

A saucerful of *finds*

⚡ Content warning: work in progress ⚡

Natasha Korotkova (Utrecht) & Pranav Anand (UC Santa Cruz)

Polysemy Across Categories @ ESSLLI 37

August 14, 2026

Project supported by NWO (grant 406.XS.25.01.105; PI Korotkova)



► Empirical focus: distinct(-ish) senses of English *find*

- (1)
- a. DP: *find the needle in a haystack*
 - b. small clause: *find hobbits adorable*
 - c. *find that the temperature difference between the two hemispheres has grown since 1980*
- Central Q: do they have anything in common and what could it be? $\sqrt{\text{find}}$?
- Central claim: shared causal skeleton, predicting which meaning components are foregrounded/backgrounded
- Key data: event structure (aspect, evidence) + actuality/factivity



Pranav Anand
(UC Santa Cruz)

Our background I

- ▶ Polysemy/polyfunctionality/underspecification (in our corner of semantics)
 - ▶ Elements that show up in questions, disjunctions, conditionals (Inquisitive Semantics; Mascarenhas 2009; Ciardelli et al. 2019)
 - ▶ Elements that express possibility/necessity across modal flavors (modality in natural language; Kratzer 2012; Steinert-Threlkeld et al. 2023)
- ▶ Our interest: attitudes and attitude predicates (*believe, know, want*)
 - ▶ Pioneering work on the nature of meaning (Hintikka 1969)
 - ▶ Foundation of belief-desire-intention psychology

- ▶ Recent research on the fine-grained semantics of attitude predicates
 - ▶ Substantial empirical coverage (Georgian, Koryak, Mandarin Chinese, Navajo, Nez Perce, Polish, Slovene, Turkish, a.o.)
 - ▶ Particular attention to the interaction between verb meaning and the syntactic shape of the complement (mood choice, complement selection, syntax-driven meaning alternations)
 - ▶ Creation of several databases annotated for syntactic and semantic features (An and White 2020; Özyıldız et al. 2023; Stiebels et al. 2024; White et al. 2018)
- ▶ Less attention: the extent to which the linguistic behavior of attitude predicates reflects the underlying differences in the attitudes they describe (though see Grano 2017 on verbs like ‘intend’ and Higginbotham 2003; Liefke 2023 on memory predicates)

Our background III

- ▶ Overarching goal: understand natural classes within attitudes of knowledge and belief
 - ▶ “On the plurality of verbs”
<https://natasha-korotkova.github.io/teaching/ESSLLI2026/>
 - ▶ Series of papers (written and unwritten)
- ▶ Inspiration: classical work on verb classes within lexical semantics
- ▶ Polysemy in research on attitude predicates
 - ▶ Meaning alternations (*believe/intend*, Jackendoff 1985; *think/know*, Bondarenko 2023; Özyıldız 2017 ...)
 - ▶ Argument structure, DP complementation (Bondarenko 2020; Djärv 2023)
- ▶ We (=the field) could use more research on polysemy in the attitudinal domain!

Setting the stage

Varieties of *find* I

QUOTATIONS

☐ Hide all quotations

CONTENTS

I. To come upon by chance or in the course of events.

▼ I.1.

▼ I.1.a. To become aware of, come into contact with, or get...

I.1.a.i. transitive. With simple object. Also intransitive with...

I.1.a.ii. transitive. With object and complement (adjective...

I.1.b. transitive. In passive. To be identified as present; to...

I.1.c. transitive. To come across in written accounts. Frequently...

I.1.d. transitive. To come upon, begin acquaintance with or...

► I.2. transitive. To discover the whereabouts of (something or...

I.3. transitive. To meet with, come to have or experience...

► I.4. To discover or perceive on inspection or consideration; to...

► I.5. transitive. To discover, come to the

I. To come upon by chance or in the course of events.

I.1.a. To become aware of, come into contact with, or get possession of, in the course of some activity; to come across, meet with, light upon, discover.

I.1.a.i. *transitive*. With simple object. Also *intransitive* with object understood or implied.

Old

eOE Nele hio [sc. the lion] forlætan libbendes wuht..., nimð eall þæt hio *find*.
Metres of Boethius (2009) xiii. 34 ...

