

Reconsidering the locative syntax of experiencers in English

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Psych-verbs: Overview

Crosslinguistically, psychological (“psych”) verbs generally fall into two broad classes:

- Subject experiencer verbs: *fear, love, hate, admire, ...*
- Non-subject experiencer verbs: *frighten, please, annoy, appeal to, grate on, ...*

- | | |
|---|------------|
| (1) a. Indiana Jones <u>fears</u> snakes. | [Subj-Exp] |
| b. Snakes <u>frighten</u> Indiana Jones. | [Obj-Exp] |
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- non-subject experiencers are grammatically marked in many languages
(e.g. Haspelmath (2001))
- but... no obvious marking on objects of *frighten* verbs in English
→ similar to objects of transitive verbs e.g. *hit, break*

Peculiar properties of English Obj-Exp verbs¹

- Variably used to denote on-going emotional states and/or dynamic events & changes of state
- Often said to exhibit unusual behavior with respect to...
 - anaphor binding
 - nominalization
 - compounding
 - passivization
 - island effects
 - ...

¹Alexiadou et al. (2014); Arad (1998); Belletti & Rizzi (1988); Bouchard (1995); Croft (1993); Dowty (1991); Grimshaw (1990); Jackendoff (2007); Pesetsky (1995); Rozwadowska (2005); van Gelderen (2014); Van Voorst (1992); Verhoeven (2010),...

Explanations

Accounts of Obj-Exp verb behavior variously appeal to:

- their aspectual flexibility between stative and eventive readings²
 - once we account for this variability, Obj-Exp verbs are essentially similar to other prototypical transitive verbs (*break*)
 - Transitive account
- the special nature of experiencer arguments³
 - experiencer objects are not direct arguments of their verbs
 - Locative/Oblique account

²e.g. Alexiadou & Iordachioia (2014), Arad (1998), Pesetsky (1995)

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This talk:

- Provide **qualitative corpus evidence** and **quantitative experimental evidence** against the Locative/Oblique status of *frighten* verb experiencers
- Facts suggest English *frighten* verbs are structurally Transitive (like *break*, *kill*, etc.)

²e.g. Alexiadou & Iordachioaia (2014), Arad (1998), Pesetsky (1995)

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Locative/Oblique account of object experiencers

The basic intuition:⁴

1. Experiencers are mental locations, that is, locatives.
2. All object experiencers are oblique (or dative).

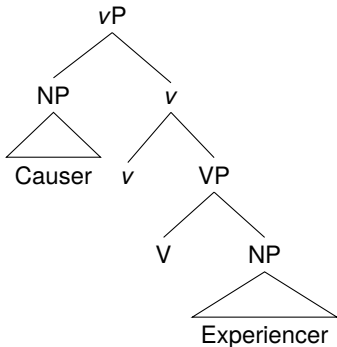
Crucial aspects:

- a **universal** fact about language
- this is an explicitly **syntactic** hypothesis
- non-subject experiencers (E) and goal/locative/recipient (G/L/R) arguments are **structurally equivalent**

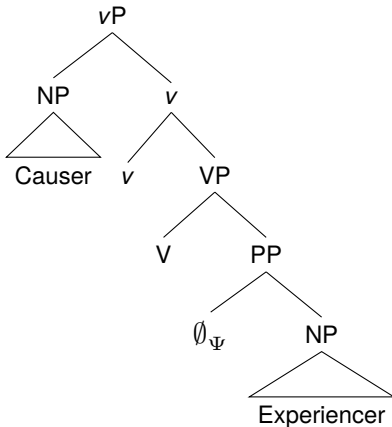
⁴Landau (2010b:6)

