

# Teaching formal semantics in introductory linguistics classes

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## This poster might be for you if:

- You're teaching intro linguistics for the first time soon
- You've never taught semantics before, and want to know what can be taught in intro linguistics
- You don't teach formal semantics in your intro class and want to, but don't know where to start

- You want to make the semantics portion of your intro class more contemporary
- You want to make the semantics portion of your intro class more rigorous
- You're unsatisfied with the semantics coverage in the intro textbook you use

## The problem of semantics in intro linguistics

- Underrepresented in introductory linguistics (intro) textbooks
- Relatively small proportion of pages dedicated to semantics (out of theoretical chapters) in three leading intro textbooks

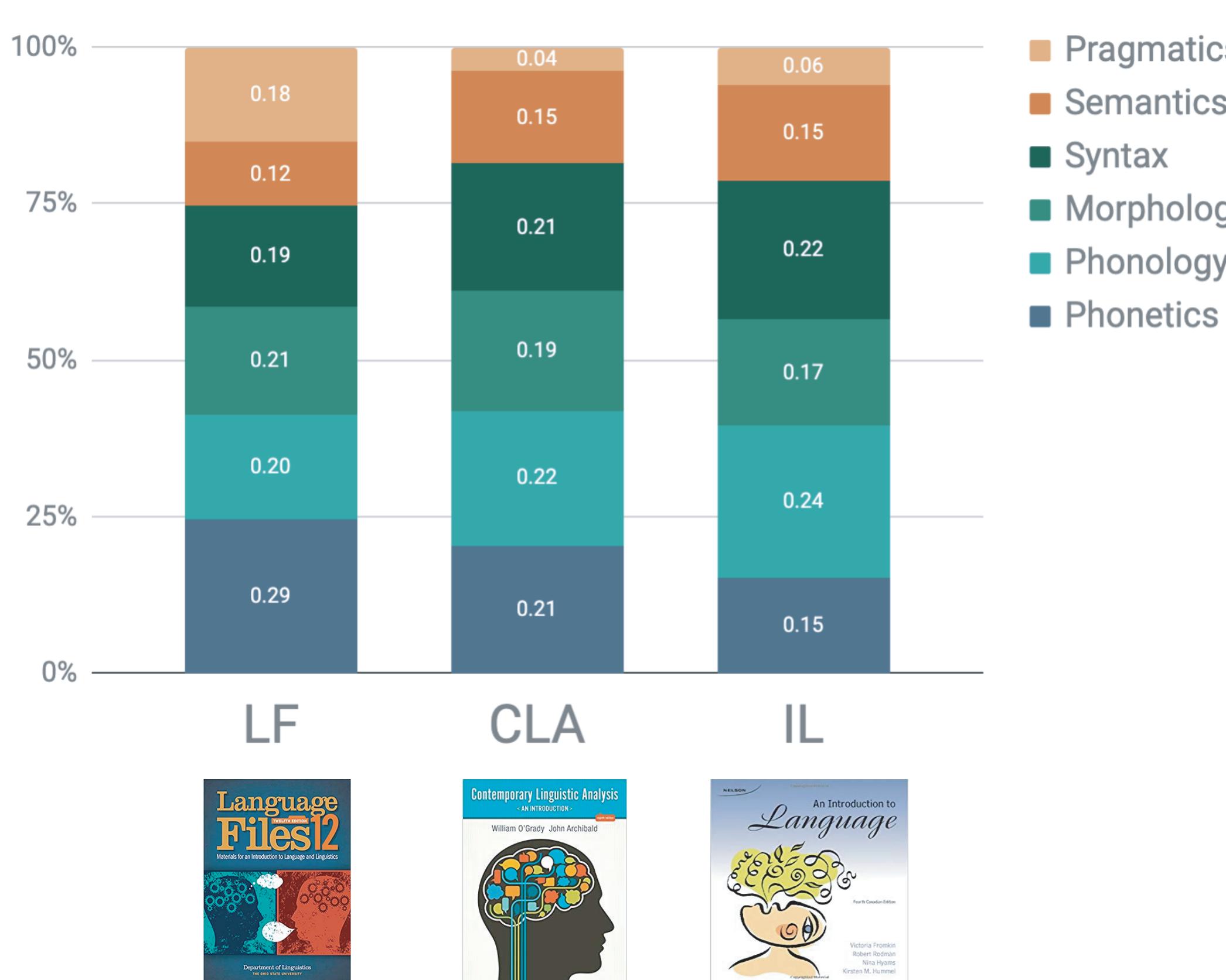
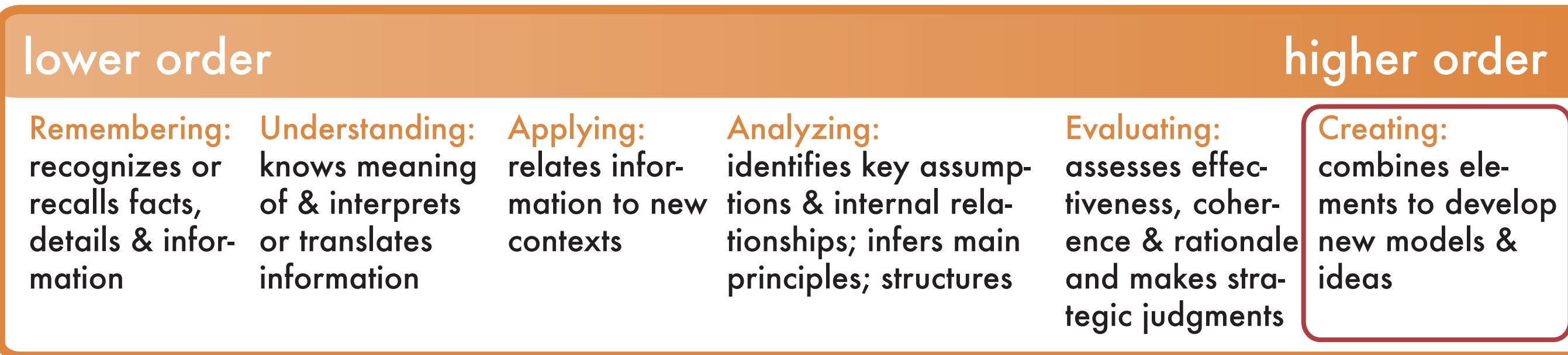