OE Ic ða ðæs wælnes..grundhyrde *fond*.
Beowulf (2008) 2136 ...

a1200 Foure þinges..man *find* ilome on gerde þat he be riht and smal and long and s...
MS Trinity Cambr. in R. Morris, *Old English Homilies* (1873) 2nd Series 219 ...

c1325 He wende sone to þe lond of yrlonde & wan it al clene to him & al þat he *vonde*...
(c1300) [*a1400 MS Trinity Cambr. fond, c1425 MS Harley wond*].
Chronicle of Robert of Gloucester (MS Caligula) 3726 ...
[Composed c1300]

1340 Yef þe *vinst* and naȝt ne yelst: þou hit stelst.
Ayenbite (1866) 38 ...

a1400 Quen adam abel bodi *fand* For soru on fote moght he noght stand.
(a1325) *Cursor Mundi* (MS Vespasian) I. 1183 ...
[Composed a1325]

1490 Men shold *fynde* in the worlde but fewe suche knyghtes as he is one.

Varieties of *find* II① locative *find*: DP complements

- ▶ goal-directed *find the keys*
- ▶ lucky/non-goal-directed *find happiness*

② *find* + small clause

- ▶ subjective *find*: *find hobbits adorable*
- ▶ judicial *find*: *find him innocent*

③ *find* + to-infinitive: *find the claim to be false* (not discussed)④ *find* + declarative CP

- ▶ conclusion *find*: goal-directed conclusion-from-investigation *find*
- ▶ learning *find*: lucky/non-goal-directed learning-from-experience *find*

Varieties of *find* III

► Possibly, two additional *finds*

① **find + small clause**, temporary/stage-level predicates

our hunch: this is the locative *find*, the predicate is a depictive on the noun (otherwise we expect it to take episodic bare infinitives)

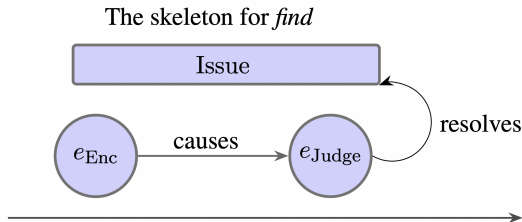
- (2)
- a. We found a starman waiting in the sky.
 - b. In the morning, venturing downstairs for breakfast, he was surprised to find the restaurant open, the waiters affable, the eggs actual, the coffee hot, but syrupy.
(John Updike, *Bech: A Book*, “The Bulgarian Poetess”)

② **mathematical *find* + concealed question DP**, ‘determine’, ‘calculate’ (we’ll come back to q-embedding)

- (3)
- a. I am completely stumped on how to “find the slope, if it exists, of the line”
 - b. I know how to find the domain of a function without a graph, but how do you find the range?
 - c. How to find the volume of a sphere (web)

- ▶ What was said:
 - ▶ **locative *find***: discussed in the literature on lexical aspect as a representative of achievements (Malink 2008; Martin 2011; Piñón 1997; Piñón 2008)
 - ▶ **subjective *find***: discussed in the literature on subjective language as a key representative of subjective attitudes (Sæbø 2009; Stephenson 2007; Kennedy and Willer 2016)
- ▶ No connection between these two strands
- ▶ No discussion of other *finds* (except Bouchard 2012, who incorrectly treats *find that* as obligatorily subjective in English)
- ▶ No understanding of how distinct *finds* connect, if at all

- ▶ Novel observations about shared linguistic properties
 - ▶ lexical aspect: achievement predicates (albeit of different types)
 - ▶ event structure: encounter
 - ▶ actuality/factivity
 - ▶ two varieties for each complement type
- ▶ Proposal for common semantic core: events of encounter and judgment



Constraint on Foregrounding: (For achievements), within a causal network n , the most causally downstream event is foregrounded. All causally upstream events are backgrounded. (based on Abrusán 2011, 2016 on soft triggers, including factives)

Core data

The locative *find* I

- Aspectual profile: achievements (Malink 2008; Piñón 1997; Piñon 2008; Martin 2011)

- ① W/ process/goal-direction: *find the keys*
- ② W/out process/accidental: *find a key/happiness/a treasure chest*

- (4) a. #*For*-adverbials: [telicity]
 #For an instant/split second, we found the keys/a key/happiness/a treasure chest.
- b. #*Finish*: [non-durativity]
 #We finished finding the keys/a key/happiness/a treasure chest.

