Scalar implicatures from “some” to “not all” are highly variable and context-dependent

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interActive Language Processing Lab Stanford

Stanford University

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- **Maxim of Quantity:** "Make your contribution as informative as required" (Grice, 1967:26)

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- **Scalar Diversity**: different scales are variably likely to result in a scalar implicature being derived (van Tiel et al. 2016, Doran et al. 2009, Beltrama & Xiang 2013, Gotzner et al. 2018)

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- Experiments on scalar diversity often use only a few, manually generated items per scale
- Possible generalizability questions (but see Sun et al., to appear)

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I had some of the banana yogurt.

I had **some, but not all** of the banana yogurt

How similar is the statement in blue (with 'but not all') to the statement in red (without 'but not all')?

very different meaning	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7	same meaning

Degen (2015): findings

- Certain **contextual factors** are significant predictors of within-scale variability in the likelihood of an implicature arising

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1. Partitivity: partitive *some* is more likely to give rise to implicature
    (a) I ate **some** cookies
    (b) I ate **some of the** cookies

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2. Determiner strength: strong *some* is more likely to give rise to implicature than weak *some*
    (a) But my son needed **(some)** money
    (b) #**(Some)** history books are scary

Degen (2015): findings

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4. Subjecthood/topic-hood: subject and topic *some*-NPs are more likely to give rise to scalar implicature

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      (a) But my son needed **some/*all** money

      (b) **Some/all** history books are scary
    - What if the apparent contextual effects are correlated with certain uses of *some*?

The replication

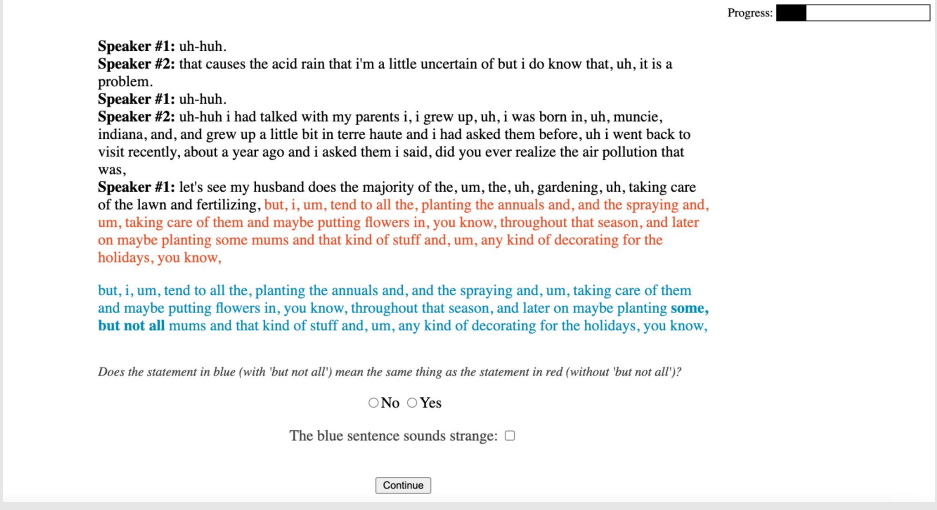
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  - -Alternativehood of *all* included as a predictor
  - -Binary forced-choice task instead of Likert scale