Figure 1. % pages dedicated to subdiscipline in textbook (out of theoretical chapter total page)

- Disproportionate emphasis on lexical relations
- For some students, intro is the only linguistics class they take; inaccurate representation of contemporary semantics
- For linguistics majors, false advertisement of upper-year semantics course

## Why formal semantics in intro?

- Formal tools are introduced in other theoretical subdisciplines; why not semantics too?
- Accurate representation of semantics as a subfield
- Provides tools for developing students' higher-order cognitive skills



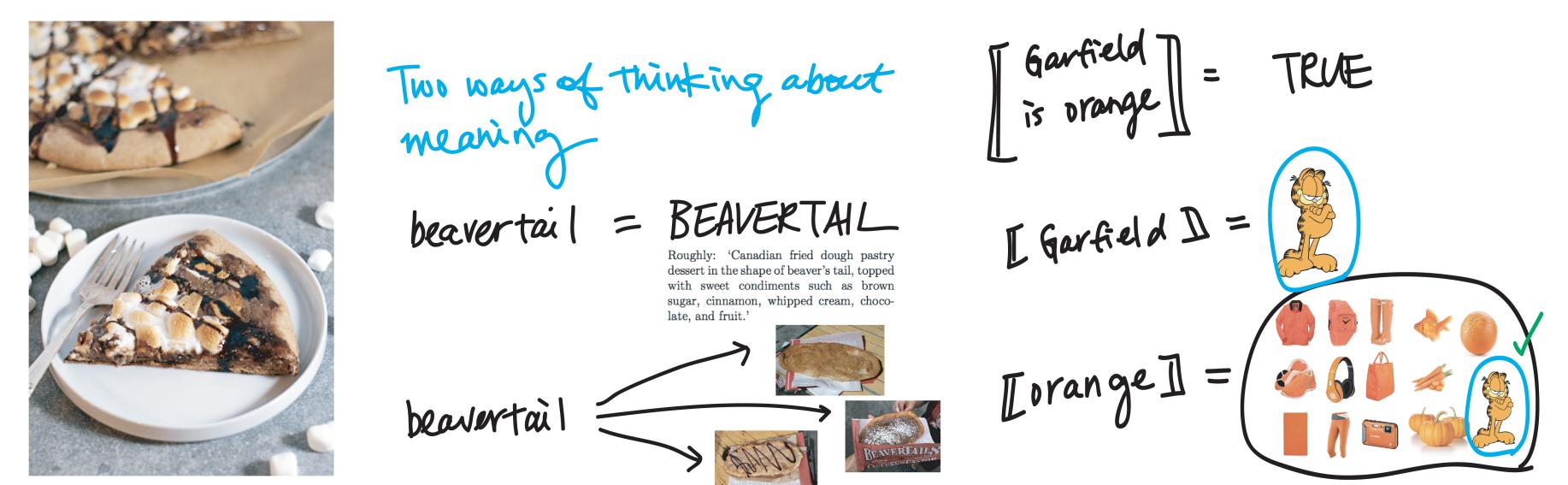
Source: <http://carleton.ca/edc/teachingresources/course-design/learning-outcomes> (cf., Bloom 1956; Krathwohl 2002)