The locative *find* II

► Contrasts based on goals/process

- ① **Lucky *find***: no process
- ② **Goal-directed *find***: presupposes preparatory process & volition/intention & presence of issue/QUD to be resolved (terminology galore: progressive/durative/right-boundary/culmination achievements, see overview in Gyarmathy 2015; ≠ accomplishments, which assert the process)

- | | |
|--|--|
| <p>(5) Natasha didn't find the keys.
→ Natasha was searching.
→ QUD: object location</p> | <p>(9) ?Natasha didn't find a key.
↗ Natasha was searching.
↗ QUD: object location</p> |
| <p>(6) Natasha almost found the keys.
✓scalar reading: was searching, didn't succeed
✓counterfactual reading: didn't even look</p> | <p>(10) Natasha almost found a key.
#scalar: was searching, didn't succeed
✓counterfactual: didn't even look</p> |
| <p>(7) ✓ Natasha tried to find the keys.</p> | <p>(11) ??Natasha tried to find a key.</p> |
| <p>(8) ??Natasha was finding the keys. (ok in Indian English, same root for <i>find</i>/<i>search</i>)</p> | <p>(12) ??Natasha was finding a key.</p> |

The locative *find* III► Encounter/evidence restrictions: locative *find* $\neq$ *locate*(13) **Direct encounter:**

✓ *You examine triangulation data.* / ✓ *You see a bunch of fallen trees.*

Eliminative reasoning:

The earthquake can only be in three locations, you excluded the first two.

We've found the earthquake epicenter.

The locative *find* IV► Goal-directed *find* (Piñon 2008)

$$(14) \quad \forall e \forall t [(\text{FIND}(e) \wedge \tau(e) \subseteq t) \rightarrow \exists e' [\text{SEARCH}(e') \wedge t \subseteq \tau(e') \wedge \text{RIGHT.BOUNDARY}(e, e')]]]$$

► Explaining backgrounding/highlighting (building on Abrusán 2011, 2016):

- goal-directed *find*: QUD about location
- all else will be backgrounded

Find + small clause I

- ▶ Two cases:
 - ▶ Subjective *find*: *find hobbits endearing*
 - ▶ Judicial *find*: *find him innocent*

Find + small clause II

- ▶ Subjective *find* (much discussed in a niche corner of semantics/philosophy of language devoted to subjective language, moral and aesthetic judgment starting with Sæbø 2009; Stephenson 2007, see extensive discussion in Anand and Korotkova 2026, <https://lingbuzz.net/lingbuzz/010263>)

- (15)
- a. Q finds humans ✓entertaining/#mortal.
 - b. Q finds this number ✓fascinating/#prime.

- ▶ Distinguished linguistic profile (practically undiscussed in prior literature)
 - ① complex presuppositional profile (much like emotive factives *be glad/mad/sad*, ask me in the Q&A, content alert: de re & other issues in possible worlds semantics)
 - ② non-trivial small clause syntax (see appendix; new class of “characterizing verbs”)
 - ③ classic achievement (pace Vardomsкая 2018)
 - ④ encounter presupposition (holds across languages, not just English)

Find + small clause III

► Aspect: subjective *find* ≠ *think*

- Classic achievement w/out process/goal (pace Vardoms kaya 2018, who incorrectly treats *find* as a state)
- Stative-like reading: genericity conspiracy (see appendix)

(16) #*For*-adverbials

The Fleeting Beauty Case:

We're watching an unusually bright meteor shower, with several fireballs and even one purple star. #For a minute/moment/split second, I found the purple shooting star disappointing/distressing/ominous, but then came to adore it.

(17) #*Finish*:

#I finished finding the purple star gorgeous/ominous/distressing/adorable.

Find + small clause IV

- ▶ Direct experience/encounter: subjective *find* $\neq$ *think* (first remarks due to Borkin 1973, first formal proposal due to Stephenson 2007, first detailed defense in Korotkova and Anand 2021, including arguments against competing views)

(18) The Authentic Food case

Context 1 (encounter/experience): *You tried the food at least once.*

Context 2 (lack of experience): *You read reviews about this restaurant.*

- a. The food at this restaurant is authentic.

Context 1:✓, Context 2:✓

- b. I find the food at this restaurant is authentic.

Context 1:✓, Context 2:✗

(Korotkova and Anand 2021)

- ▶ Experience: presupposed/backgrounded (soft trigger, special interaction with markers of indirectness like epistemic *must*; common behavior for acquaintance inferences, see e.g. Anand and Korotkova 2018)

- (19) Pranav didn't find the food authentic.

[assume normal prosody]

→ Pranav tried the food.

Find + small clause V

- ▶ Like other *finds*: (as Borkin 1973 alludes to!)
 - ▶ subjective *find*: needs encounter, bad in general knowledge/stereotypical reasoning cases
 - ▶ not predicted if *find* simply requires strong grounding (an argument against approaches such as Kennedy and Willer 2022)

(20) The Stereotypical Reasoning case

There is a new academic boycott. You don't believe in such measures, as they only breed hatred and polarization and ultimately don't target the real perpetrators.