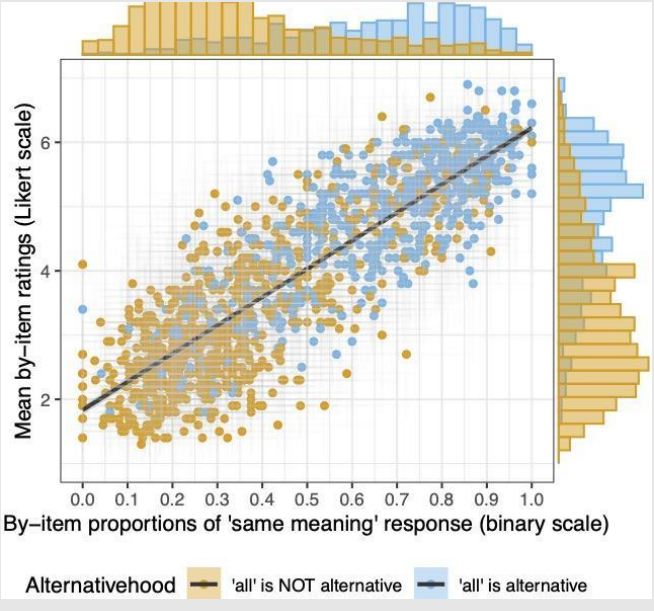


Analysis and results

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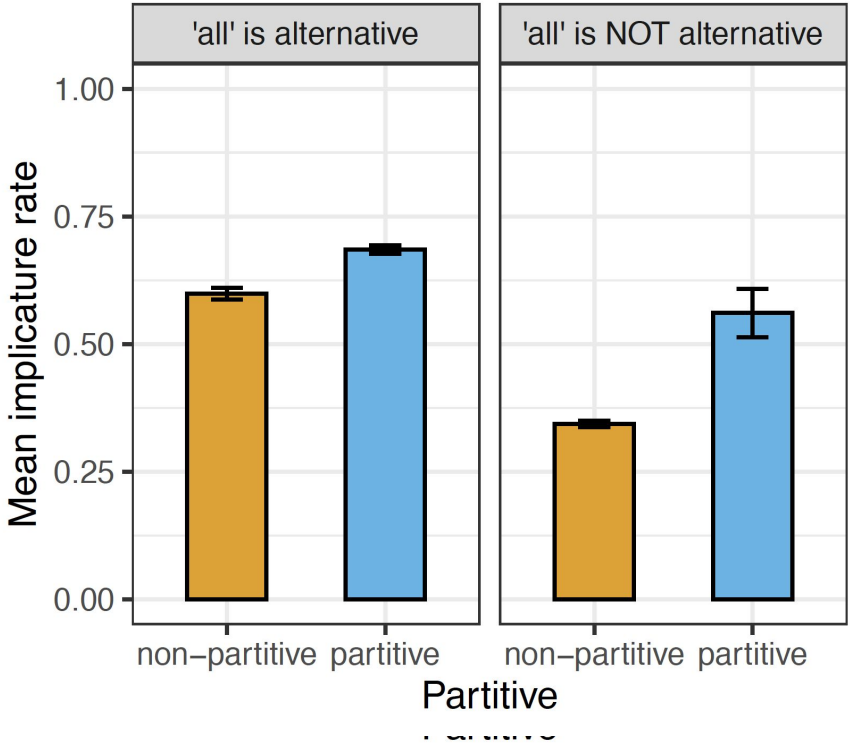
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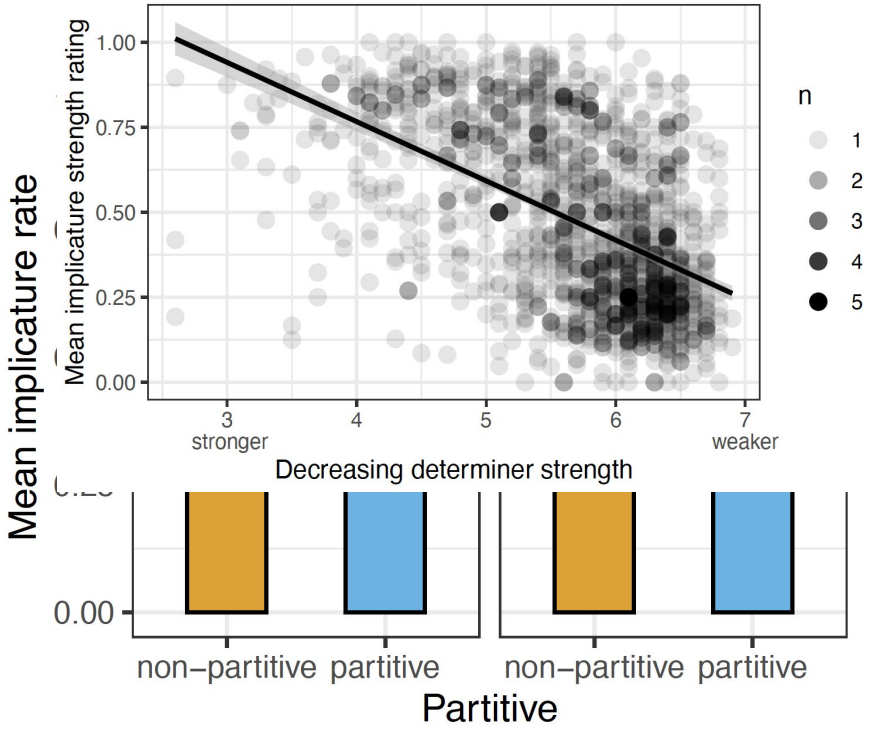
- Mixed effects logistic regression predicting ‘same meaning’ judgments from the same fixed effects reported by Degen (2015)
- Fixed effects allowed to interact with the alternativehood predictor
- All effects reported by Degen (2015) were replicated on each of the two data subsets

