

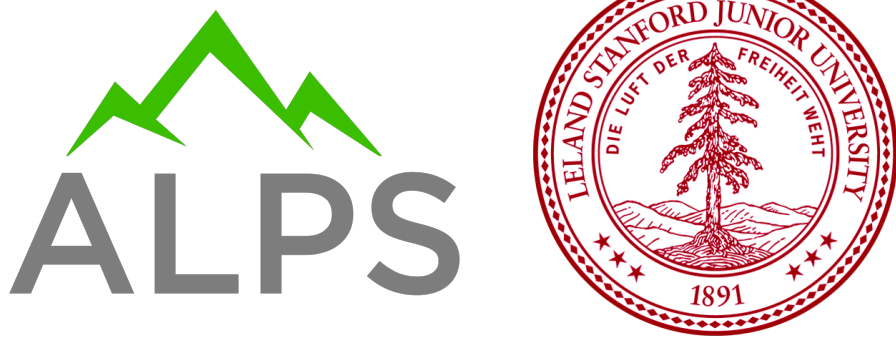
# Uncertain evidence statements and guilt perception in iterative reproductions of crime stories

The corpus will become publicly available by January 2020 as part of a Github repository at <https://github.com/elisakreiss/iteratednarration>.

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## Motivation

- News stories are constantly observed and communicated.
- Transmission of information is lossy!
- How does information about guilt transform over reproductions?
- This is an exploratory investigation on the systematicity behind the way stories transform and what affects the reader's perception about guilt inferences.

Thanks to a routine cargo vessel check, the Indonesian police were able to prevent a smuggling attempt. They found about 150 exotic birds stuffed into **plastic drain pipes** that were sealed at each end by a wire. The animals were meant to be transported to the US, where they were to be sold as pets. Officials assume that the operation was planned and executed by a wildlife trafficking ring. This delivery would have been worth approximately \$250,000. **Nearly one week after** discovering the illegally captured birds, the police arrested four men who **purportedly** attempted to commit the smuggling. The suspects face up to five years in prison and a fine of up to \$8000 if found guilty. The case rests on an anonymous tip, which provides a very weak case for the suspects' guilt. Moreover, all four suspects appear to have plausible alibis. Thus, it seems very unlikely that they were involved.

Indonesian police were able to stop a smuggling attempt when they stopped a **truck** and found about 150 exotic birds being hidden in **tubes** to sell as pets. **About a week later 4 men were arrested for their involvement** in the exotic animal trafficking ring.

Indonesian police were able to stop a smuggling attempt when they stopped a truck containing 150 exotic birds that were hidden in tubes that were hidden in tubes to sell as pets. **About a week later 4 men were arrested** for their involvement in the exotic animal smuggling ring.