- a. ✓ This new academic boycott is meaningless and reprehensible. I've no idea what exactly it amounts to, but I don't need to.
- b. #I find this new academic boycott meaningless and reprehensible. I've no idea what exactly it amounts to, but I don't need to.
- c. #I abhor/detest/dislike/hate this new academic boycott. I've no idea what exactly it amounts to, but I don't need to.

Find + small clause VI► Subjective *find*:

- issues/QUD about opinion (which may or may not be a doxastic attitude)
- encounter backgrounded
- no process

► Current favorite semantics

(21) $\llbracket \text{find} \rrbracket = \lambda \langle S, P \rangle \in D_X \lambda x \lambda e \lambda i :$

a. presupposes:

P is judge dependent $\wedge$

$\exists e_{exp} [\text{Exp}(x, e_{exp}, i) \wedge \text{Theme}(S, e_{exp}, i) \wedge \text{CAUSE}(e_{exp}, e, i)]$

b. asserts:

$\exists s [\text{BECOME}(s, e, i) \wedge \text{FS}(s, i) \wedge \text{Exp}(x, s, i) \wedge \forall i' \in \text{CON}(s, i) [P(i')(S)]]$

Find + small clause VII

► Judicial *find*:

- issue/QUD about the outcome of legal proceedings
- encounter is backgrounded
- achievement: doesn't combine with *for*-adverbials/*finish*
- could be viewed as a goal-directed counterpart of subjective *find*?

- (22)
- a. The jury didn't find him guilty.
→ There was a process.
 - b. The jury almost found him guilty.
✓ scalar: process was initiated
✓ counterfactual: no process
 - c. The jury found him innocent in an hour.
✓ prospective reading: after an hour
✓ timeframe reading: within an hour

- If intuition on the right track, we have two *find* + small clause, differences due to goals/process

Find that I

- ▶ Find + declarative CPs (we are not aware of any discussion of these senses/uses; please redress our ignorance)
 - ① learning *find*
 - ② conclusion *find*
- ▶ Both senses:
 - ▶ veridical/factive/semi-factive: prejacent truth entailed and often backgrounded
 - ▶ achievements
 - ▶ lexicalize evidential requirements
 - ▶ fits into the general come-to-know blueprint along with *discover*, *find out*, *realize* (Korotkova and Anand 2024)

NB *find CP*: doesn't take questions, a counterexample to the generalization that veridicality predicts Q-embedding

- Evidential grounding: encounter required, *CP find* $\neq$ *find out*, *discover*

(23) **Abductive reasoning (effect-to-cause)**

Before leaving in the morning, you check the forecast and put your laundry outside to dry. When you come, it's wet.

I #found / ✓discovered / ✓learned / ✓found out that it rained.

(24) **Eliminative reasoning**

Unable to find the keys, you decide they could only be in your car.

I #found/✓figured out that the keys are still in the car.

► Aspectual profile: achievement

- (25) *#For*-adverbials:
#For a year, the study found that the new vaccine works.
#For a day, Aynat found that she liked cilantro.
- (26) *#Finish*:
#The study finished finding that ...
#Aynat finished finding that she liked cilantro.

► Two micro-senses of find CP

① **conclusion *find***

② **learning *find***

- (27) a. The study found that walking indoors or outdoors similarly boosted creative inspiration.
- b. When a brown bear awakes from hibernation, he is surprised to find that a modern factory has been built right over his den. (web)

► Some differences

- process/systematic inquiry: only conclusion *find*
- non-sentient subjects: only conclusion *find*
- neg-raising: only learning *find* (see appendix)

► Aspect, again

(28) **Learning *find*:**

There seemed to be short spells of the movie where I almost found that the physics made sense, only to descend into complete bullshit again. (web)
only the counterfactual reading

(29) **Conclusion *find*:**

- a. Based on our research, we almost found that the updates are lost because of parallel processing by another program on the same record. (web)
scalar reading : search for answers was initiated, but interrupted
- b. In a year the study found that the new vaccine works.
can have a timeframe reading.

Find that VI

- ▶ Checking for goals/intentions: tricky!
 - ▶ Like other change-of-state factives, *find that* is bad in deliberative environments due to a presupposition clash (Anand and Korotkova 2024)
 - ▶ Other verbs: ok with interrogative complements *try to discover/find out whether/who ...*
 - ▶ *Find*: not a Q-embedder (at least outside of mathematical vocabulary)

Outlook

General schema I

- All uses of *find* (except possibly locative find w/out process):
 - ① for some information state S , an unsettled issue I
 - ② an event of encounter, e_{Enc} , between the finder and some relevant object
 - ③ the resolution of I at a culminative event