Analysis and results: partitivity



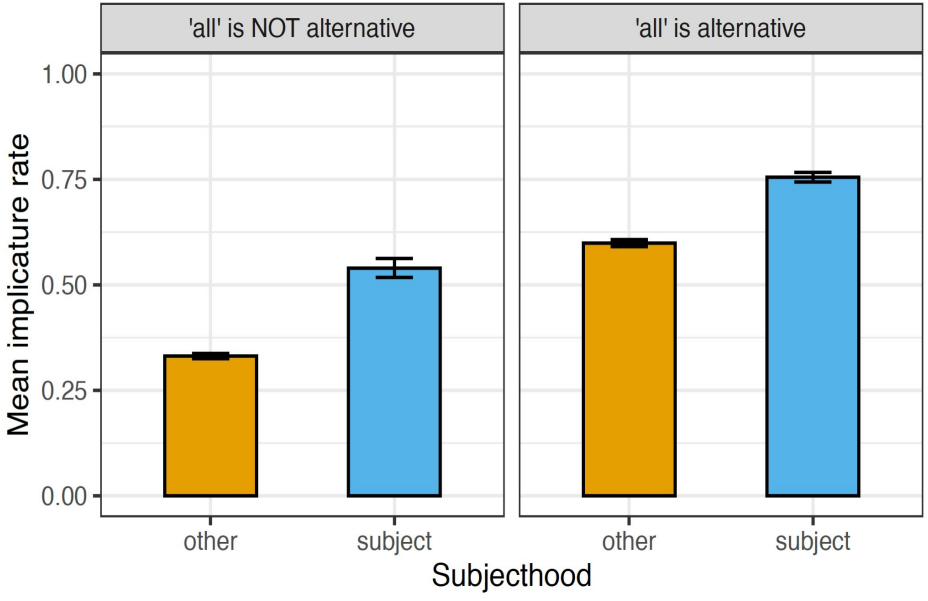
- r = .XX
- p < x

Analysis and results: determiner strength



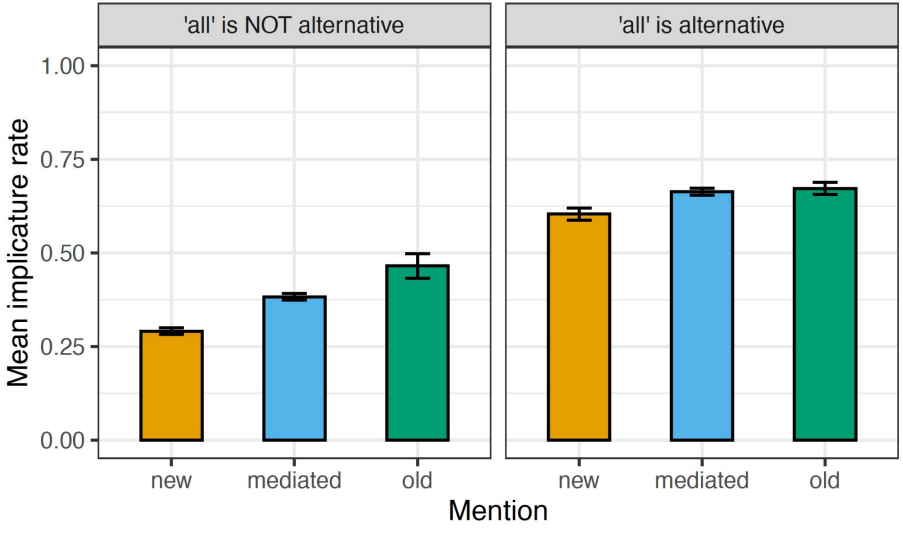
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Analysis and results: subjecthood



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Analysis and results: mention



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- There is both *between-scale* and *within-scale* variability in implicature strength
- Within-scale variability can be substantial
- Modulated by linguistic context and discourse context
- Results demonstrate that scalar diversity literature must engage with theories of context-dependence in interpretation