Object vs. Oblique experiencers

a. transitive structure

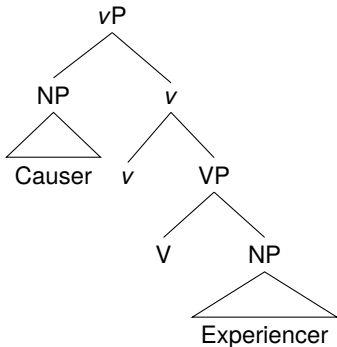


b. locative/oblique structure

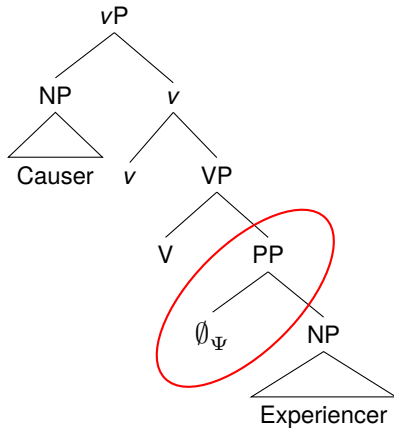


Object vs. Oblique experiencers

a. transitive structure



b. locative/oblique structure



Inferential evidence: The “duck test”

“If it looks like a duck, swims like a duck, and quacks like a duck, then it probably is a duck.”



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- ➡ If Obj-Exp verbs behave grammatically like overt obliques/locatives, then the two probably share similar structures



Inferential evidence: The “duck test”

“If it looks like a duck, swims like a duck, and quacks like a duck, then it probably is a duck.”

- ➡ If Obj-Exp verbs behave grammatically like overt obliques/locatives, then the two probably share similar structures
- ➡ Conversely, if Obj-Exp verbs behave grammatically like typical transitive verbs, then *they* probably share similar structures



Empirical tests

Landau considers several simple tests of “core psych properties”, to which I add 2 more...

1. secondary predicates
2. synthetic compounding
3. middle formation
4. island effects

Examine the behavior of Obj-Exp verbs in naturalistic corpora (COCA, Google) and compare it to that of G/L/R verbs and prototypical transitive verbs

Test 1: Secondary predicates

Argument: Resultative constructions (2) cannot be predicated of G/L/R arguments (3–4).⁵

➡ therefore resultative constructions should not be able to be predicated of E arguments either

(2) It smashed the lobster **flatter than a leper joke and twice as tasteless**.

(COCA)

(3) a. *I gave a treat to the kids **happy**.

b. *I tracked mud on the rug **filthy**.

(4) a. I hammered the metal **flat**.

b. *I hammered on the metal **flat**.

⁵Simpson (1989); Landau (2010a)

Test 1: Secondary predicates

- (5) a. she knew that he did so have that much scratch and that she
scared him pale (COCA)
- b. the vibration and noise scare you awake (COCA)
- c. the pure sensation of cupping your hand lazily around the
pelvic curve of a perfect hip stunned you immobile and nearly
into tears (COCA)
- (6) a. I hardly ever put a novel down, but this one bored me into it.
(Google)
- b. The lines of the pose are what fascinated me into making the
painting. (Google)
- c. it takes something very special to amaze me into giving them
a 9 or 10 (Google)

Test 1: Summary

- (Direct) Object Es do allow resultatives, but Oblique Es do not
- **Object Es behave more like transitive direct objects**

(7) David Bowie **annoyed** me into being a better music fan (Google)

- (8) a. *David Bowie **niggled at** me into being a better music fan
b. *David Bowie **grated on** me into being a better music fan
- (9) a. *The soft music appealed to me relaxed.
b. *The soft music **appealed to** me into a state of complete relaxation.

Test 2: Synthetic compounds

Argument: G/L/R arguments cannot form synthetic compounds, therefore neither should E arguments.⁶

- (10) a. a god-fearing man, a fun-loving teenager, a cat-hating jerk
b. *a man-frightening god, *a parent-appalling exploit, *a man-annoying cat
c. *friend-giving (of gifts), *a parent-dependending child

- (11) Worse yet, a gift-giving friend or relative may also be unaware of that special product. (Google)

⁶Baker (1997); Grimshaw (1990)

