Verbs describing routines facilitate object omission

Lelia Glass
September 2020
Which verbs, & why?

- **Which transitive verbs can omit their** (non-anaphoric) **objects** to what extent, **and why**?
  

- **Near-synonyms differ! Is it random?**
  - *I ate*** ___ vs. *?I devoured*** ___
  - *I raked*** ___ vs. *?I bagged*** ___
  - *I wrote*** ___ vs. *?I penned*** ___
I argue that a verb is more likely to omit its object if...

...the verb describes a routine

• ... a conventional action in a community (Lambrecht & Lemoine 2005, Ruppenhofer & Michaelis 2010; Martí 2015; Levin & Rappaport Hovav 2014)
• Eat — routine for everyone
• Lift — more routine for strength trainers
• Taste — more routine for vintners
• Polysemous; when a verb describes a routine, object can be omitted
• Omission is more likely in communities where a verb is more strongly associated with a routine
• Corpus study - verbs omit objects in subreddits where they describe routines
• Experiments - in contexts where a speaker pursues an action routinely, their use of an object-omitting form is considered more likely

“Auburn can’t catch ___.” (r/football)

“How long have you been lifting ___?” (r/xxfitness)

“Wait until you’ve reached terminal gravity before bottling ____.” (r/Homebrewing)
Language, down to its structure, is fundamentally social!

**Significance**

- Offers **new data** in the debate about object omission
- Offers a **new method** — comparison across subreddits — to explore how community-specific conventions shape language use (complemented by experiments!)
- Explains why object omission may **vary across speakers**; made predictions about where it will emerge
- Language is social!: The **syntax** of verbs is shaped by the (community-specific) **routines** of the **people** who use those verbs
Which verbs, & why?

• Which **transitive verbs can omit their** (non-anaphoric) **objects** to what extent, **and why**?
  

• Near-synonyms differ! Is it random?
  
  • *I ate ____ vs. ?I devoured ____*
  • *I raked ____ vs. ?I bagged ____*
  • *I wrote ____ vs. ?I penned ____*
It’s suggested that a verb is more likely to omit its object if….

1. the verb provides more info about missing object (“selection”).
   - *Eat* requires/“selects” food objects — so missing object is recoverable
     - *(devour* takes more diverse objects)*
   - But, no association between a verb’s “selection” and its percent of object-omitting uses in my study of AskReddit

*(contra Resnik 1993)*
It’s suggested that a verb is more likely to omit its object if...

2. ... the verb is more frequent.
   - *Eat* is more frequent than *devour*
     - *I ate _____* vs. *?I devoured _____*.
   - But, no association between a verb’s frequency and its percent of object-omitting uses in my study of AskReddit
     (contra Goldberg 2005)
I argue that a verb is more likely to omit its object if….

... the verb describes a routine

- ... conventional actions in a community (Lambrecht & Lemoine 2005, Ruppenhofer & Michaelis 2010; Martí 2015; Levin & Rappaport Hovav 2014)
- *Eat* — routine for everyone
- *Lift* — more routine for strength trainers
- *Taste* — more routine for vintners
- Polysemous; when a verb describes a routine, object can be omitted
- Omission is more likely in communities where a verb is more strongly associated with a routine
- **Corpus study** - verbs omit objects in subreddits where they describe routines
- **Experiments** - in contexts where a speaker pursues an action routinely, their use of an object-omitting form is considered more likely

“*Auburn can’t catch ___.*” (r/football)

“*How long have you been lifting ___?*” (r/xxfitness)

“*Wait until you’ve reached terminal gravity before bottling ____.*” (r/Homebrewing)
Because I tore my ACL **lifting** a box. (200)

if you were **lifting** ____ correctly. (17)

I like **lifting** heavy things. (347)

How long have you been **lifting** ____? (139)

---

**reddit corpus study**

- Found uses of transitive verbs with and without objects in various subreddits
- Used a dependency parser (Honnibal & Johnson 2015) plus laborious hand-correction
- Found verbs that omit objects significantly (Fisher Test) more often in “specialist” vs. “generalist” subreddits
  - **Lift** omits object more often in fitness subreddits vs. generalist ones!
- Total of 134 verbs across 15 specialties omitting objects significantly more often in that specialty’s subreddits
In the subreddits where a verb more-often omits its object, it occurs significantly more frequently with more consistent objects (Wilcoxon Test) — what we’d expect if the verb is more strongly associated with a routine in those subreddits.