(30) Find skeleton

- a. x find e
- b. I is unsettled in S before $\tau(e)$
- c. x has an encounter event e_{Enc}
- d. e_{Enc} causes a (possibly trivial) process e_{Proc} leading to e_{Judge}
- e. e_{Judge}/e_{Enc} resolves I for S

General schema II

- ▶ Two parallel uses/senses
 - ▶ **locative *find***: lucky *find*, *find* w/process/goal
 - ▶ ***find* + small clause**: subjective *find*, judicial *find*
 - ▶ ***find* + CP**: learning *find*, conclusion *find*
- ▶ Possible parameterization: presence of process + volition
- ▶ At-issue: culmination
- ▶ Backgrounding: can be explained via some assumptions about causal chains (immediate problem: Abrusán's (2011) theory doesn't predict accomplishments)

General schema III

► Broader context:

- change-of-state eventualities have complex internal structures (Nadathur 2023; Nadathur and Siegal 2025)
- all change-of-state factives lexicalize evidence (Korotkova and Anand 2024)
- *find*-verbs: knowledge verbs, with predictable complementation patterns (cf. Djärv 2023)
- Encounter requirement: part of a large family of Acquaintance Inferences (term from Ninan 2014)
- May 2027, MIT: Acquaintance-themed workshop

Outstanding issues (some of many)

- ▶ So what is the meaning of *find* or $\sqrt{\text{find}}$?
- ▶ If not systematic polysemy, what is it?
- ▶ Possible avenues for future explorers:
 - ▶ Cross-linguistic picture: clearly non-uniform (not all subjective *finds* allow *find* + DP), but not much else is known
Stay tuned for results on subjective *find* (NWO project)
 - ▶ Diachronic development: what comes first etc

Thank you!

(and to the very many people who talked to us about *find* over the years)

Quasi-stative subjective *find*

- The genericity conspiracy: *find* masquerades as *think* in certain cases

(31) Q finds humans entertaining.

- Conspiracy resolved: simple present only possible if experience is **repeatable** (proper semantics: we need to incorporate habituality/disposition that clashes with the experience presupposition)

- (32) *A stowaway on an alien ship, leaving Earth for good, muses about what they'll miss. They couldn't bring any photographs, and there is no technology that would allow them to see their home planet.* (modeled after the case of Jan Rodrick in Arthur C. Clarke's *Childhood's End*)
- a. #I find the Matterhorn beautiful/easy to climb, even though I'll never see it again.
 - b. ✓The Matterhorn beautiful/easy to climb, even though I'll never see it again.

Characterizing small clauses

► Small clause syntax:

- episodic perception reports w/ bare infinitives *notice, watch, observe*
- characterizing verbs *deem, judge, consider, regard as, view as, remember as, classify as, define as* (term ours, key syntactic discussion in Basilico 2003; Raposo and Uriagereka 1995)

► Special properties:

- Embedded complements: i-level and other inherent/defining properties (we don't subscribe to i-level/s-level distinction, see Jäger 2001, but lack a better term; all subjective predicates licensed by *find* are canonically i-level)
- Embedded subjects: only strong nominals (bare plurals: only the kind reading, quantifiers: only the partitive reading)

- Verdict: such clauses are structured propositions, subjects are aboutness topics (drawing on Basilico 2003; Cohen and Erteschik-Shir 2002; Jäger 2001; Krifka 2001)

Find CP & neg-raising

► Neg-raising:

- Conclusion *find*: negation can target the process
- Learning *find*: negation targets the culmination, leading to neg-raising

- (33)
- a. The professor didn't find that families are much better off financially when both parents work.
no entailment about prejacent truth/falsity
 - b. My doctor doesn't find that patients who have this diagnosis get the care they need.
neg raising: finds that not

Upshot

- ▶ Previous literature: *find* as a species of *think*
- ▶ Incorrect prediction: interpretation of referential DPs
- ▶ Our take: *find* is/resembles emotive factives

- ▶ Hallmark of intensional environments (Farkas 1997; Musan 1997; Percus 2000):
 - ▶ **subject position** (S): 'de re'/'de dicto' ambiguities, can be evaluated wrt attitude worlds or higher world ($\neq$ scope due to Double Vision cases; Quine 1956 and later work)
 - ▶ **predicate position** (P): only 'de dicto', must be evaluated wrt attitude worlds (though see Schwager 2009)

► Subject position with *find*: no 'de dicto'

(34) The Scared Hiker Case

While hiking in the dark, your companion Kit became scared of what he thought was a mountain lion. You saw, however, that it was a tree.

- a. ✓Kit thought that [a tree trunk]_{de re} / [a mountain lion]_{de dicto} was frightening.
- b. ✓Kit found [a tree trunk]_{de re} frightening.
- c. #Kit found [a mountain lion]_{de dicto} frightening .

