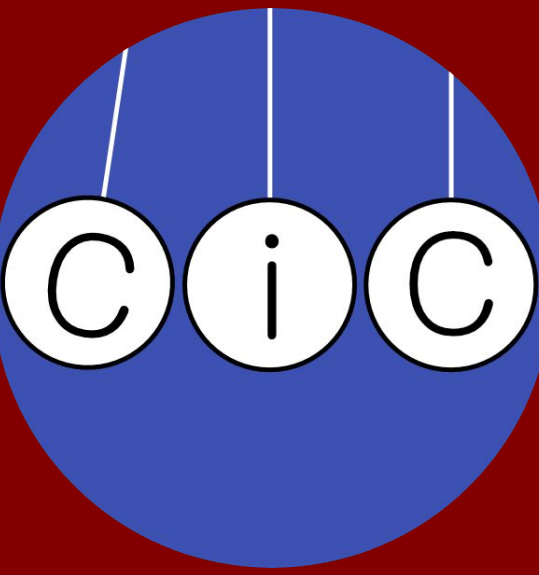


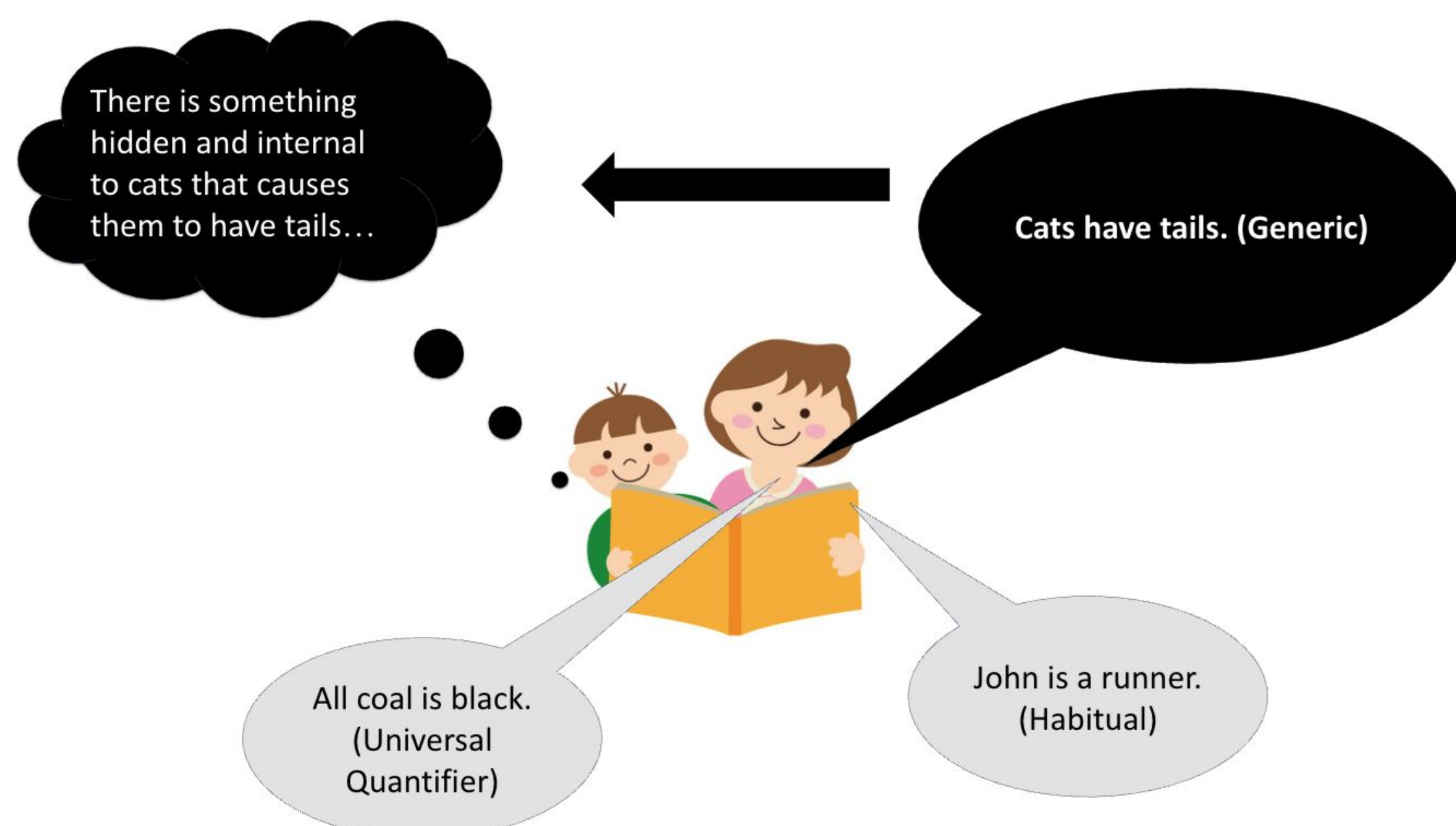
# Generics Revisited: Analyzing generalizations in children's books and caregivers' speech

