Asymmetry in English multi-verb sequences

A corpus-based approach

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**V and V**

- *V and V* combination attracts little attention in narrowly syntactic approaches to English grammar.
Van Valin and LaPolla

- $V \text{ and } V$ is not discussed as such.

- It would be a special case of Conjunction Reduction which applies to many kinds of conjoined clauses:

  Robin drove out of Phoenix this morning and pro will arrive in Atlanta tomorrow.

Syntax of coordination is considered along with the lexical items that occur in coordination.

“Asymmetric Constructions” = coordination where \( V_1 \) and \( V_2 \) cannot be reversed without a change of meaning:

\[
I \text{ fell off the ladder and broke my leg.}
\]

Why study $V$ and $V$?

- **Symmetric** at the abstract syntactic level (*a la* Van Valin and LaPolla), but **asymmetric** at the lexical/semantic level (*a la* Huddleston and Pullum, Givon etc.).

- A possible locus of grammaticalization

  $i$-pile-la-be $i$-eno [Manam; Lichtenberk 2002]

  3sg.realis-speak-limiter-and 3sg.realis-lie

  ‘He kept talking.’
Research questions

- What kinds of verbs occur in the V and V construction?

- Are there special meanings/ grammaticalizations which arise in the V and V construction?

- How are the two verbs in the V and V construction integrated semantically?
Research questions

- What kinds of verbs occur in the V and V construction?
- Are there special meanings/grammaticalizations which arise in the V and V construction?
- How are the two verbs in the V and V construction integrated semantically?
Two corpora used in this study

- Wellington Corpus
  - New Zealand English
  - 1 million words written (WC)
  - 1 million words transcribed spoken (WSC)

- British National Corpus
  - British English
  - 90 million words written
  - 10 million words transcribed spoken
Wellington Corpus

- Large enough corpus to see high frequency patterns
- Small enough corpus to make an exhaustive study of $V$ and $V$
"V and V in the Wellington Corpus"

- We identified all *and* occurrences and then manually identified sequences of *V and V*
  - sing and dance

- We *allowed* verb particles
  - come in and wait

- We *excluded* the copula and auxiliaries
  - was and will be
## CLAWS Tagset

<table>
<thead>
<tr>
<th>VVI (infinitive)</th>
<th>will wait and see, wants to wait and see</th>
</tr>
</thead>
<tbody>
<tr>
<td>VVB (‘base’)</td>
<td>Wait and see! They go and wait</td>
</tr>
<tr>
<td>VVZ (3Sg Pres)</td>
<td>It comes and goes</td>
</tr>
<tr>
<td>VVD (Simple Past)</td>
<td>went and waited</td>
</tr>
<tr>
<td>VVG (verbal -ing)</td>
<td>coming and going</td>
</tr>
<tr>
<td>VVN (past participle)</td>
<td>come and gone</td>
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</table>
### CLAWS Tagset

<table>
<thead>
<tr>
<th></th>
<th>Written</th>
<th>Spoken</th>
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<tbody>
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<td>VVI (infinitive)</td>
<td></td>
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<td>VVG (-ing)</td>
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<tr>
<td>VVN (past participle)</td>
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</table>
## V *and* V in the Wellington Corpus

<table>
<thead>
<tr>
<th>Form</th>
<th>Written</th>
<th>Spoken</th>
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</thead>
<tbody>
<tr>
<td>VVI (infinitive)</td>
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<td>692</td>
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<tr>
<td>VVB (‘base’)</td>
<td>113</td>
<td>208</td>
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<tr>
<td>VVZ (3Sg Pres)</td>
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<tr>
<td>VVD (Simple Past)</td>
<td>325</td>
<td>267</td>
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<tr>
<td>VVG (-ing)</td>
<td>248</td>
<td>148</td>
</tr>
<tr>
<td>VVN (past participle)</td>
<td>271</td>
<td>98</td>
</tr>
</tbody>
</table>
Asymmetry in lemmas

Number of lemma types in $V_1$ and $V_2$ construction

<table>
<thead>
<tr>
<th></th>
<th>V1 ALL</th>
<th>V2 ALL</th>
<th>V1 WC</th>
<th>V2 WC</th>
<th>V1 WSC</th>
<th>V2 WSC</th>
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<tr>
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<td>712</td>
<td>828</td>
<td>587</td>
<td>658</td>
<td>275</td>
<td>370</td>
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</tbody>
</table>
Most frequent $V_1$ lemmas in written WC