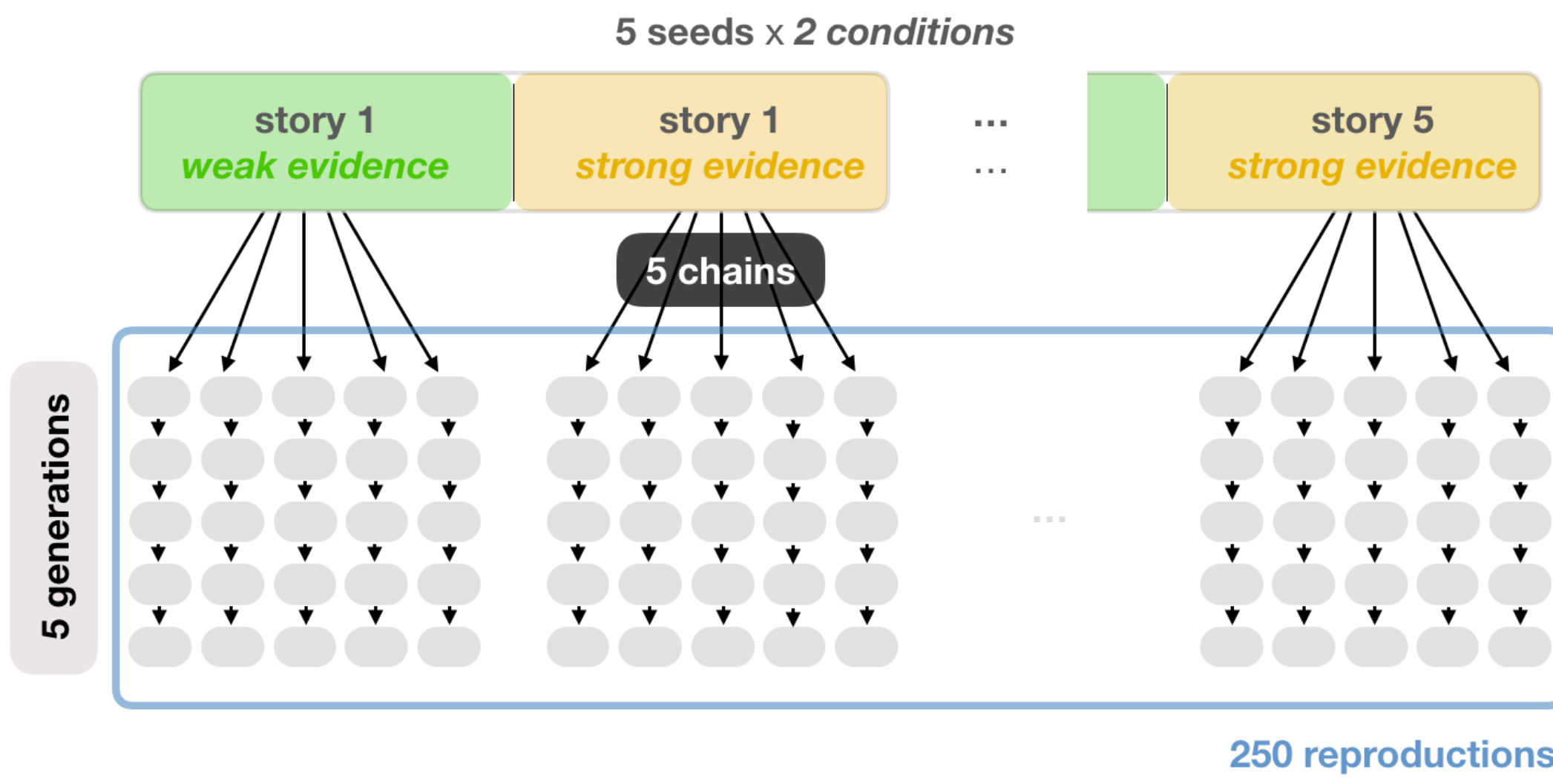
Indonesian police stopped a smuggling of 150 exotic birds by pulling over the **car** with the animals that were going to be sold as pets. **A week later, 4 men were arrested in connection to this operation.**

Indonesian police **pulled over someone** with 150 exotic animals that were going to be sold as pets. A week later, police had **arrested 4 people who were involved** in the plan.

Indonesian police arrested a person who had 150 exotic animals and planned to sell them as pets. **Later on, 4 more people were arrested** who helped out the original person.

