out)
II: Bipartite English vPs

[Diagram showing a tree structure for the sentence "Mary throw out the cat"]]
II: Bipartite English vPs

• Note: V-prt constructions often idiomatic, yet clearly still syntactically complex:

1. see NP through  'to persevere with NP'
2. chew NP out     'to scold NP'
3. piss NP off     'to anger NP'
4. fill NP in      'to brief NP'
5. work NP over    'to beat NP'
6. while NP away   'to pass NP(=time)'

…
II: Bipartite English vPs

- Important point: English verb roots can appear in $\text{v}^\circ$ as well as in the SC predicate
- Indeed, they can do so productively
- English resultative constructions, as well as manner-of-motion constructions, involve an overt, independent SC predicate, and a manner-identifying verb in the $\text{v}^\circ$ position
II: Bipartite English vPs

vP
  v’
    v°
      CAUSE
        DP
          Mary
        hammer
          SC
            DP
             Pred°
                flat
              the metal
II: Bipartite English vPs

\[ \text{vP} \rightarrow \text{DP} \rightarrow \text{v'} \rightarrow \text{v}^\circ \rightarrow \text{CAUSE} \rightarrow \text{Pred}^\circ \rightarrow \text{SC} \rightarrow \text{Pred}^\circ \]

Mary \rightarrow \emptyset \rightarrow \text{the door} \rightarrow \text{open}
II: Bipartite English vPs

Mary 

CAUSE

open

dp

the door

Pred°

Wide

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II: Bipartite English vPs

- Keyser and Roeper 1987 noted that re-affixation applies only to change-of-state verbs…
- …but not to verb-particle or resultative change-of-state verbs:

1. Mary reopened the door.
2. *Mary reopened the door wide.
3. *Mary reopened the door up.
II: Bipartite English vPs

- This can be analyzed in the current framework in the following way:
  - \textit{re-} must modify the SC predicate (has ‘again’ meaning)
  - In \textit{Mary opened the door}, ‘open’ is the SC predicate
  - Hence \textit{Mary reopened the door} is fine
  - In \textit{Mary opened the door wide}, ‘wide’ is the SC predicate (open is in v°).
  - So \textit{Mary reopened the door wide} is out.
II: Bipartite English vPs

- Causative and inchoative manner-of-motion constructions can be analyzed in this way.
- In a manner-of-motion construction, a non-motion verb is used to describe the manner in which the event is caused or takes pace.
- The Goal PP is the SC predicate; the manner verb root is in v°.
II: Bipartite English vPs

- For example
  1. Mary whistled the dog to her side.
     *Mary whistled the dog.
  2. Mary shoved her way to the front of the line.
     *Mary shoved her way.
  3. Mary talked herself onto the stage.
     *Mary talked herself.
  4. Mary pitched her team into the finals.
     *Mary pitched her team.
II: Bipartite English vPs

Mary whistled the dog to her side
II: Bipartite English vPs

• Accounts for potential unrelatedness of verb and object in the causative manner-of-motion…

• …because the object is introduced by the small clause (the predicate Goal PP), not by the verb itself
II: Bipartite English vPs

• Same analysis will apply to inchoative manner-of-motion constructions

1. The bottle floated into the cave
2. The ball bounced across the road.
3. The bullet whistled through the window.
4. The water swirled down the drain.
   … etc.
II: Bipartite English vPs