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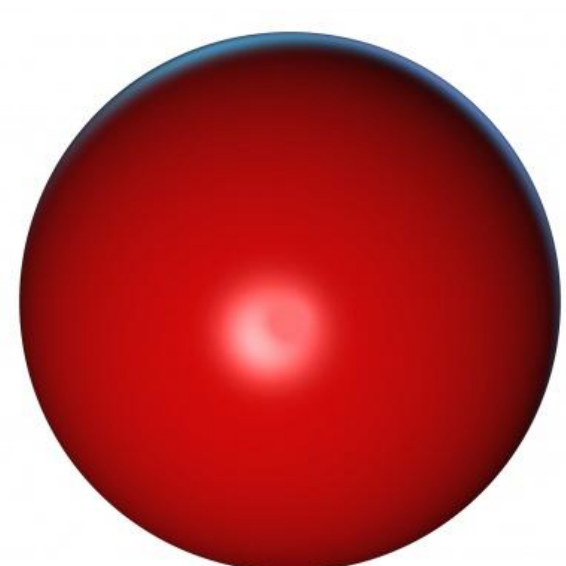
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## Background



- Generics are important vehicles for essentialist beliefs (the idea that things have a hidden true nature).
- Building on prior corpus analysis (Gelman, 2008; Mehrotra, 2019), we test whether non-living kinds and social kinds are more likely to be essentialized than artifacts.