- go, 54
- come, 80
- others, 1074
- get, 26
- turn, 24
- stop, 20
- stand, 18
- try, 18
- sit, 16
- read, 15
- say, 15
- smile, 15
Most frequent $V_1$ lemmas in spoken WSC

- go, 462
- come, 229
- try, 168
- get, 36
- sit, 28
- turn, 26
- ring, 21
- wait, 17
- stand, 15
- look, 14
- walk, 13
- stop, 13
- others, 433
$V_1$ in VVB, VVI, VVD in Wellington Corpus

- $V_1$ of VVB in WC
  - COME: 8
  - GO: 18
  - 87

- $V_1$ of VVB in WSC
  - COME: 35
  - GO: 98
  - 75

- $V_1$ of VVI in WC
  - COME: 31
  - GO: 18
  - 279

- $V_1$ of VVI in WSC
  - COME: 256
  - GO: 105
  - 331

- $V_1$ of VVD in WC
  - COME: 10
  - GO: 30
  - 285

- $V_1$ of VVD in WSC
  - COME: 87
  - GO: 55
  - 125
V₁ of VVB and VVB in BNC

BNC samples based on 20,000 random *and*.

No verb particles after V₁

Conversation (BNC) based on all (6,916) hits for *and* in Conversation sub-corpus of 4.2 million words
**Past Tense V₁ in Wellington Spoken Corpus**

Collostructional Strength: \(-\log\) (Fisher exact, 10), the higher the stronger. Coll.strength>3 \(\Rightarrow\) p<0.001.  

<table>
<thead>
<tr>
<th></th>
<th>Freq. in Corpus</th>
<th>Freq. in V and V</th>
<th>Relation</th>
<th>Collostructional Strength</th>
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<tbody>
<tr>
<td>1</td>
<td>went</td>
<td>1509</td>
<td>87</td>
<td>attraction</td>
</tr>
<tr>
<td>2</td>
<td>came</td>
<td>683</td>
<td>55</td>
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<tr>
<td>3</td>
<td>turned</td>
<td>91</td>
<td>11</td>
<td>attraction</td>
</tr>
<tr>
<td>4</td>
<td>stood</td>
<td>31</td>
<td>6</td>
<td>attraction</td>
</tr>
<tr>
<td>5</td>
<td>got_up</td>
<td>51</td>
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<td>attraction</td>
</tr>
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<td>6</td>
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<td>290</td>
<td>6</td>
<td>attraction</td>
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<tr>
<td>7</td>
<td>stopped</td>
<td>60</td>
<td>4</td>
<td>attraction</td>
</tr>
<tr>
<td>8</td>
<td>talked</td>
<td>81</td>
<td>4</td>
<td>attraction</td>
</tr>
<tr>
<td>9</td>
<td>rang</td>
<td>174</td>
<td>3</td>
<td>attraction</td>
</tr>
<tr>
<td>10</td>
<td>left</td>
<td>161</td>
<td>2</td>
<td>attraction</td>
</tr>
</tbody>
</table>
# Past Tense V₁ in Wellington Spoken Corpus

Collostructional Strength: $-\log$ (Fisher exact, 10), the higher the stronger. Coll.strength$>3 \Rightarrow p<0.001$.


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<thead>
<tr>
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<th>V1</th>
<th>Freq. in Corpus</th>
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<th>Collostructional Strength</th>
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<td>turned</td>
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<td>talked</td>
<td>81</td>
<td>4</td>
<td>attraction</td>
<td>8.09</td>
</tr>
<tr>
<td>9</td>
<td>rang</td>
<td>174</td>
<td>3</td>
<td>attraction</td>
<td>4.80</td>
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<td>left</td>
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<td>2</td>
<td>attraction</td>
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## Past Tense $V_1$ in Wellington Spoken Corpus

Collostructional Strength: $-\log$ (Fisher exact, 10), the higher the stronger. Coll.strength>3 $\Rightarrow$ $p<0.001$.  

