

Focus and contrast

Janina Radó

janina@sfs.uni-tuebingen.de

The Referential Theory

1. a. The spy saw the cop with the binoculars.
b. The spy saw the cop with the revolver.

2. The horse raced past the barn fell.

The referential theory (Crain and Steedman 1985)

- multiple structural analyses computed in parallel
- incremental semantic evaluation
- the semantic/discourse processor chooses the alternative that best fits the conversational context

Principle of Referential Success

If there is a reading that succeeds in referring to entities already established in the perceiver's mental model of the domain of the discourse, then it is favored over one that does not.

Principle of Parsimony

If there is a reading that carries fewer unsatisfied but consistent presuppositions than any other, then that reading will be adopted and the presuppositions in question will be incorporated into the perceiver's mental model.

- prosodic prominence serving semantic and pragmatic functions
- affects truth conditions
- evokes alternatives

e.g. Rooth 1992, Krifka 1993

- answers to wh-questions:

Where did Tom go last week? – He went to PARIS

- corrections:

Last week Tom went to London. – No, he went to PARIS.

- focus particles

a. Mary only introduced BILL to Sue.

b. Mary only introduced Bill to SUE.

introductions: John - Jane, John - Kim, Bill - Kim, Bill - Sue, Jane - Kim

Ni et al. (1996)

“only” should eliminate the garden path

- “only” signals need for contrast set
- contrast set must be identified as part of interpretation
- partitioning an existing set is preferred over introducing new entities

1. a. The businessmen loaned money at low interest were told to record their expenses.
b. Only businessmen loaned money at low interest were told to record their expenses.
2. a. The vans stolen from the parking lot were found in a back alley.
b. Only vans stolen from the parking lot were found in a back alley.

3. a. The wealthy businessmen loaned money at low interest were told to record their expenses.
b. Only wealthy businessmen loaned money at low interest were told to record their expenses.
4. a. The new vans stolen from the parking lot were found in a back alley.
b. Only new vans stolen from the parking lot were found in a back alley.

- Experiment 1: incremental grammaticality judgment
- Experiment 2: eye-tracking, only conditions without adjective

results:

- no adjective: garden-pathing in “the-amb” condition
- adjective conditions: garden-pathing in both ambiguous conditions

Paterson et al. (1999)

- many of Ni et al.'s items exclude the strongest competitor (direct object) analysis

The boxers punched hard in the early rounds were unable to finish the bout.

- more uniform items: NP follows ambiguous verb
- more similar controls: full relative clause
 - a. Only teenagers (who were) allowed a party invited a juggler straightaway.
 - b. The teenagers (who were) allowed a party invited a juggler straightaway.

eye-tracking

results:

- in early measures, garden-pathing in both ambiguous conditions
- but “only” facilitates reanalysis

Liversedge et al. (2002)

- a. Only motorists (who were) stopped in the car park received a warning about their outdated permits.
- b. The motorists (who were) stopped in the car park received a warning about their outdated permits.

results:

- no first pass effects
- disruption in “the-amb” condition
- numerical effect: delayed disruption in “only-amb” condition

“only”: weak influence, only when strongest competitor is not available

Experiment 1: extended replication of Ni et al. (1996)

self-paced reading

- a. Only the N
- b. The N
- c. Only N
- d. N

results:

- longer RT for (a) and (c) in the ambiguous region
- faster RT for (a) and (c) in the disambiguating region

Sedivy (2002): Experiment 2

context:

1. a All of the secretaries and accountants were made to take a tough computing course.
- b All of the secretaries in the company were made to take a tough computing course.

target:

2. a Only the secretaries prepared for the exam and earned significant pay raises.
- b Only the secretaries prepared for the exam passed and earned pay raises.

results:

- faster RT at ambiguous verb following context (1.a)
- significant interaction in disambiguating region:
(2.a) slower after (1.b) than after (1.a)

Sedivy (2002): Experiment 3: like Exp. 2 but without “only”

results:

- somewhat *longer* RT at ambiguous verb following context (a)
- reduced relative slower in disambiguating region regardless of context

Clifton et al. (2000)

Can a noun satisfy “only”’s contrast requirement intrinsically?

- low contrast: social worker, nutritionist
- high contrast: bachelor, vegetarian

eye movement

- a. The bachelors (who were) refused child support accused the agency of discrimination.
- b. Only bachelors (who were) refused child support accused the agency of discrimination.
- c. The social workers (who were) refused child support accused the agency of discrimination.
- d. Only social workers (who were) refused child support accused the agency of discrimination.

plus unambiguous controls

results:

- effect of ambiguity
- first pass: disruption in all ambiguous cases *except* high contrast - only

“only” + high contrast facilitates reanalysis

Liversedge et al. (2004)

Experiment 1: dative construction

- a. At Christmas Fred sent only chocolates to mother but not to Grandma too because he didn't have enough money.
- b. At Christmas Fred sent chocolates to only mother but not to Grandma too because . . .
- c. At Christmas Fred sent only chocolates to mother but not flowers too because . . .
- d. At Christmas Fred sent chocolates to only mother but not flowers too because . . .

effect of appropriateness after the “alternative”

Liversedge et al. (2004)

Experiment 2: double object construction

results:

- appropriateness effect when “only” precedes the indirect object
- no difference when “only” precedes the direct object

Umbach (2002)

The research team arrived at the base camp late at night.
Ben only talked to the GEOLOGIST.

- “geologist” focussed → novel discourse referent
- bridging relation singles out unique referent

The research team arrived at the base camp late at night.
Ben only talked to the DUTCH geologist.

- “Dutch geologist” novel: new discourse referent, “Dutch” asserted
- bridging relation singles out unique referent
- focus indicates dimension of contrast

Sedivy et al. (1999): visual world paradigm

spoken instructions:

- a. Touch the pink comb. Now touch the YELLOW comb.
- b. Touch the pink comb. Now touch the YELLOW bowl.
- c. Touch the pink comb. Now touch the yellow comb.
- d. Touch the pink comb. Now touch the yellow bowl.

display:

- two objects of the same category, differing w.r.t. a salient property (e.g. color)
- a different object that shares the salient property (e.g. color) with one member of the pair
- an object unrelated to any of the others

results:

- faster looks to target in (a) and (c) than in (b) and (d)
- no latency difference between (a) and (c)
- more looks to the other member of the pair (the yellow comb) when the target was the yellow bowl than vice versa
- numerical, but not statistical, effect of stress on looks to competitor objects