Test 2: Synthetic compounds

- (12) McDonald's bravely speaks out against PETA's **child-frightening** tactics. (Google)
- (13) This girl comes from the **child-scaring** school of clownistry. (Google)
- (14) I am going to give you a picture show of all the **child-amusing** things I thought to pack (Google)
- (15) Find **Teen Annoying** Sounds for your BlackBerry Smartphone. (Google)
- (16) Ah, the **parent-terrifying** 1950 Nash. Parent-terrifying because the front seat will recline to meet the back seat (Google)

Test 2: Synthetic compounds

- (17) Maple Mustard [Man Pleasing](#) Chicken (Google)
- (18) A [Husband Pleasing](#) Dessert! (Google)
- (19) Find recipes for [Kid-Pleasing](#) Spaghetti and other Baked Pasta recipes. (Google)
- (20) [crowd-pleasing](#) comedies (Google)
- (21) the [audience-pleasing](#) mix of action, romance and comedy is right in his wheelhouse. (Google)
- (22) a colleague tells me that a recent study of the [parent-terrifying](#) phenomenon of “sexting” found...

Test 2: Summary

- E arguments *can* form synthetic compounds, but G/L/R arguments *do not*
- in this respect, **E arguments behave like other transitive direct objects**:

- (23)
- | | |
|---|----------|
| a. Little Pete, the fire-eating dwarf | (COCA) |
| b. How to make a rod bending jig. | (Google) |
| c. Even a dart-throwing chimpanzee can select a portfolio that performs as well as one chosen by the experts | (COCA) |
| d. There is a nasty, wheel-wrenching, tire-shredding pothole on Pohick Road | (COCA) |

Test 3: Middle constructions

Argument: Typical transitive verbs readily form middles, while G/L/R verbs are unacceptable in middles (24)

➡ therefore *frighten* verbs should not be able to form middles either

- (24)
- a. ??Trusted charities donate (to) easily.
 - b. ??My sister doesn't confide (in) easily enough.
 - c. ??Terry relies on easily.

Test 3: Middle constructions

- (25) 12-year olds. They **scare easy**. (Google)
- (26) If you **depress easily**, don't read!!! (Google)
- (27) You fascinate him, and Sleet doesn't **fascinate easily**. (Google)
- (28) Good thing I don't **worry easily**, eh, red sox? (Google)
- (29) Us teenage poets **depress easily**. (COCA)
- (30) I don't **please easily**, but I was very happy with the Cheese Steak Shop. (Google)
- (31) In other words, as a society we **bore easily**,... (COCA)

Test 3: Summary

- **object E middles contrast with overt G/L/R middles and behave like other transitives**

- (32) a. Wet hair can **break easily** (COCA)
- b. Antique rippled-glass windows – like those in my living room – are lovely, but old panes **scratch easily**. (COCA)
- c. Dark panels that are sealed with Ardex...look good but they **scuff easily** (COCA)

- middle formation is more flexible than often assumed⁷
 - frequency/felicity of *frighten*-verb middles can be attributed to their prototypical transitivity
- in (very) rare cases, G/L/R *may* form middles?

⁷ e.g. Davidse & Olivier (2008)

Test 4: Island effects

E objects are islands to extraction⁸

- (33) a. Who_i did you **tease** the sister of ___i?
b. ??Who_i did your behavior **bother** the sister of ___i?

Hard to test using only corpus data

Conducted acceptability rating experiments:

- 100 online participants (AMT) rated 24 sentences
- 7 point naturalness scale (7 = perfectly natural, 1 = extremely unnatural)

⁸Baker (1997, Johnson (1992)

Test 4: Island effects

Argument 4:

Extraction from E arguments is less acceptable than extraction from other transitive objects⁹

- (34) a. ??Which company does international unrest frighten the president of?
b. Which company does the international community fear the president of?