<table>
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<tr>
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<th>Freq. in $V$ and $V$</th>
<th>Relation</th>
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<tbody>
<tr>
<td>1</td>
<td>went</td>
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<td>attraction</td>
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<td>6</td>
<td>attraction</td>
<td>15.60</td>
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<td>attraction</td>
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<td>left</td>
<td>161</td>
<td>2</td>
<td>attraction</td>
<td>3.05</td>
</tr>
</tbody>
</table>
### Past Tense V1 in Wellington Written Corpus

Collostructional Strength: $-\log$ (Fisher exact, 10), the higher the stronger. Coll.strength$>3 \Rightarrow p<0.001$.


<table>
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<tr>
<th>Word</th>
<th>Freq. in Corpus</th>
<th>Freq. in V and V</th>
<th>Relation</th>
<th>Collostructional Strength</th>
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<tbody>
<tr>
<td>1</td>
<td>came</td>
<td>563</td>
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<tr>
<td>2</td>
<td>turned</td>
<td>173</td>
<td>13</td>
<td>attraction</td>
</tr>
<tr>
<td>3</td>
<td>got_up</td>
<td>21</td>
<td>9</td>
<td>attraction</td>
</tr>
<tr>
<td>4</td>
<td>stood</td>
<td>140</td>
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<td>attraction</td>
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<td>5</td>
<td>went</td>
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<td>attraction</td>
</tr>
<tr>
<td>6</td>
<td>looked</td>
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<tr>
<td>8</td>
<td>sat</td>
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<td>attraction</td>
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<td>9</td>
<td>said</td>
<td>1998</td>
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<td>attraction</td>
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<td>10</td>
<td>saw</td>
<td>319</td>
<td>5</td>
<td>attraction</td>
</tr>
</tbody>
</table>
Most frequent V₂ lemmas in written WC

- go, 30
- see, 19
- take, 18
- say, 17
- talk, 16
- have, 15
- play, 15
- get, 14
- write, 12
- change, 10
- give, 10
- others, 1182
Most frequent V2 lemmas in spoken WSC

see, 107
get, 104
say, 86
have, 85
do, 73
go, 48
look, 25
talk, 25
tell, 21
made, 23
sit, 24
work, 17
others, 837
What kinds of verbs occur in the \textit{V and V} construction?

- \textbf{COME} and \textbf{GO} together account for more than half of the tokens in \textit{V}_1 position in the infinitival, base, and past tense forms in the Wellington Corpus.
- \textbf{GO} > \textbf{COME} as \textit{V}_1 in the \textit{spoken} corpus.
- \textbf{COME} > \textbf{GO} as \textit{V}_1 in the \textit{written} corpus.
- \textit{V}_1 position has fewer types of verb than \textit{V}_2 position.
COME and GO in Kalam (Papuan)

‘come’ and ‘go’ are the most common verbs in serial verb constructions in Kalam.

COME and GO in Kaititj (Arandic, Australia)

‘come’ and ‘go’ are the only verbs which enter into a serial verb construction with other verbs.

Probability vs. Categoricality

The **probabilistic** behaviour of GO and COME as conjoining verbs in English corresponds to

The **categorical** behaviour of GO and COME in the serial verb construction of some other languages
**V and V**

- What kinds of verbs occur in the V *and* V construction?
- Are there special meanings/grammaticalizations which arise in the V *and* V construction?
- How are V1 and V2 integrated semantically?
then you **try and comprehend** it in maori eh

for years basically he had to **try and convince** the politicians

i might want to **try and catch up with him again**
Distribution of *try and V* in Wellington Corpus

<table>
<thead>
<tr>
<th></th>
<th>Written</th>
<th>Spoken</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>try and VVI</em></td>
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<td>130</td>
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<tr>
<td><em>try and VVB</em></td>
<td>2</td>
<td>36</td>
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<tr>
<td><em>trying and VVG</em></td>
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<td>1*</td>
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<tr>
<td><em>tries and VVZ</em></td>
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<td>0</td>
</tr>
<tr>
<td><em>tried and VVD</em></td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

* Ted kept trying and scraping all this paint off the inside
Usage of *try and V*

- The distribution of the combination is skewed across inflectional categories, i.e., it has a defective paradigm in this construction.
- More frequent in spoken than in written corpus.
- The meaning of the whole is unified.
- *try and V* is grammaticalized.
What kinds of verbs occur in the V and V construction?