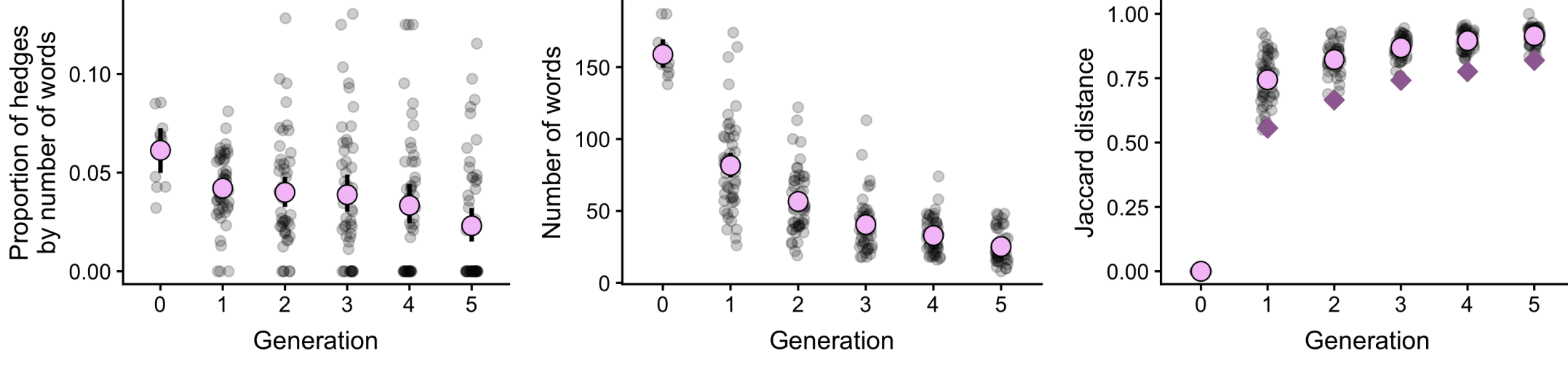
## Corpus

Transmission chain paradigm: Bartlett 1932<sup>[1]</sup>



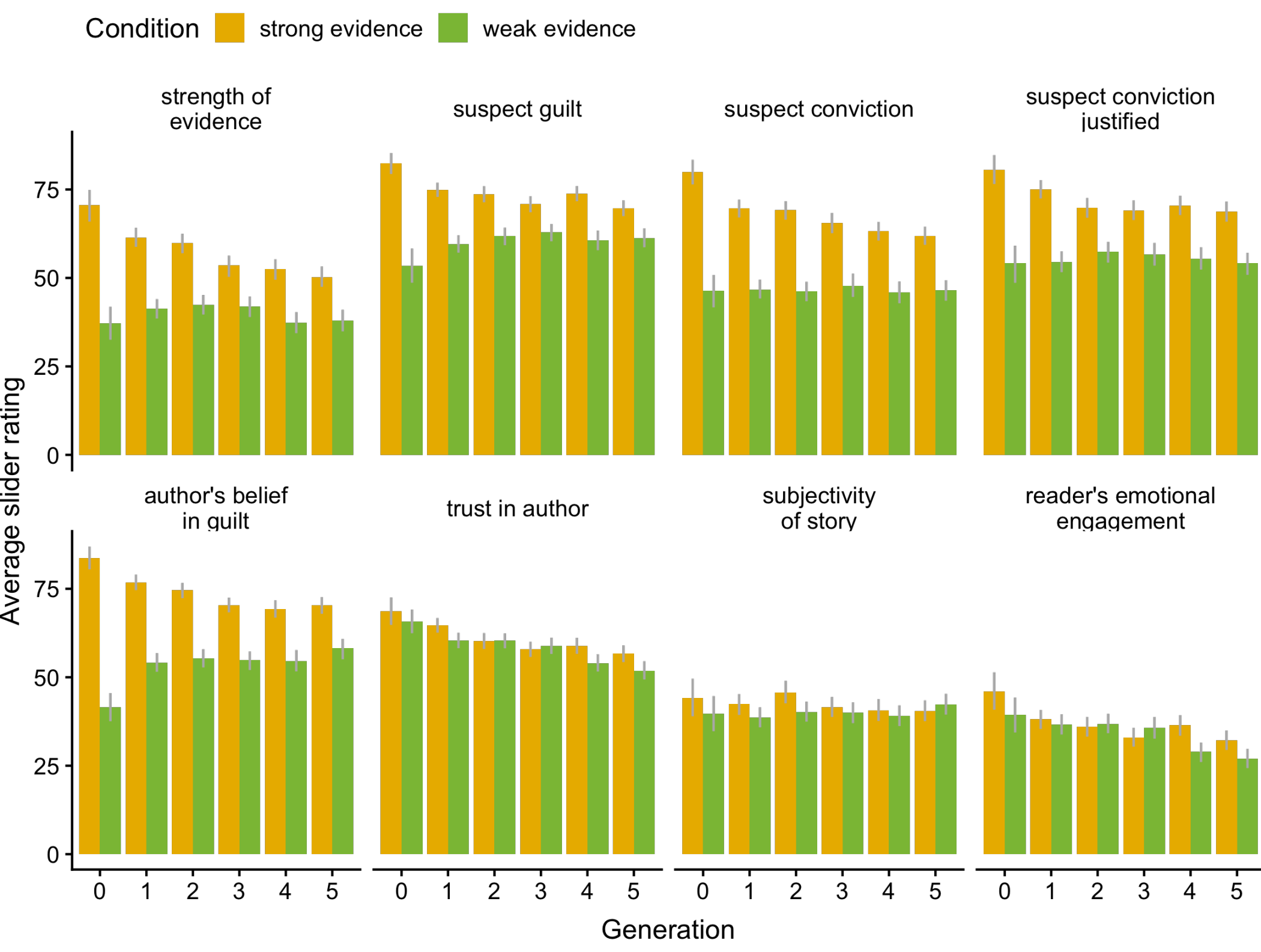
### Seed stories

- The seed stories reported on a committed crime and an arrest of one or more suspects.
- Each seed occurred in a **weak and strong evidence condition**, for example suggesting blurry or clear video footage used for identification of the suspects.<sup>[2]</sup>
- **Topics:** arson, property destruction, sexual harrasment, email scam, animal smuggling