Scalar Implicature

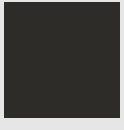
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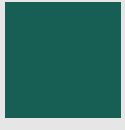
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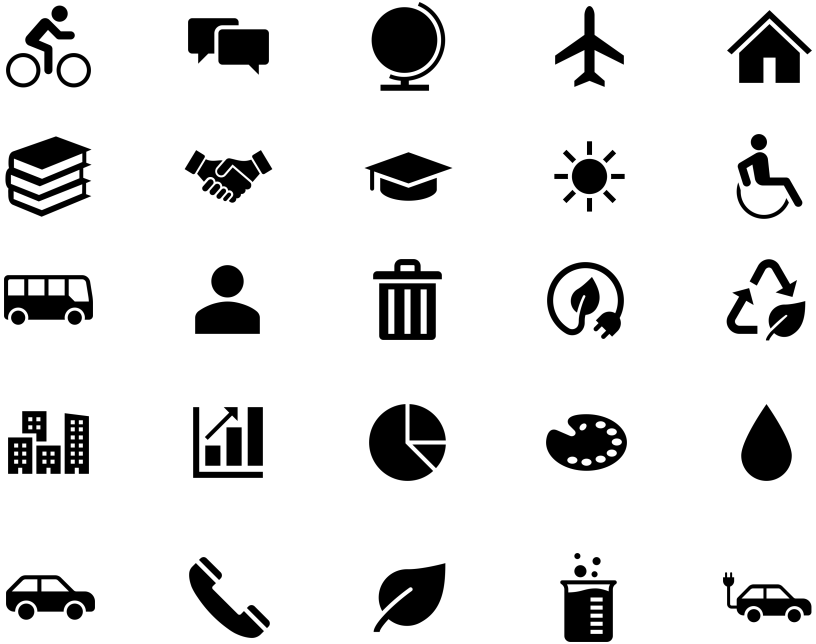
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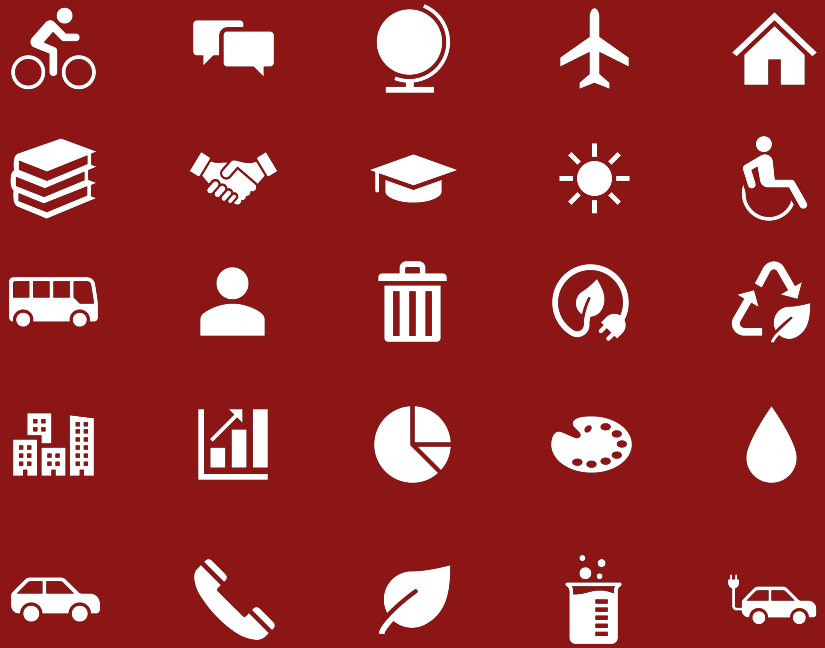