- Inchoatives have the same structure as causatives
- ...but have a different light verb
  - Japanese: transitive *ak-as*, intr. *ak-i*, ‘tire’
  - Hiaki: transitive *ham-ta*, intr *ham-te*, ‘break’
  - Persian: transitive *pa.hn kardan*, intr. *pa.hn shodan*, ‘widen’
- Different light verb does not introduce external argument
II: Bipartite English vPs

to Spec-TP

v°

BECOME

∅

the door

DP

SC

Pred°

open

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II: Bipartite English vPs

- Same causative/inchoative relationship in manner-of-motion verbs
  - Mary floated the boat into the cave
  - The boat floated into the cave
  - Mary rolled the ball into the room.
  - The ball rolled into the room.
II: Bipartite English vPs

\[
\begin{align*}
\text{vP} & \quad | \quad \text{v°} \\
& \quad | \quad \text{BECOME} \\
& \quad \downarrow \\
\text{float} & \quad | \quad \text{SC} \\
& \quad | \quad \text{DP} \\
& \quad | \quad \text{the bottle} \\
& \quad | \quad \text{PP} \\
& \quad | \quad \text{into the cave}
\end{align*}
\]
III: Restricting Vs in \( v^\circ \)

- If manner of motion constructions are seen in this light, Talmy’s generalization can be characterized syntactically.
- Languages, like Spanish, which don’t allow manner of motion constructions, don’t allow verb roots to appear in \( v^\circ \).
III: Restricting Vs in ν°

- Talmy 1987:

La botella flotó a la cueva.
*The bottle floated to the cave.*
"The bottle floated in the cave"  (no motion, ok)
"#The bottle floated into the cave"  (motion, *)

La botella entró a la cueva, flotando
*The bottle entered to the cave, floating*
"The bottle entered the cave, floating."
III: Restricting Vs in $v^\circ$

- If the ban on manner-of-motion constructions is a ban on verb roots appearing in $v^\circ$…
- …then prediction (correct) is that Spanish will lack verb-particle constructions and resultative constructions as well.

IV: Restrictions on V in $v^\circ$
in English

• Placing a verb root in $v^\circ$ is not completely free in English
• A subpart of the English verbal lexicon forbids it.
• Consider the following:
IV: Restrictions on V in v°

in English

write it up  *compose it up/*arrange it up
eat it up     *consume it up
finish it up  *complete it up
throw it out  *discard it out
lie down      *recline it down
hand it out   *distribute it out
show it off   *exhibit it off / *reveal it off
fire it up    *ignite it up
slice it off  *incise it off
IV: Restrictions on $V$ in $v^\circ$

in English

tidy it up
hide it away
cut it apart
figure it out
move it over
go away
clear it up
write it up
cast it off
dig it up

*arrange it up
*conceal it away
*dissect it apart
*calculate it out
*displace it over
*depart away
*clarify it up
*compose it up
*release it off
*excavate it up
IV: Restrictions on V in \( v^\circ \) in English

- pump it full
- walk yourself tired
- work yourself ragged
- squeeze it empty
- stab it dead
- train yourself fit
- freeze solid
- dance yourself pink
- eat yourself sick
- drink yourself unconscious

- *inflate it full
- *perambulate yourself tired
- *decide yourself ragged
- *compress it empty
- *impale it dead
- *condition yourself fit
- *congeal solid
- *exert yourself pink
- *devour yourself sick
- *imbibe yourself unconscious
- unconscious
IV: Restrictions on V in \( \nu^0 \) in English

- Evidently, ‘Latinate’ verbs do not participate well in the verb-particle and resultative constructions
- They seem to be prohibited from occurring in \( \nu^0 \)
- But why?
IV: Restrictions on V in v° in English

• There is one other famous case of a constraint on Latinate verbs in a certain construction in English
• Ditransitive Latinate verbs resist ‘dative-shift’
• Anglo-Saxon type verbs participate freely, given the right semantics
• Can this have something to do with v°?
IV: Restrictions on V in $v^\circ$ in English

- The facts (examples from Pesetsky 1995):
  a. Susie gave Oxfam some canned food.
  a'. Susie gave some canned food to Oxfam.
  b. *Susie donated Oxfam some canned food.
  b'. Susie donated some canned food to Oxfam.
  c. Bill sent Sue his regards.
  c'. Bill sent his regards to Sue.
  d. *Bill conveyed Sue his regards.
  d'. Bill conveyed his regards to Sue.
IV: Restrictions on V in v° in English