Artifacts



Biological Kinds



Non-Living Natural Kinds



Social Kinds

## Data

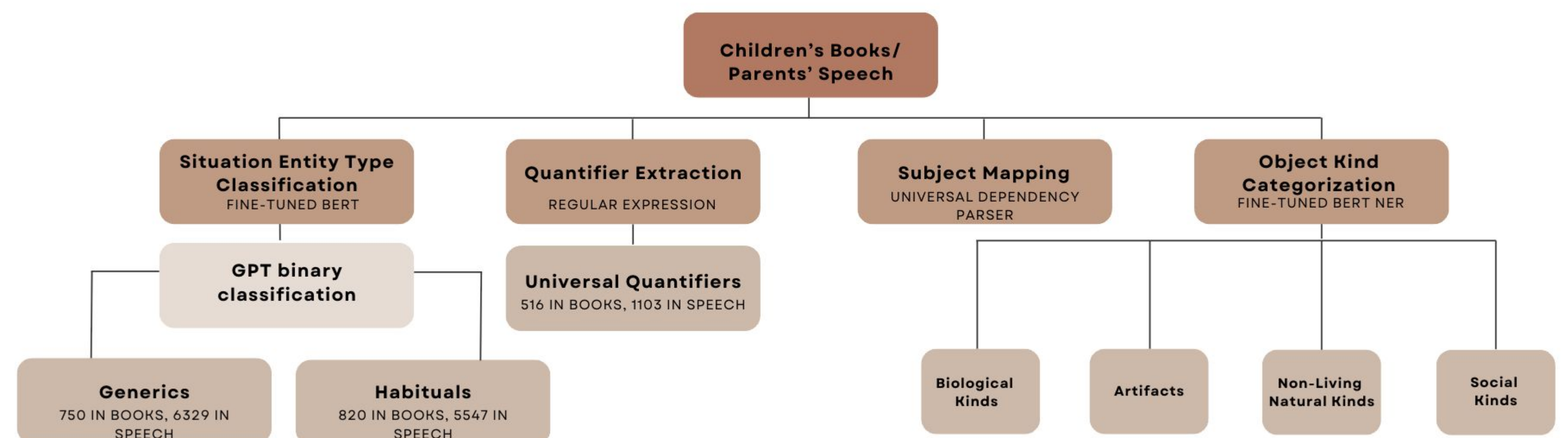


**Children's Books:**  
Web-scraped 694 publicly available books from various sources (650k words).



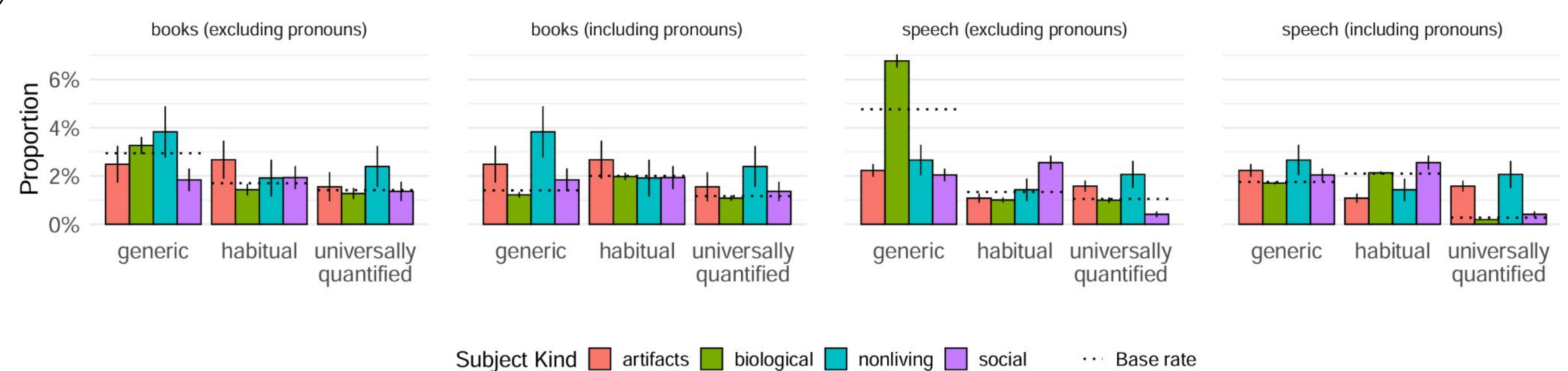
**Children & Caregiver's Speech:**  
Retrieved parent-child conversations from CHILDES database (caregivers' utterances: 8.7m words).