**subreddits** | **verbs**
---|---
**sports** | nfl, nba, soccer, Baseball, cricket, Basketball (...) | bat, block, catch, execute, hold, shoot (...)
**strength** | bodybuilding, xxfitness, strength_training (...) | cut, eat, gain, **lift**, press, push, stretch (...)
**drinks** | Homebrewing, beer, tea, wine, CraftBeer | age, boil, bottle, chill, clean, cool, filter (...)

An excerpt; there’s more!

• “Auburn can’t catch ___.” (football)
• “How long have you been lifting ___?” (xxfitness)
• “Wait until you’ve reached terminal gravity before bottling ____.” (Homebrewing)
### Exp. 1: routine vs. selection

Your friend Helen describes her day:

<table>
<thead>
<tr>
<th>low-selection</th>
<th>high-selection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>routine</strong></td>
<td></td>
</tr>
<tr>
<td>I worked at my homestead. Just like I always do, <strong>I crushed some tomatoes</strong>. Then I made sauce.</td>
<td>I worked at my family business. Just like I always do, <strong>I repaid some loans</strong>. Then I worked on the budget.</td>
</tr>
<tr>
<td><strong>-routine</strong></td>
<td></td>
</tr>
<tr>
<td>I visited a friend’s job. Just because people wanted me to try it, <strong>I crushed some tomatoes</strong>. Then I took some photos.</td>
<td>I visited a friend’s job. Just because people wanted me to try it, <strong>I repaid some loans</strong>. Then I went to see my aunt.</td>
</tr>
</tbody>
</table>

The next time Helen tells you about {crushing tomatoes/repaying loans} the day before, how likely is she to say:

“I crushed/repaid yesterday.” ★★★★★★

*Crush appears with diverse objects in corpus data (low selection); repay consistently takes money objects (high selection)! (Both have moderate frequency.)*

In the high-routine condition, the speaker conveys that they pursue this action regularly at a workplace where it is institutionalized!
### Exp.2: routine vs. frequency

Your friend Helen describes her day:

<table>
<thead>
<tr>
<th>low-freq.</th>
<th>high-freq.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>+routine</strong></td>
<td></td>
</tr>
<tr>
<td>I worked at my poultry farm. Just like I always do, <strong>I butchered some chickens</strong>. Then I gathered some eggs.</td>
<td>I worked at my sales agency. Just like I always do, <strong>I closed some deals</strong>. Then I called some clients.</td>
</tr>
<tr>
<td><strong>-routine</strong></td>
<td></td>
</tr>
<tr>
<td>I visited a friend’s job. Just because people wanted me to try it, <strong>I butchered some chickens</strong>. Then I went for a walk.</td>
<td>I visited a friend’s job. Just because people wanted me to try it, <strong>I closed some deals</strong>. Then I picked up my kids.</td>
</tr>
</tbody>
</table>

The next time Helen tells you about {butchering chickens/closing deals} the day before, how likely is she to say:

“I butchered/closed yesterday.” ☆☆☆☆☆
Results

- 8 items, 10 fillers, 150 participants/exp on MTurk
- Graphs plot mixed-effects linear regression’s prediction (effect replicates in \textit{ordinal} regression)
- High-\textit{routine} items have higher ratings; nothing else significant
Analysis

- Object-omitting uses of transitive verbs are analyzed as intransitive activity verbs describing a **routine** (thus, polysemous)
  - *Alice lifted*: ∃e[\(lift(e) \land agent(e, Alice)\)]

- Rather than recovering any missing object, the hearer’s task is to infer the **routine** described by the verb

- No semantic object, but one might or might not be inferred conceptually depending on the **routine**
  - (explaining why omitted objects vary widely in how they’d be paraphrased)

- This analysis (from Levin & Rappaport Hovav 2014) is not new — but the evidence for it is
Significance

- Offers **new data** in the debate about object omission
- Offers a **new method** — comparison across subreddits — to explore how community-specific conventions shape language use (complemented by experiments!)
- Explains why object omission may **vary across speakers**; made predictions about where it will emerge
- **Language is social!**: The *syntax* of verbs is shaped by the (community-specific) **routines** of the *people* who use those verbs
Thanks to Beth Levin, Louise McNally, & James Collins for comments; Yuval Pinter for Reddit data; & Eddy Chiao & Jonathan Jiang for work as research assistants on part of this project.

For references & more information, please see the manuscript on my website (www.leliaglass.com)
References


References


References


References


References