• The facts:
  e. Mary showed the committee her findings.
  e' Mary showed her findings to the committee.
  f. *Mary displayed the committee her findings.
  f' Mary displayed her findings to the committee.
  g. Tom told Ben the story.
  g' Tom told the story to Ben.
  h. *Tom recounted Ben the story.
  h' Tom recounted the story to Ben.
The constraint is synchronically acquired by children

Gropen et. al 1980 tested 4-5 year olds with invented ditransitive verbs

Taught the children the verbs in the to-dative frame

The children dative-shifted significantly more often with the invented “Anglo-Saxon” verbs than with the invented “Latinate” verbs
IV: Restrictions on V in v° in English

• Prosody matters: Mostly wS stress
  ♦ *confess up but ‘fess up!
  ♦ doNATE vs DOnate

• Previous approaches:
  ♦ Grimshaw: Dative shifting verbs must be a single prosodic foot. (But why? and why not in some other construction?)
  ♦ Pesetsky: Null G morpheme in double object construction requires a certain shape for its host. (What about V-prt?)
IV: Restrictions on V in v° in English

- Note: although prosody fine, *clarify* behaves like a Latinate verb
  - *Mary clarified the situation up.
  - *Mary clarified Bill the situation.
- *Clarify* certainly multimorphemic
- Proposal: *all* these ‘Latinate’ verbs are synchronically multimorphemic
- Their morphemes have particular category requirements
- Hence no Latinate verbs in v°
V: Aside—Dative shift and $v^\circ$

- Need to show that dative shift involves putting a verb root in $v^\circ$.

- Recall Larson’s proposal concerning the structure of ditransitive verbs:
V: Dative shift and v°

Larson’s solution: Split VPs

Mary gave a book to John
V: Dative shift and $v^\circ$

```
V: Dative shift and $v^\circ$

vP

<table>
<thead>
<tr>
<th>DP</th>
<th>v'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag_0</td>
<td>v^\circ</td>
</tr>
<tr>
<td>(Ag_0, Th_0, Go_0)</td>
<td>SC</td>
</tr>
<tr>
<td>DP</td>
<td>Pred'</td>
</tr>
<tr>
<td>Th_0</td>
<td>Pred</td>
</tr>
<tr>
<td></td>
<td>PP</td>
</tr>
<tr>
<td></td>
<td>Go_0</td>
</tr>
</tbody>
</table>

Mary gave a book to John

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V: Dative shift and $v^\circ$

- Larson derived the double object structure from the *to*-dative by a ‘passivization’ operation
- Analysis problematic with respect to a considerable amount of subtle semantic data
- Data suggests that the SC predicate in the double object construction is *have*
V: Dative shift and $v^o$

- Double object construction and *have*

1. Mary gave John a book
   Mary *CAUSE* John *HAVE* a book

- Evidence for: Oerhle’s generalization
V: Dative shift and $v^\circ$

- Double object construction and *have*

1. The editor sent the article to Sue.
2. The editor sent the article to Philadelphia.
3. The editor sent Sue the article.
4. ??The editor sent Philadelphia the article.
V: Dative shift and $v^\circ$

- Double object construction and *have*

1. Susan sent Harry to Max/down the hall/to his room/away.
2. Susan sent Max/*the hall/*his room/*away *Harry.*
3. Susan kicked the ball to Max/down the hall/out the window/upward..
4. Susan kicked Max/*the hall/*upward/*the window/the ball.
V: Dative shift and $v^\circ$

- Double object construction and *have*
  
  1. John taught the students French
  2. John taught French to the students
  3. I knitted this sweater for our baby.
  4. I knitted our baby this sweater.
V: Dative shift and v°

- Double object construction and have

1. The car has an engine.
2. #The car has a sweater.
3. (The car has a sweater in it)

4. Mary gave the car a new engine.
5. #Mary gave the car a sweater
V: Dative shift and $v^\circ$

- If the SC predicate is ‘have’ in the double object construction, then it obviously can’t be the verb root!

- The verb root must therefore be inserted at $v^\circ$ in the double object construction
V: Dative shift and $v°$

$\text{DP} \rightarrow \text{vP} \rightarrow \text{v'} \rightarrow v° \rightarrow \text{SC} \rightarrow \text{PredP} \rightarrow \text{DP}$

- Mary
- give
- the car
- Have $\emptyset$
- a new engine

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VI: The failure to alternate

- If Latinate verbs with a wS stress pattern are treated as multimorphemic in the mind of the speaker, what are the morphemes?
- Basically, they are what they originally were in Latin: a verb-particle construction with a prefixed particle
- The particle, as in English, is the SC predicate
VI: The failure to alternate