- (35)
- a. ✓Kit thought that [a frightening mountain lion]_{de dicto} was dangerous, even though it was just a harmless tree.
 - b. #Kit found [a frightening mountain lion]_{de re} dangerous, even though it was just a harmless tree.

NB (for syntacticians: lack of 'de dicto' for subject positions could be traced to subject-to-object raising, in line with the analysis of prolepsis in, e.g., Japanese and Korean; Lohninger et al. 2022; Yoon 2007)

- ▶ Predicate position with *find*: complex pattern (some data discussed by Bouchard 2012; Coppock 2018; Ducrot 1975)
 - ▶ **objective content**: simultaneous 'de re' + 'de dicto'
 - ▶ **subjective content**: true 'de dicto'

(36) The Uplifting Movie Case

Pascal and you watched Moonage Daydream together, Brett Morgen's documentary about David Bowie. You loved it, he didn't. Additionally, you disagree about the nature of the movie—while you know it was a documentary, he mistakenly thinks that he watched a mockumentary.

- a. ✓Pascal thought that [the uplifting documentary]_{de re} was [a depressing mockumentary]_{de dicto}.
- b. #Pascal found [the uplifting documentary]_{de re} [a depressing mockumentary]_{de dicto}.
- c. #Pascal found *Moonage Daydream* [a depressing mockumentary]_{de dicto}.
- d. #Pascal found *Moonage Daydream* a [depressing]_{de dicto} [documentary]_{de re}.

- Against extensional *find* (+SOT data in other languages, worry raised by Sæbø 2009)

(37) #The uplifting documentary is depressing.
(adapted from Anand and Korotkova 2022:623)

- (38) a. ✓Pascal thought that [the uplifting documentary]_{de re} was
[depressing]_{de dicto}.
b. ✓Pascal found [the uplifting documentary]_{de re} [depressing]_{de dicto}.

- (39) a. #The deciduous tree is evergreen.
b. ✓ Mordecai believes that [the deciduous tree]_{de re} is [evergreen]_{de dicto}.
(Anand and Korotkova 2022:625)

(Non-)intensionality VI

- Pattern: very nearly like emotive factives, with the nature of the attitude supplied by the subjective predicate (support for non-doxastic *find* along the lines of Franzén 2020, 2021; Khoo 2026, plus intensionality)

(40) Q finds Janeway an entertaining human.
→ Janeway is a human at w_0 .
#Q finds J. an entertaining human, even though she is a Vulcan.
→ $\forall w' \in \text{Dox}(Q, w_0)$, Janeway is a human w' .
#Q finds J. an entertaining human, even though he believes she is a Vulcan.
→ Q judges Janeway as entertaining.
#Q finds J. an entertaining human, even though he finds her boring.

(41) Q doesn't find Janeway an entertaining human.
→, Janeway is a human at (w_0).
#Q doesn't find J. an entertaining human, because she is a Vulcan.
→ $\forall w' \in \text{Dox}(Q, w_0)$, Janeway is a human w' .
#Q doesn't find J. an entertaining human, because he believes she is a Vulcan.
→ Q judges Janeway as entertaining.
✓Q doesn't find J. an entertaining human, in fact he thinks she is very boring (for a human).

► Pattern summary

- predicate position (P), objective content: evaluated with respect to both worlds (pattern partially discussed in Bouchard 2012; Coppock 2018)
 - predicate position (P), subjective content: only attitude worlds ('de dicto')
 - subject position (S), objective & subjective: only higher world ('de re')
-
- *Find*-verbs: similar to emotive factives (modulo the interpretation of subjective content in the predicate position, which is not-at-issue with factives and at-issue with *find*)

Bottom line

- ▶ Robust pattern: only subjective content in predicate position allows 'de dicto'
- ▶ Verdict: *find*-verbs are a species of factives (for syntacticians: data for subjects amenable to a different explanation)

- Abrusán, M. (2011). Predicting the presuppositions of soft triggers. *Linguistics and Philosophy* 34(6), 491–535.
- Abrusán, M. (2016). Presupposition cancellation: Explaining the ‘soft-hard’ trigger distinction. *Natural Language Semantics* 24(2), 165–202.
- An, H. Y. and A. S. White (2020). The lexical and grammatical sources of neg-raising inferences. *Society for Computation in Linguistics* 3(1), 220–233.
- Anand, P. and N. Korotkova (2018). Acquaintance content and obviation. In U. Sauerland and S. Solt (Eds.), *Sinn und Bedeutung* 22, Berlin, pp. 161–173. ZAS.
- Anand, P. and N. Korotkova (2022). How to theorize about subjective meaning: A lesson from ‘de re’. *Linguistics and Philosophy* 45(3), 619–681.
- Anand, P. and N. Korotkova (2024). Facts, intentions, questions: English “come-to-know” predicates in deliberative environments. In F. Carcassi, T. Johnson, S. B. Knudstorp, S. D. Parrado, P. R. Robledo, and G. Sbardolini (Eds.), *Proceedings of the 24th Amsterdam Colloquium*, Amsterdam, pp. 15–21. ILLC.
- Anand, P. and N. Korotkova (2026). Refining *find*. Ms., Utrecht University and University of California, Santa Cruz.

