Immediate Processing Costs for Place-for-Institution Metonyms Appearing as Sentence Subjects

Matthew W. Lowder, Miranda Moe, and Anatolii Evdokimov
University of Richmond

Background

•In *metonymy,* an entity is referred to by the name of something intimately associated with it

- Object-used-for-user: *The BLT is a lousy tipper.*
- Producer-for-product: *He's got a Picasso in his den.*
- Place-for-institution: *The White House announced a new policy.*

•Most studies on the processing of metonymy (e.g., Bott et al., 2016; Frisson & Pickering, 1999; Lowder & Gordon, 2013) have placed the metonym in a context designed to elicit the literal or figurative sense

- Very few studies have examined the processing of metonyms as sentence subjects when there is no preceding context (although see Fishbein & Harris, 2014)

•In Lowder et al. (under review), participants read sentences like in (1), without the introductory clause

- Results showed larger garden-path effects when the subject was a metonym (1a vs. 1b), compared to when the subject was an inanimate control noun (1c vs. 1d)

- An unaddressed question is whether there are immediate differences in early processing for metonyms vs. inanimate control nouns

Method

•Eyetracking-while-reading

•Participants (n = 64) read sentences like those in (1)

		Subject Noun Phrase		Disambiguating by-Phrase	Two-Word Spillover	
(1a)	*As usual,*	*the hospital*	*requested*	*by the doctor*	*was not*	…
(1b)	*As usual,*	*the hospital*	*that was requested*	*by the doctor*	*was not*	…
(1c)	*As usual,*	*the equipment*	*requested*	*by the doctor*	*was not*	…
(1d)	*As usual,*	*the equipment*	*that was requested*	*by the doctor*	*was not*	…

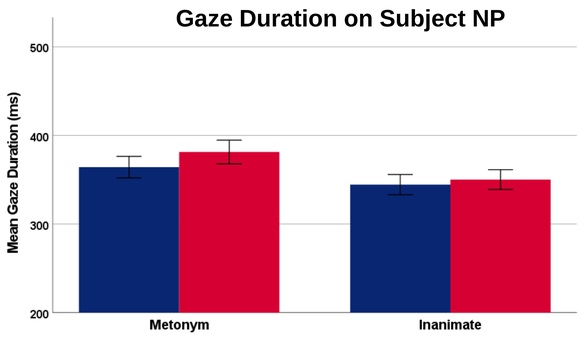
•Type of subject (metonym vs. inanimate control) x sentence structure (ambiguous vs. unambiguous), within-subjects design

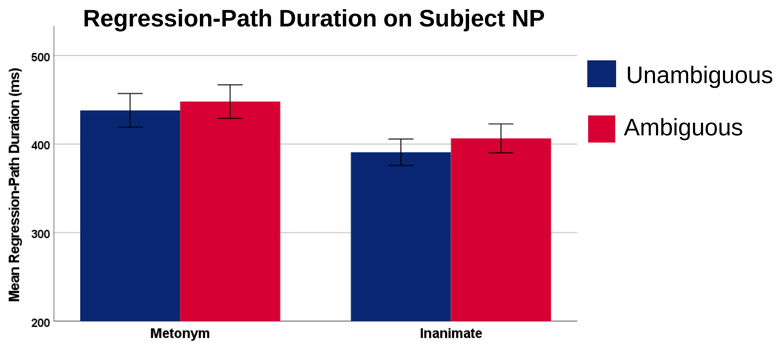
•40 sets of items, counterbalanced across four lists

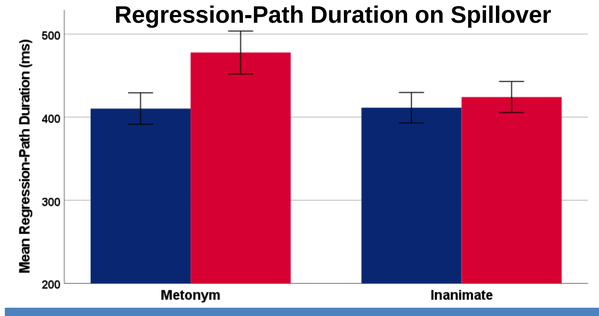
•Metonyms and inanimate control nouns were matched on average for length, frequency, orthographic neighborhood size, and concreteness

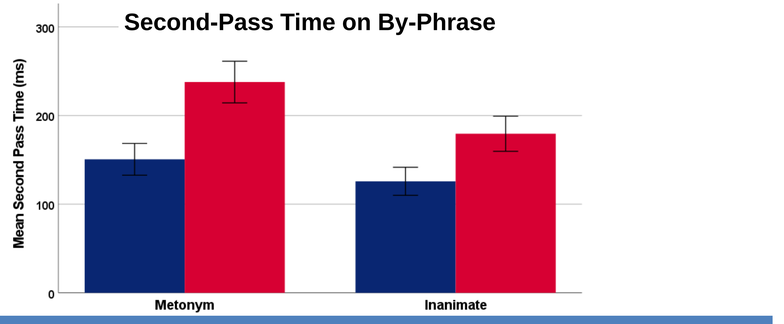
•Experimental sentences mixed with 84 filler sentences, presented randomly

Figures









Results and Discussion

•Analysis of gaze duration and regression-path duration on the subject noun phrase revealed robust main effects of subject type

- Longer reading times for metonyms than inanimate controls

•Analysis of regression-path duration on the two-word spillover region and second-pass time on the by-phrase revealed significant interactions

- Larger garden-path effects when the subject was a metonym versus an inanimate control noun

•Interactions replicate previous work (Lowder et al., under review) showing that comprehenders have a bias to initially adopt the figurative sense of a place-for-institution metonym appearing as a sentence subject

- This interpretation is rendered incorrect at the disambiguating by-phrase, leading to garden-path effects reflecting a process of reanalysis

•Novel contribution of this work is finding longer reading times on metonyms versus inanimate controls that were equated on a range of factors

•Taken together, pattern suggests a strong bias to assign an agent thematic role to the sentence subject if one is available

- Such a sense is available in the case of place-for-institution metonyms, but accessing this sense imposes an immediate processing cost

- Pattern is consistent with predictions of indirect-access model of figurative language processing

References

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