```
  vP
   \______
      v'
        \______
           v°
             \______
                CAUSE
                  \______
                     DP
                       \______
                           hibit
                           \     
                               her
                               \______
                                   Part
                                       \______
                                            PredP
                                              \______
                                                   SC
                                                       \______
                                                        PP
                                                            \______
                                                                to John
                                                              paintings
                          DP
                           \______
                              Mary
```

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VI: The failure to alternate

- Given this analysis of these Latinate verbs, consider what would happen if their SC predicate (ex-, e.g.) were replaced by another—a particle, a resultative predicate, or Have
- The verb root (-hibit), e.g., would be stranded, uninterpretable without its mate.
- Like trying to interpret caboodle without kit
VI: The failure to alternate

- A side note
- The analysis also predicts that verb-particle constructions won’t appear in the double object construction, which is generally true:
  1. Mary showed (*off) John her paintings.  
     (cf. Mary showed off her paintings)
  2. Mary passed (*around) the kids the potatoes.  
     (cf. Mary passed around the potatoes)
VII: Synchronic segmentation?

• *Synchronic motivations for decomposition*
  1. phonotactic clue (like *adhere*)
  2. phonological clue: (non-intital stress)
  3. familiar with the morpheme from elsewhere (like *deceive/receive/conceive, clarify...*)

Extant alternators and fail-to-alternators should met these criteria.
VII: Synchronic segmentation?

- Levin’s lists: Alternators

  *sending*: forward, hand, mail, post, send, ship, slip, smuggle, sneak

  *giving*: feed, give, lease, lend, loan, pass, pay, peddle, refund, render, rent, repay, sell, serve, trade

  *throwing*: bush, bat, bunt, catapult, chuck, flick, fling, flip, hit, hurl, kick, lob, pass, pitch, punt, shoot, shove, slam, slop, sling, throw, tip, toss

  *telling*: ask, cite, pose, preach, quote, read, relay, show, teach, tell, write

  *instrument*: cable, email, fax, modem, phone, radio, relay, semaphore(??) satellite (??), sign, signal, telephone, telecast, telegraph, telex, wire, wireless(??)
VII: Synchronic segmentation?

- Levin’s lists: Non-Alternators
  - address, administer, **broadcast**, convey, contribute, delegate, deliver, denounce, **demonstrate**, describe, donate, elucidate, exhibit, express, explain, **forfeit**, **illustrate**, introduce, **narrate**, portray, **proffer**, recite, recommend, refer, reimburse, remit, restore, return, **sacrifice**, submit, surrender, transfer, transport.
VII: Synchronic segmentation?

- Levin’s lists: Trouble!
  - advance, allocate, **allot**, assign, award, bequeath, cede, **concede**, extend, grant, guarantee, issue, leave, offer, owe, promise, **refuse**, vote, will, yield.
  - ‘Verbs of future having’
  - ??
Conclusions

• Verbs have a bipartite structure, even when they don’t look like they do.

• This structure can help us to understand the crosslinguistically correlated distribution of verb-particle, resutative and double object constructions.