References II

- Basilico, D. (2003). The topic of small clauses. *Linguistic Inquiry* 34(1), 1–35.
- Bondarenko, T. (2020). Factivity from pre-existence: Evidence from Barguzin Buryat. *Glossa: a journal of general linguistics* 5(1).
- Bondarenko, T. (2023). Factivity-alternating attitude verbs in Azeri. *Languages* 8(3), 184.
- Borkin, A. (1973). To be or not to be. In *The 9th Regional Meeting of the Chicago Linguistics Society*, Chicago, IL, pp. 44–56.
- Bouchard, D.-E. (2012). *Long-Distance Degree Quantification and the Grammar of Subjectivity*. Ph. D. thesis, McGill University.
- Ciardelli, I., J. Groenendijk, and F. Roelofsen (2019). *Inquisitive Semantics*. Oxford: Oxford University Press.
- Cohen, A. and N. Erteschik-Shir (2002). Topic, focus, and the interpretation of bare plurals. *Natural Language Semantics* 10(2), 125–165.
- Coppock, E. (2018). Outlook-based semantics. *Linguistics and Philosophy* 41(2), 125–164.
- Djäv, K. (2023). Knowing and believing things: What DP-complements can tell us about the argument structure and composition of (factive) attitudes. *Journal of Semantics* 40(2), 1–55.

References III

- Ducrot, O. (1975). Je trouve que. *Semantikos* 1(1), 63–88.
- Farkas, D. (1997). Evaluation indices and scope. In A. Szabolcsi (Ed.), *Ways of Scope Taking*, pp. 183–215. Dordrecht: Springer Netherlands.
- Franzén, N. (2020). Evaluative discourse and affective states of mind. *Mind* 129(516), 1095–1126.
- Franzén, N. (2021). Non-factualism and evaluative supervenience. *Inquiry*, 1–22.
- Grano, T. (2017). Logic of intention reports. *Journal of Semantics* 34, 587–632.
- Gyarmathy, Z. (2015). *Achievements, Durativity and Scales*. Ph. D. thesis, University of Düsseldorf.
- Higginbotham, J. (2003). Remembering, imagining, and the first person. In A. Barber (Ed.), *Epistemology of Language*, pp. 496–533. Oxford University Press.
- Hintikka, J. (1969). Semantics for propositional attitudes. In J. Davis, D. Hockney, and W. Wilson (Eds.), *Philosophical Logic*, pp. 21–45. Dordrecht: Reidel.
- Jackendoff, R. (1985). Believing and intending: Two sides of the same coin. *Linguistic Inquiry* 16, 445–460.
- Jäger, G. (2001). Topic-comment structure and the contrast between stage level and individual level predicates. *Journal of Semantics* 18(2), 83–126.

- Kennedy, C. and M. Willer (2016). Subjective attitudes and counterstance contingency. In M. Moroney, C.-R. Little, J. Collard, and D. Burgdorf (Eds.), *Semantics and Linguistic Theory* 26, pp. 913–933.
- Kennedy, C. and M. Willer (2022). Familiarity inferences, subjective attitudes and counterstance contingency: Towards a pragmatic theory of subjective meaning. *Linguistics and Philosophy* 45, 1395–1445.
- Khoo, J. (2026). Finding and believing. *Meaning: A Journal of Linguistics and Philosophy* 2, 1–24.
- Korotkova, N. and P. Anand (2021). *Find, must* and conflicting evidence. In P. G. Grosz, L. Martí, H. Pearson, Y. Sudo, and S. Zobel (Eds.), *Proceedings of Sinn und Bedeutung* 25, pp. 515–532.
- Korotkova, N. and P. Anand (2024). Today we learned: English ‘come-to-know’ attitudes as a natural class. Ms., Utrecht University and UC Santa Cruz.
- Kratzer, A. (2012). *Modals and Conditionals*. Oxford: Oxford University Press.
- Krifka, M. (2001). For a structured meaning account of questions and answers. In C. Fëry and W. Sternefeld (Eds.), *Audiatur Vox Sapientiae: A Festschrift for Arnim von Stechow*, pp. 287–319. Berlin, Boston: Akademie Verlag.

