Reference, Telicity, & Information Structure

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Discourse coherence

About the Mayor

Luke Ravenstahl became the 59th Mayor of the City of Pittsburgh on September 1, 2006, upon the untimely death of Mayor Bob O'Connor. At the time he was just 26-years-old. Ravenstahl's ascent began in 2003 when he became the youngest member ever elected to Pittsburgh City Council. After serving only two years on council, Ravenstahl was unanimously voted City Council President, a post he held for only eight-months before being sworn in as Mayor O'Connor's successor. Ravenstahl was officially elected Mayor of the City of Pittsburgh, "America's Most Livable City," in a special election in November of 2007. On November 3, 2009, Ravenstahl was re-elected to a full four-year term. The 30-year-old Pittsburgh native still holds the distinction of being the youngest mayor of any major U.S. city.

During his four years in office, Mayor Ravenstahl has taken a City that was on the brink of bankruptcy to a City whose bond rating has been upgraded four times due to a

Reference tracking

- Contributes to discourse coherence by

  - Maintaining referential continuity

  - Signaling information status of discourse entities with different referring expressions

- Modeled with a variety of sources

  - Language-internal principles (Kameyama 1996; Crawley et al. 1990)

  - General cognitive reasoning (Winograd 1972; Hobbs 1979; Kehler 2002)

Reference tracking

- Subject preference (Kameyama 1996)

  (1) <u>Joel</u> kicked Mark. Sue told <u>him</u> to go home.

  (2) <u>Mark</u> was kicked by Joel. Sue told <u>him</u> to go home.

- Real-world event knowledge (Winograd 1972)

  (3) The city council denied <u>the demonstrators</u> the permit...

    (a) ... because they feared violence.
    (b) ... because <u>they</u> advocated violence.

Transfer of possession

- Stevenson et al. 1994

  (4) Mark$_{GOAL}$ received flowers from Joel$_{SOURCE}$. *He thanked Joel.*

  → bias to re-mention subject Goal

  (5) Joel$_{SOURCE}$ delivered flowers to Mark$_{GOAL}$. *He thanked Joel.*

  → bias to re-mention Goal

- Two explanations for Goal bias
  - Thematic role bias: Goals over Sources
  - Event Structure Hypothesis: focus on end state

Manipulating telicity

Telic: ➡ Bias to Goal
Joel[Source] delivered flowers to Mark[Goal]. *He thanked Joel.*

Atelic: ➡ Bias to Source
Joel[Source] was delivering flowers to Mark[Goal]. *He always remembers Mark's birthday.*

(Kehler, Kertz, Rohde, Elman 2008; Rohde & Kehler 2009)

- Goal bias restricted to telic contexts, particularly in passages whose operative coherence relation relies on event structure.

- Telicity found to influence referential expectations, in keeping with Event Structure Hypothesis.

Implicature of non-telicity

Joel_{Source} was delivering flowers to Mark_{Goal}. *He always remembers Mark's birthday.*

Atelic:
Joel$_{Source}$ was delivering flowers to Mark$_{Goal}$. *He always remembers Mark's birthday.*

- Imperfective aspect eliminates Goal bias.

- Given availability of perfective, use of imperfective implicates non-telicity.

This talk:

→ What happens to event structural effects in contexts in which the perfective/imperfective alternation is neutralized?

VP Inversion

After the corporate take-over, everyone was eager to please the new bosses, with some going so far as to buy them presents.
Delivering flowers to the CFO Mark Johnson was the Head of Accounting Joel Sherman.

- VP is 'preposed', appearing sentence-initially.

- Subject NP is 'postposed', appearing post-verbally.

- Imperfective marking is required. *Delivered flowers to ...

- Despite imperfective marking, both telic/atelic interpretations available (telic favored).

Testing event structure

Predictions

- Canonical word order: Aspect marks telicity which in turn guides reference tracking.

  - Perfective → Goal bias
  - Imperfective → Source bias

- Non-canonical word order: Because VPI imperfective does not implicate non-telicity, telic interpretation becomes available.