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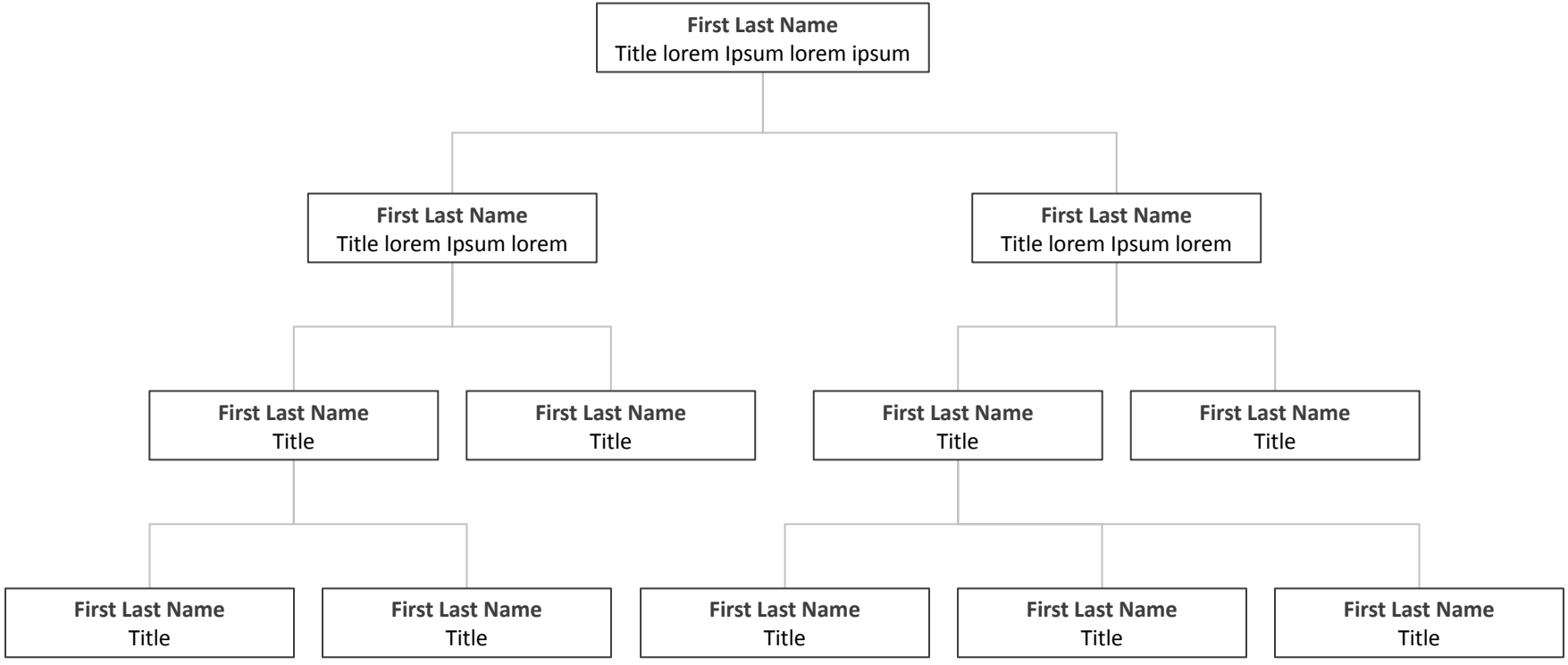
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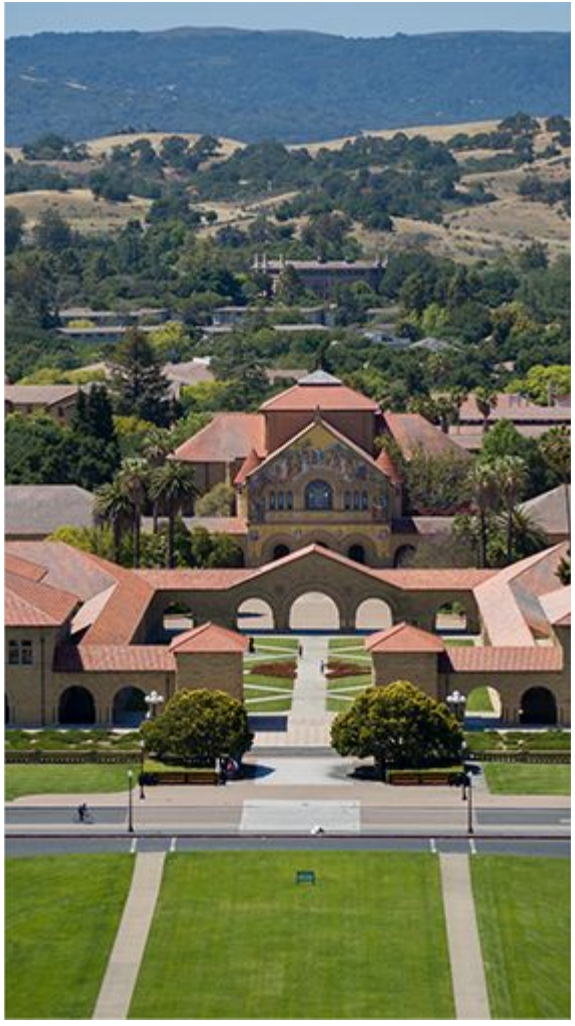
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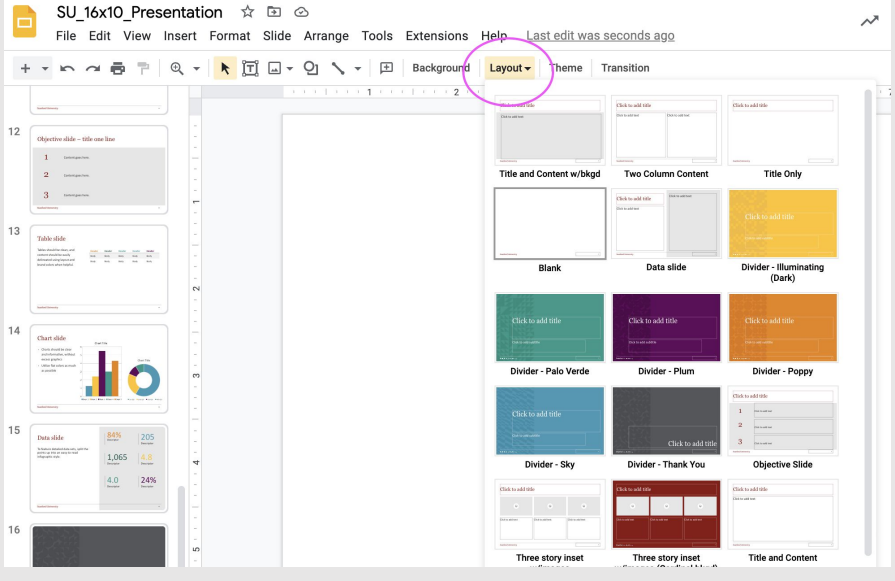
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Content slide w/image