➡ different levels of (un)acceptability imply different structure

⁹Baker (1997); Johnson (1992)

Island effects: Judgment study

Compare Obj-Exp verbs to other non-psych transitive verbs

Extraction from Direct Object

- (35) a. Which neighborhood_{*i*} did the construction annoy [residents of ____{*i*}] the most? [psych]
b. Which neighborhood_{*i*} did the construction benefit [residents of ____{*i*}] the most? [non-psych]

Extraction from CP island

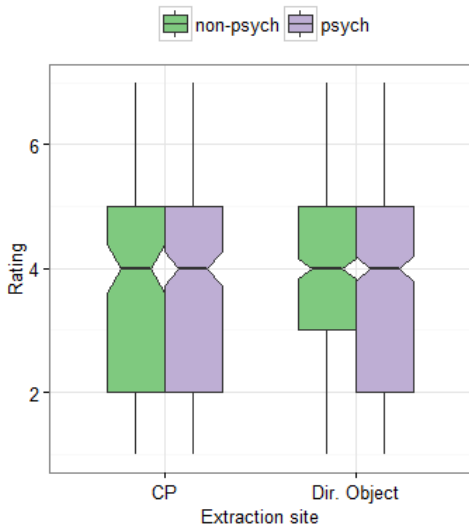
- (36) a. Which students_{*i*} did you wonder [whether the teacher upset ____{*i*}]? [psych]
b. Which students_{*i*} did you wonder [whether the teacher punished ____{*i*}]? [non-psych]

Island effects: Judgment study

Results of ordered logistic mixed model¹⁰

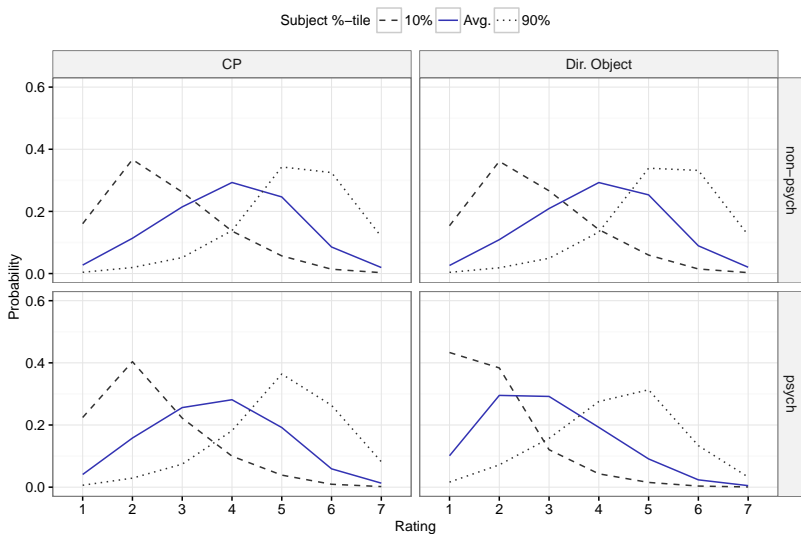
No significant effects of...

- Verb type:
($\beta = -0.41$, $SE = 0.55$, $p = 0.46$)
- Condition:
($\beta = 0.05$, $SE = 0.35$, $p = 0.89$)
- V.T. x Cond. interaction:
($\beta = -1.02$, $SE = 0.57$, $p = 0.07$)



¹⁰R package ordinal (Christensen 2015)

Island effects: Judgment study



Conclusion

- Considered 2 competing models of Object-experiencer verb structure in English:
 - Transitive model
 - Locative/Oblique model
- In four separate test cases, **Obj-Exp verbs behaved grammatically more similar to prototypical transitives** (*break*) than verbs bearing overt G/L/R arguments (*give*, *appeal to*)
- Given the lack of overt marking on E objects, **the more parsimonious explanation is that E objects should be modeled as direct objects of typical transitive verbs**

Future directions

- Closer examination of these data and phenomena
 - What factors render different cases more/less common/acceptable?
- Other psych phenomena to be investigated:
 - binding
 - nominalization
 - passivization
 - agentivity effects
 - ...
- Explore more languages in detail (English an outlier?)

Thank you!

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