  - VP Inversion → Goal bias

Story-continuation study

- Materials: 15 2-sentence passages
  Sentence 1: Source & Goal arguments evoked
  Sentence 2: Description of transfer event (Source-Goal verb)

- Participants/Procedure: 16 native speakers instructed to write a "natural" continuation to each passage
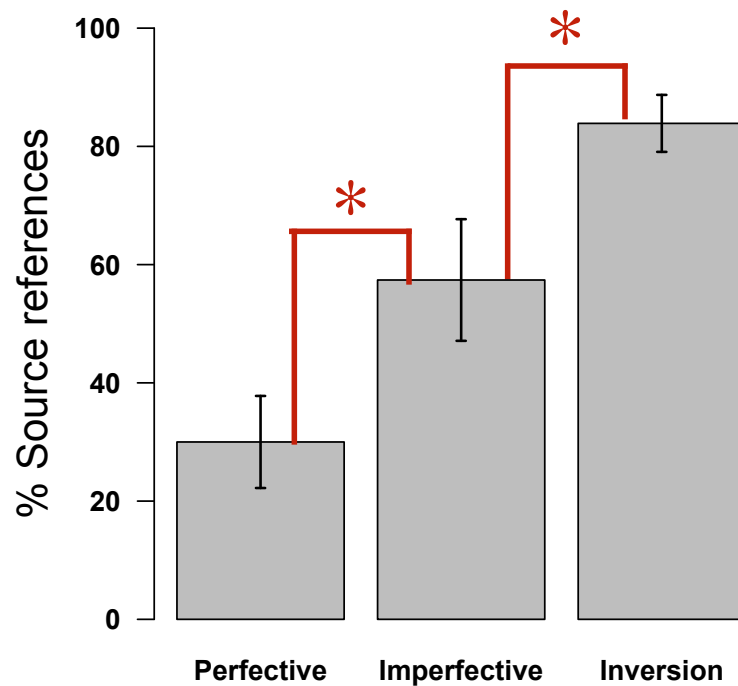
  After the corporate take-over, everyone was eager to please the new bosses, with some going so far as to buy them presents.

  Perf: The Head of Accounting Joel Sherman delivered flowers to the CFO Mark Johnson.

  Imp: The Head of Accounting Joel Sherman was delivering flowers to the CFO Mark Johnson.

  VPI: Delivering flowers to the CFO Mark Johnson was the Head of Accounting Joel Sherman.

Story continuation results

VP Inversion → Source bias, contra prediction

Information structure

VP Inversion: Postposed constituent must not represent more familiar information than that represented by the preposed constituent (Birner 1992; Birner & Ward 1998).

> After the corporate take-over, everyone was eager to please the new bosses, with some going so far as to buy them presents.
> Delivering flowers to the CFO Mark Johnson was the Head of Accounting Joel Sherman.

Source

→ Source referent occupies position associated with less familiar information.

Effect of VP Inversion

- Original prediction: Goal bias
  - Canonical word order permits both perfective/imperfective marking, so imperfective can implicate non-telicity.
  - Lacking this alternation, VP Inversion allows telic reading. Telic reading in transfer contexts favors Goal.

- Finding: Source bias
  - VP Inversion imposes an information-structural constraint.
  - The relatively less familiar status of postposed constituent in VP Inversion favors reference to that entity as a new topic.
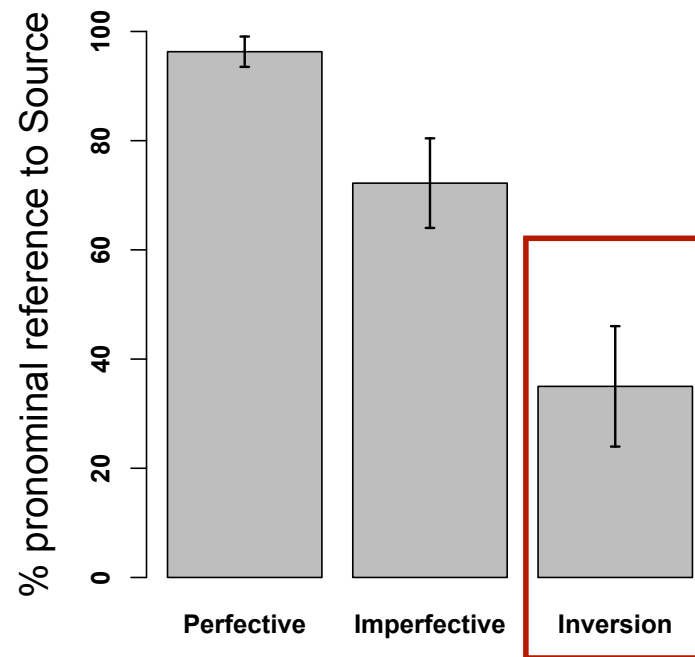
(Non-)Effect of telicity

- Canonical word order (Perf/Imperf)
  Telicity guides reference tracking through verb aspect marking.

- Non-canonical word order (VP Inversion)
  Telicity does not appear to influence referential expectations; instead, information-structural constraint signals new topic.