## Sample lesson plan

- This is a fairly standard way of teaching semantics and introducing type-driven compositional semantics (lambda calculus); see e.g., Heim & Kratzer (1998), Kearns (2011), among other textbooks.
- I don't intend to portray this as a teaching innovation. The purpose of this poster is to raise awareness that formal semantics can and should be taught in intro.

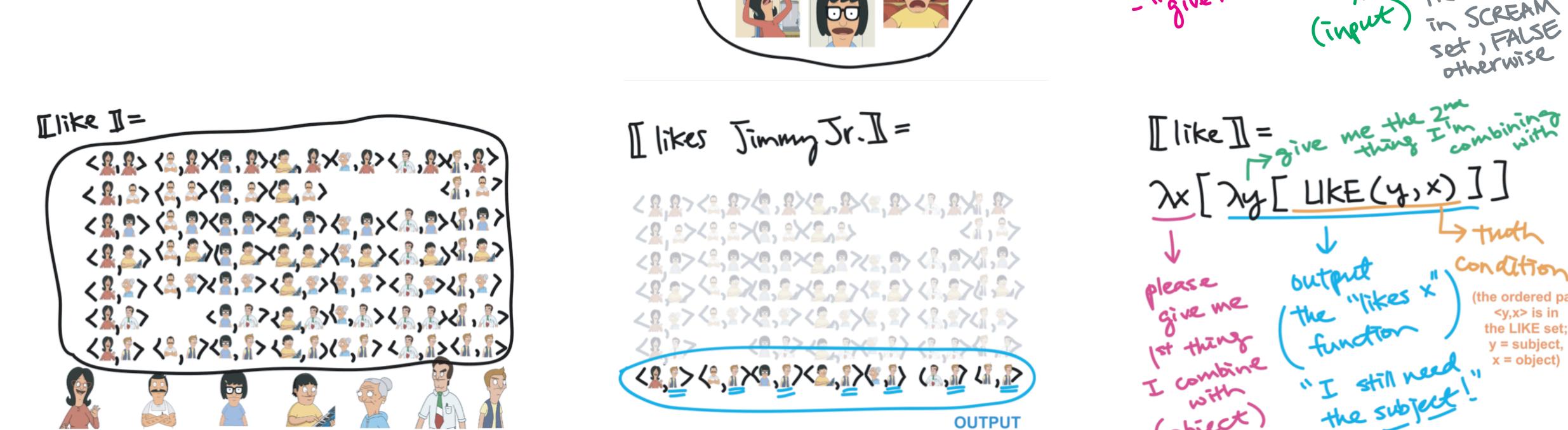
### Day 1

- Sense & reference
- Denotation
- Basic set theory



### Day 2

- From sets to functions
- One-place predicates
- Two-place predicates



### Day 3

- Two-place continued
- Basic semantic types:  $e$ ,  $t$ ,  $\langle e, t \rangle$ ,  $\langle e, \langle e, t \rangle \rangle$
- Applied exercise on homework: what is the type of the? not?

### Day 4

- Entailment, presupposition, implicature
- Bite-sized lexical semantics

## What about lexical relations?

- Most textbooks have a comprehensive coverage of lexical relations (synonyms, antonyms, etc.)
- Can be assigned as a "reading check" assignment (read and answer Q)

## Developed resources - for teachers (free!)

<http://aitaniguchi.github.io/teaching-resources.html>



- Detailed teaching guide
- Supplemental reading aimed at intro students
- Sample homework/in-class exercise questions, with answers
- In-class activities, and more

## Future directions

- How much lexical semantics should be taught in intro?
- Are other subfields represented accurately in intro too?
- Semantics for non-majors?
- Semantics "in real life"?
- Large vs. small intro classes?

## References

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