Are there special meanings/grammaticalizations which arise in the V and V construction?

How are $V_1$ and $V_2$ integrated semantically?
Three types of GO and V

GO and TELL

GO and VISIT

GO and PROVE ME WRONG (Colloquial)
Three types of GO and V

**GO and TELL**

**GO and VISIT**

**GO and PROVE ME WRONG (Colloquial)**
GO

Detailed view*

Schematic view

GO and TELL (schematic)

GO and TELL in Spatio-temporal Domain
GO and TELL (schematic)

GO and TELL in Intentional Domain
Complex matrix of GO *and* TELL (schematic)

GO *and* TELL in Spatio-temporal and Intentional Domains
Cf. complex matrix of *knife*

---

GO and Purposive marking

- Fa d’Ambu (Portuguese-based creole, Equatorial Guinea)
  *ba* ‘go’ > ‘(in order) to’

- Shona (Bantu, Zimbabwe)
  *(ku-)*enda ‘to go’ > -ndo- purpose marker

- Rama (Chibchan, Nicaragua, virtually extinct)
  *bang* ‘go’ > -bang subordinating conjunction of goal, purpose

Heine, B. and T. Kuteva (1999, ms.) *Common grammaticalization processes in the languages of the world.*
Three types of GO and V

GO and TELL

GO and VISIT

GO and PROVE ME WRONG (Colloquial)
Triangle
Hypotenuse
“Profile” and “Base”

Profile = hypotenuse

Base = whole triangle

Visit

- *visit*. v.t. 1. to go to see (a person, place, etc.) in the way of friendship, ceremony, duty, business, curiosity or the like. [The Macquarie Dictionary]

- *visit*. 1. v.t. go or come to see (person, place, etc. or abs.) as act of friendship or ceremony, on business or for a purpose [Concise Oxford Dictionary]
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- visit. v.t. 1. to go to see (a person, place, etc.) in the way of friendship, ceremony, duty, business, curiosity or the like. [The Macquarie Dictionary]

- visit. 1. v.t. go or come to see (person, place, etc. or abstract) as act of friendship or ceremony, on business or for a purpose [Concise Oxford Dictionary]
yes but i go all over cambridge visit the old haunts go out to our

cos you know she goes up to auckland to visit her father a all the time and he can give her p

yeah all i can do i'm going going in to visit rangi see rangi yeah oh that's

anything you know there's no popping around to visit somebody in the evening

we come back to our waka and then paddle down to moehau and visit all the other marae in waima
GO and VISIT (schematic)

GO and VISIT
in Spatio-temporal Domain
Complex matrix of GO and VISIT (schematic)

GO and VISIT in Spatio-temporal and Intentional Domains
Priori motion implied by $V_2$

- they go and pick her up at ten thirty
- they go and see a solicitor
- The team prays for two hours before they go and return later to pray again.
Three types of GO and V

GO and TELL

GO and VISIT

GO and PROVE ME WRONG (Colloquial)
Colloquial style

1. so i i went and told this guy
2. the silly council went and sprayed the side of the banks
3. so she went and moved us up to new plymouth
4. and then a day later he went and wrote this poem called thine
5. go on go and prove me wrong now
6. the punters they went and paid forty odd dollars to win
Colloquial **GO and PROVE ME WRONG**

(schematic)
Complex matrix of colloquial GO and PROVE ME WRONG (schematic)

GO and PROVE ME WRONG in Spatio-temporal and Intentional Domains
Motion is present in varying degrees
Always purposeful human motion in the Wellington Corpus
Exhibits a range in types of semantic integration
Summary

V and V is asymmetrical in the types of verbs that occur as $V_1$ and $V_2$ (quite apart from any “reversal of predicates” test *a la* Huddleston and Pullum)

MOTION verbs account for most instances of $V_1$ and in infinitival, base, and past tense forms
The most common event schema encoded by $V$ and $V$ is

MOTION ALONG A PATH + SUBSEQUENT ACTIVITY AT END OF PATH
Summary (cont.)

V and V is worthy of study:

- frequent, therefore a large amount of data can be observed
- a range of integration types (even when the focus is just on GO and V)
- completed and emergent grammaticalizations are evident