- Liefke, K. (2023). Experiential attitude reports. *Philosophy Compass* 18(6), 1–17.
- Lohninger, M., K. Iva, and S. Wurmbrand (2022). From prolepsis to hyperraising. *Philosophies* 7(32), 1–40.
- Malink, M. (2008). Right boundary achievements under conative negation. In A. Steube (Ed.), *The Discourse Potential of Underspecified Structures*, pp. 145–162. Berlin, New York: De Gruyter.
- Martin, F. (2011). Revisiting the distinction between accomplishments and achievements. In T. M. Jesse Mortelmans and W. De Mulder (Eds.), *From now to eternity*, pp. 43–64. Leiden: Brill.
- Mascarenhas, S. (2009). Inquisitive semantics and logic. Master's thesis, Universiteit van Amsterdam, Institute for Logic, Language, and Computation.
- Musan, R. (1997). *On the Temporal Interpretation of Noun Phrases*. New York: Garland.
- Nadathur, P. (2023). *Actuality inferences: Causality, aspect, and modality*. Oxford: Oxford University Press.
- Nadathur, P. and B.-A. Siegal (2025). Modeling progress: causal models and the imperfective paradox. Ms., <https://ling.auf.net/lingbuzz/009209>.

- Ninan, D. (2014). Taste predicates and the acquaintance inference. In T. Snider, S. D'Antonio, and M. Weigand (Eds.), *Semantics and Linguistic Theory 24*, pp. 290–309. LS.
- Özyıldız, D. (2017). Attitude reports with and without true belief. In D. Burgdorf, J. Collard, S. Maspong, and B. Stefánsdóttir (Eds.), *Proceedings of SALT 27*, pp. 397–417.
- Özyıldız, D., C. Qing, F. Roelofsen, M. Romero, and W. Uegaki (2023). A crosslinguistic database for combinatorial and semantic properties of attitude predicates. In *Proceedings of the 5th Workshop on Research in Computational Linguistic Typology and Multilingual NLP (SIGTYP 2023)*. Association for Computational Linguistics.
- Percus, O. (2000). Constraints on some other variables in syntax. *Natural Language Semantics* 8(3), 173–229.
- Piñón, C. (1997). Achievements in event semantics. In A. Lawson (Ed.), *Semantics and Linguistic Theory 7*, Ithaca, NY, pp. 276–293. Cornell university.
- Piñón, C. (2008). Negating right boundary achievements. In A. Staube (Ed.), *The Discourse Potential of Underspecified Structures*, pp. 163–175. Walter de Gruyter.

References VII

- Quine, W. V. O. (1956). Quantifiers and propositional attitudes. *Journal of Philosophy* 53, 101–111.
- Raposo, E. and J. Uriagereka (1995). Two types of small clauses. In A. Cardinaletti and M. T. Guasti (Eds.), *Syntax and Semantics 28: Small Clauses*, pp. 179–206. San Diego, CA: Academic Press.
- Schwager, M. (2009). Speaking of qualities. In E. Cormany, S. Ito, , and D. Lutz (Eds.), *Proceedings of SALT 19*, pp. 395–412.
- Steinert-Threlkeld, S., N. Imel, and Q. Guo (2023). A semantic universal for modality. *Semantics and Pragmatics* 16(1), 1–20.
- Stephenson, T. (2007). *Towards a Theory of Subjective Meaning*. Ph. D. thesis, Massachusetts Institute of Technology.
- Sæbø, K. J. (2009). Judgment ascriptions. *Linguistics and Philosophy* 32(4), 327–352.
- Stiebels, B., T. McFadden, K. Schwabe, T. Solstad, E. Kellner, L. Sommer, and K. Stoltmann (2024). ZAS Database of Clause-embedding Predicates, release 1.1 (july, 2024). In *OWID^{plus}*. Institut für Deutsche Sprache, Mannheim.
- Vardomskaya, T. (2018). *Sources of Subjectivity*. Ph. D. thesis, University of Chicago.

- White, A. S., R. Rudinger, K. Rawlins, and B. Van Durme (2018). Lexicosyntactic inference in neural models. In E. Riloff, D. Chiang, J. Hockenmaier, and J. Tsujii (Eds.), *Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing*, Brussels, Belgium, pp. 4717–4724. Association for Computational Linguistics.
- Yoon, J. H. (2007). Raising of major arguments in Korean and Japanese. *Natural Language and Linguistic Theory* 25(3), 615–653.