## Annotation

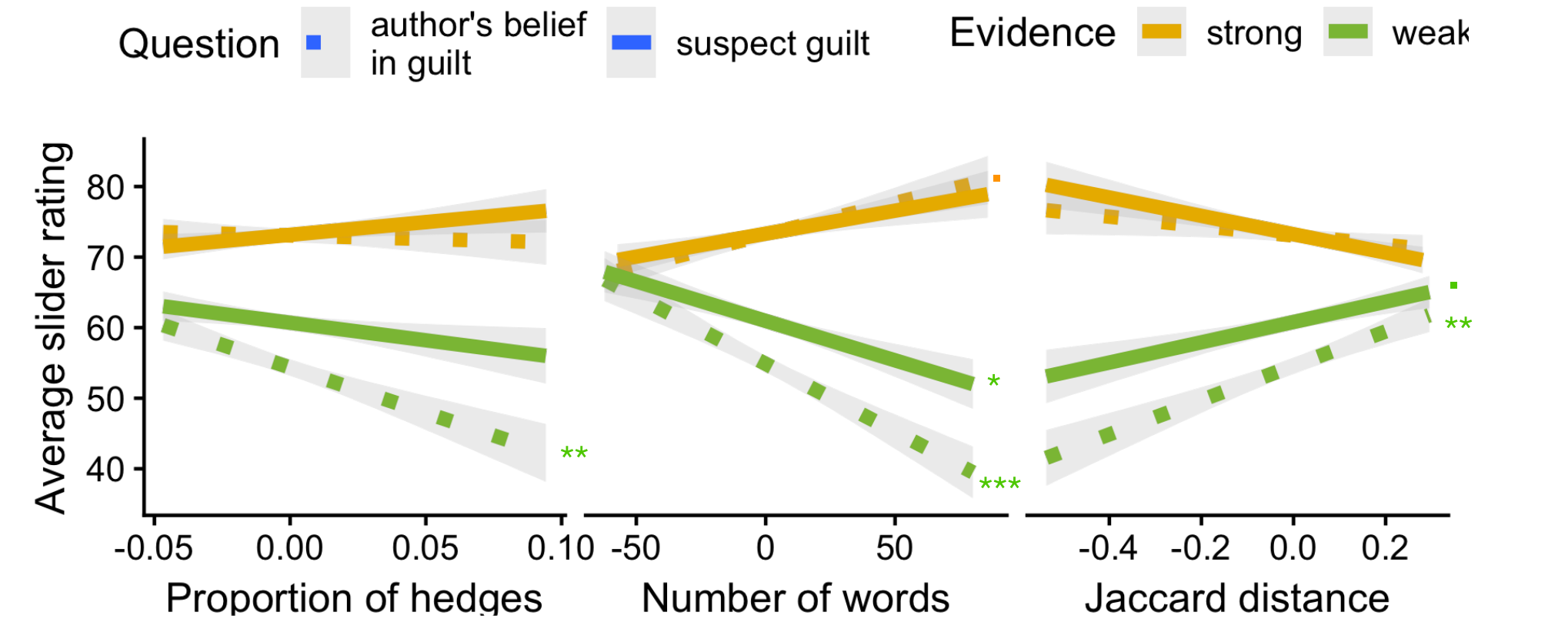
- The corpus elicited reproductions, whereas the annotations address the reader's guilt perception directly.
- 5392 participants (Amazon Mechanical Turk) answered 8 questions (5 guilt-related, 3 other) about one story from the corpus.



- All guilt related measures are clearly affected by the strong vs. weak evidence manipulation.

## Results

- Asymmetry between what readers themselves believe about the suspect's guilt and what they think the author of the story believes.
- However, this asymmetry only exists when the evidence is weak. It increases when the proportion of hedges and number of words is high and Jaccard distance to the original story is low.



## Discussion

- When the evidence is weak, participants judge the suspect's guilt higher than what they think the author of the story believes. This in turn could guide people's reproductions and influence how stories transform.

References  
[1] Bartlett, F. C. (1932). Remembering: An experimental and social study. Cambridge: Cambridge University.  
[2] Van Prooijen, J.-W. (2006). Retributive reactions to suspected offenders: The importance of social categorizations and guilt probability. *Personality and Social Psychology Bulletin*, 32(6), 715–726.  
Related: [3] Kirby, S., Griffith, T., & Smith, K. (2014). Iterated learning and the evolution of language. *Current Opinion in Neurobiology*, 28, 108–114. [4] Degen, J., Trotzke, A., Scontras, G., Wittenberg, E., & Goodman, N. D. (2019). Definitely, maybe: A new experimental paradigm for investigating the pragmatics of evidential devices across languages. *Journal of Pragmatics*, 140, 33–48. [5] Mesoudi, A., & Whiten, A. (2004). The hierarchical transformation of event knowledge in human cultural transmission. *Journal of Cognition and Culture*, 4(1), 1–24.