Comparison slide w/two columns

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Objective slide – title one line

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2 Text goes here.

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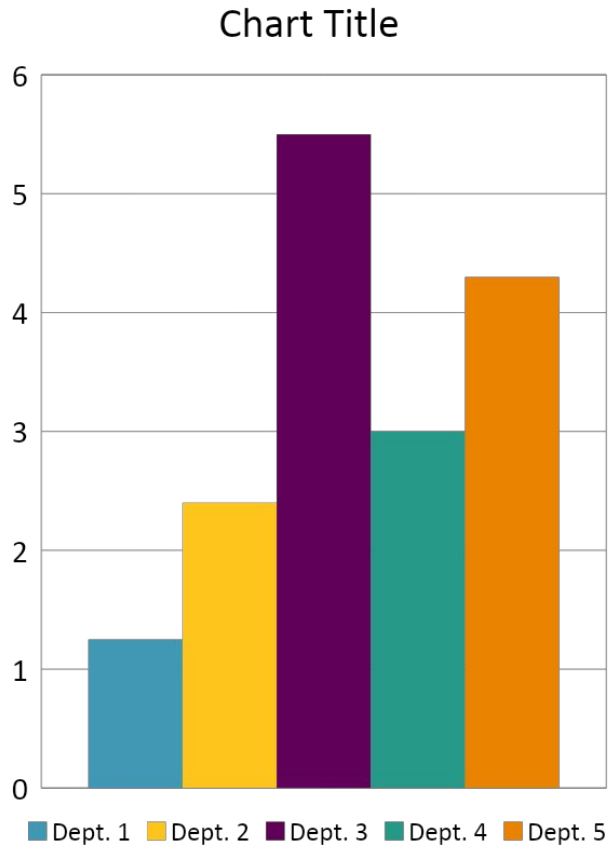
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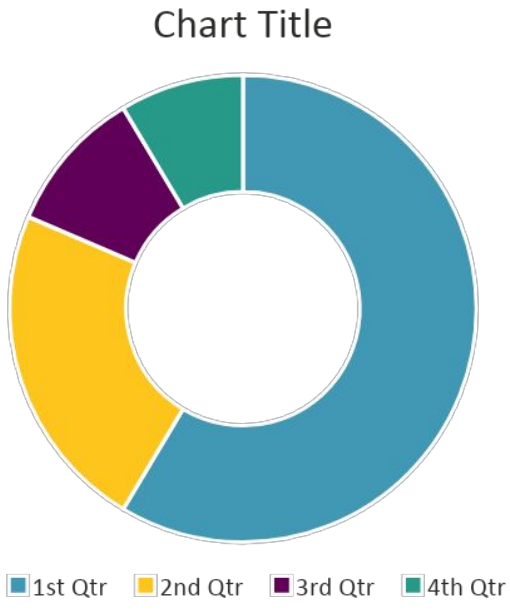
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Body	Body	Body	Body	Body
Body	Body	Body	Body	Body

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- Charts should be clear and informative, without excess graphics
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