## Methods

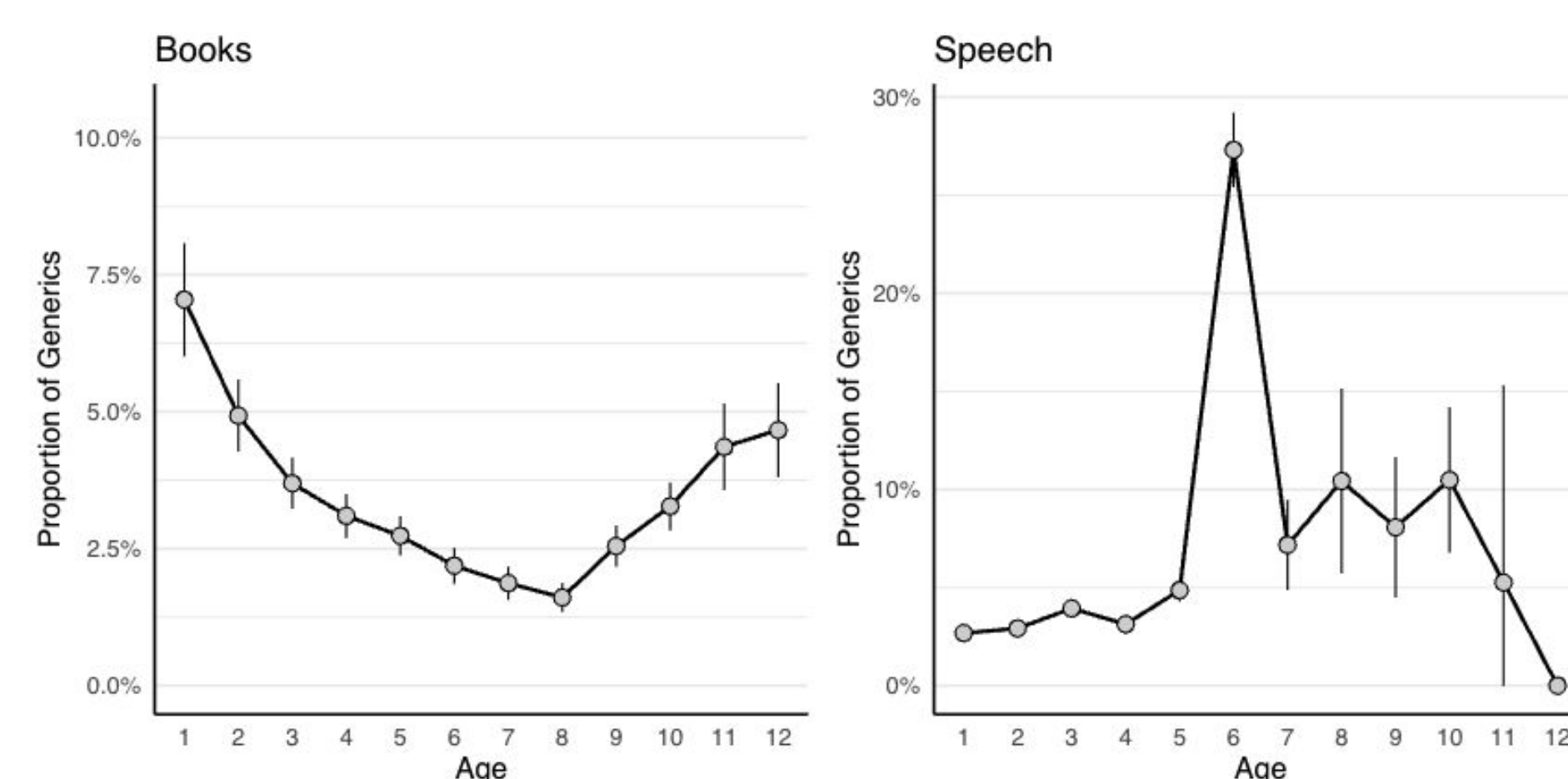


Source	Sentence	Sentence Type	Subject Kind
Books	Ferrets are happy, active pets who need lots of attention.	Generic	Biological Kind
Speech	The King is a tea drinker.	Habitual	Social Kind/Role

## Results



- Generics are more likely used for biological kinds than artifacts.
- Generics increase with age in parents' speech and decrease over age in children's books.
- Generics **weren't more likely** used for non-living or social kinds than artifacts.
- The findings complicate the connection between generics and essentialism.



## References

- Gelman SA;Coley JD;Rosengren KS;Hartman E;Pappas A; (n.d.). Beyond labeling: The role of maternal input in the acquisition of richly structured categories. Retrieved from <https://pubmed.ncbi.nlm.nih.gov/9788141/>
- Gelman, S. A., Coley, J. D., Rosengren, K. S., Hartman, E., & Pappas, A. (1998). Beyond labeling: the role of maternal input in the acquisition of richly structured categories. Monographs of the Society for Research in Child Development, 63(1), 1-157.
- Friedrich, A., Palmer, A., & Pinkal, M. (2016). Situation entity types: Automatic classification of clause-level aspect. Proceedings of the 54th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers), 1757-1768. doi:10.18653/v1/p16-1166
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