Information status & referring expression

- Correlation found between information status of a discourse entity and the linguistic form used to reference that entity.

- More topical entities tend to be realized with pronouns, whereas less topical entities tend to be realized with full NPs (Ariel 1990, Gundel et al. 1993, Prince 1992).

- Prediction: references to the Source as the new topic should use relatively few pronouns

Referring expressions

Although continuations following VP Inversion tend to reference the Source, they do so with relatively few pronouns.

→ (Minimal) use of pronouns supports new-topic claim.

Comparison with Passives

- Similar given-before-new constraint (Birner 1996)

- Different next-mention biases

  → Passives favor re-mention of more familiar entity (Gordan & Chan 1995; Foraker & McElree 2007; Rohde & Kehler 2010).

  → VPI favors re-mention of less familiar entity.

- Syntactic prominence may guide topicality

  → In Passives, more familiar entity exhausts preposed NP constituent.

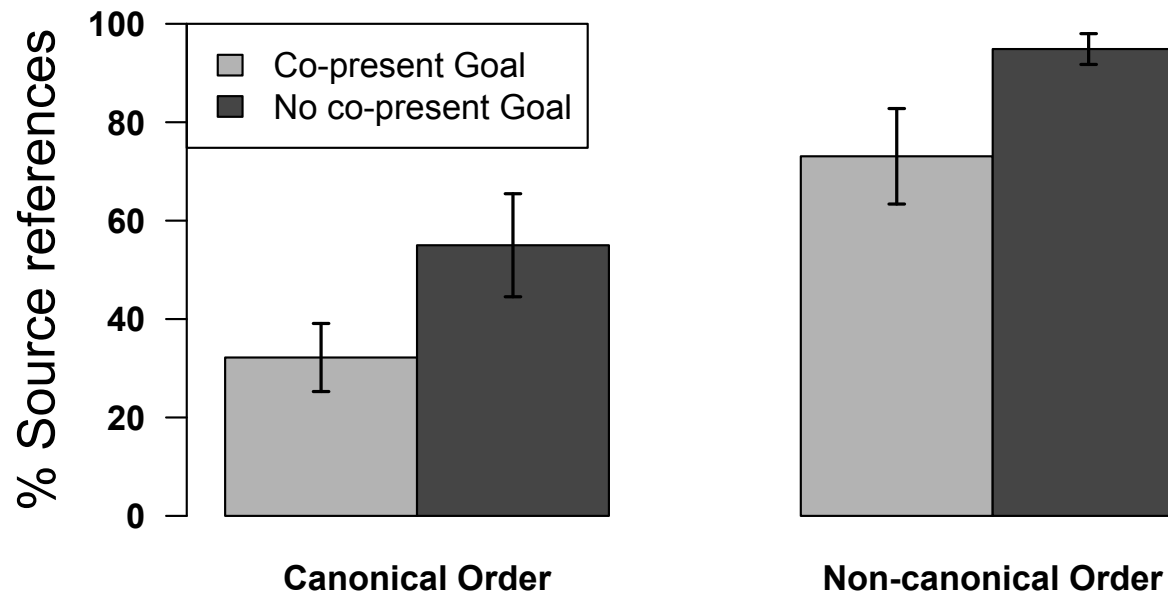 → In VPI, the entity is embedded within the preposed VP constituent.

Lexical semantics

- Although no telicity effect in VPI, do other aspects of event structure matter in VPI?

- One possibility: the physical proximity of event participants

  - Verbs evoking co-present participants: *bring, carry, deliver, give, hand, pass, serve, throw*

  - Verbs not evoking co-present participants: *fax, forward, mail, send, ship, transmit, wire*

→ Does this event-structural factor influence referential biases?

→ Does this event-structural factor interact with the information-structural factor?

Role of event structure

Test interaction between:

- Information-structural factor (within items)
  canonical vs. non-canonical word order

- Event-structural factor (between items)
  co-present vs. non-co-present participants

Lexical semantics results

→ Effect of information structure
Effect of event structure
No reliable interaction

Summary

- Canonical word order shows effect of telicity on reference tracking.

- Non-canonical VP Inversion shows effect of an information-structural constraint (as opposed to effect of telicity via implicature elimination).

- Unlike Passives, the *less* familiar entity is favored.

- Form of referring expression suggests this re-mentioned entity is a new topic.

→ Reference tracking combines language-internal principles (from particular linguistic constructions) and general cognitive reasoning (from real-world event knowledge).

Thanks!