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Introduction

- Semantic measures from the Cookie Theft picture description differentiate older adults with mild cognitive impairment (MCI) from those who are cognitively unimpaired (CU). (Filiou et al., 2020).
 - People with MCI produce more pronouns and verbs, and fewer nouns than CU (Mueller et al., 2018; Fraser et al., 2016).
- However, findings from the Cookie Theft may not generalize to other contexts given unique task demands (Yeung et al., 2021).
- This study compared the levels of semantic variables produced by older adults across 6 different discourse tasks.**

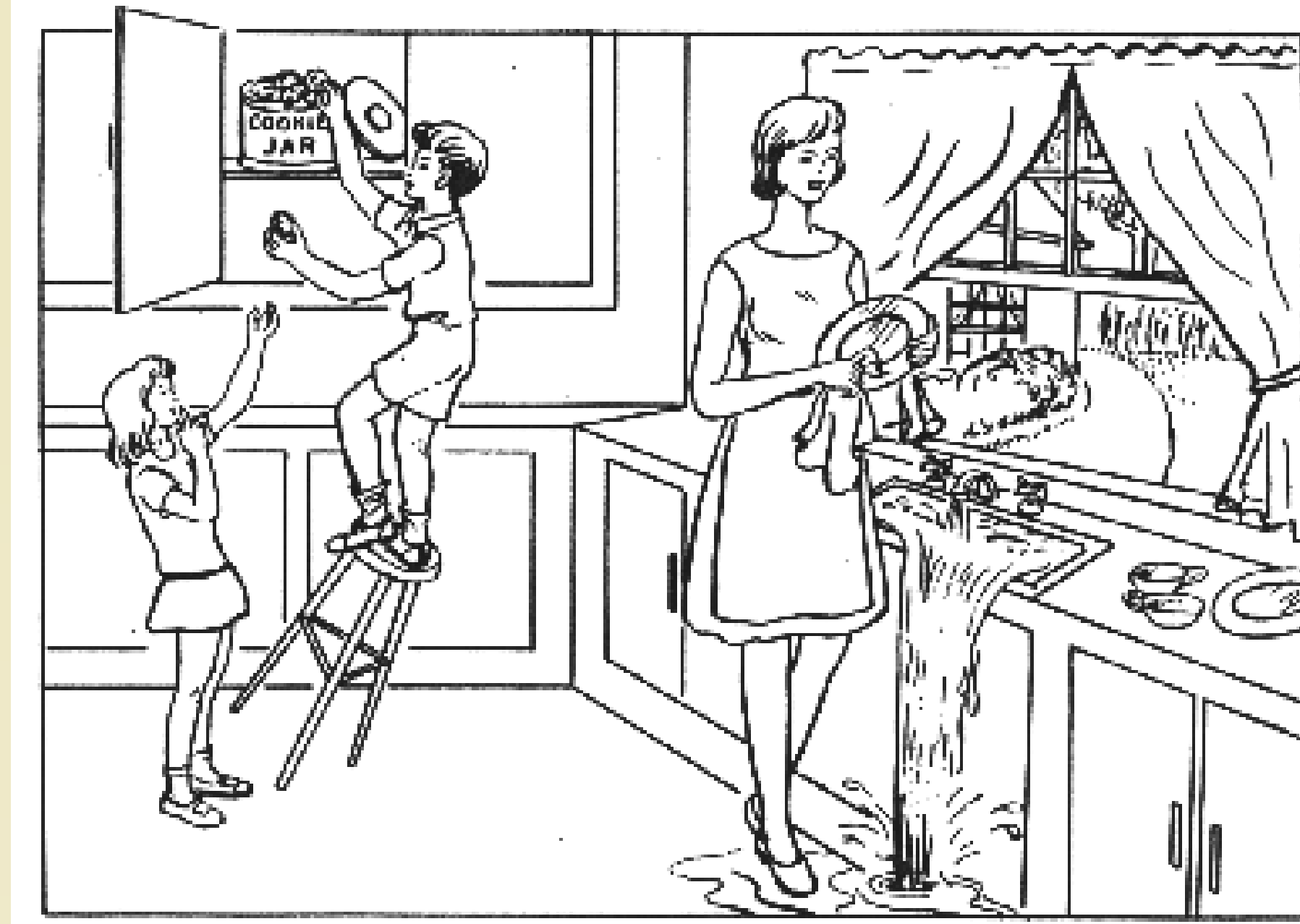
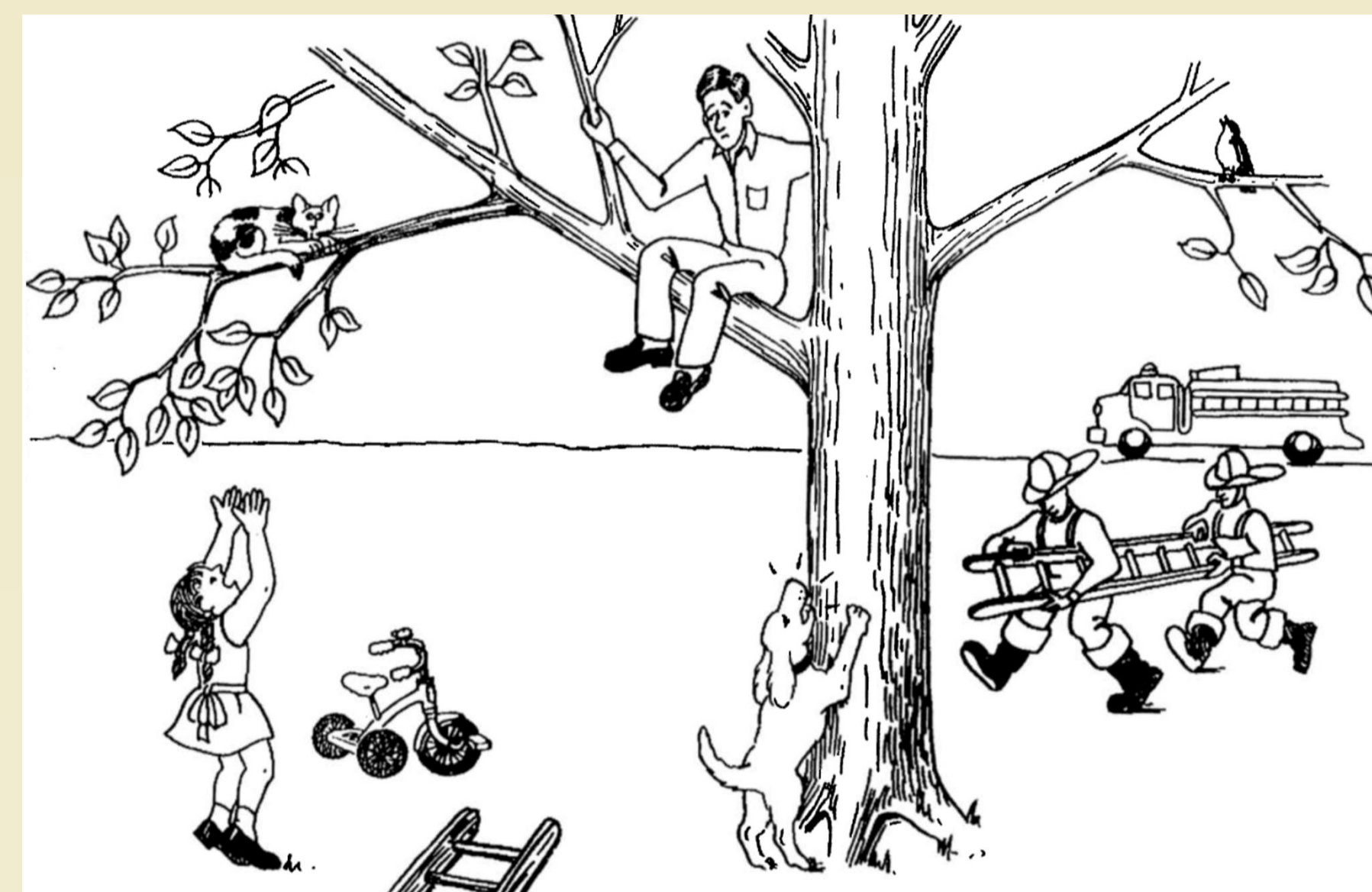
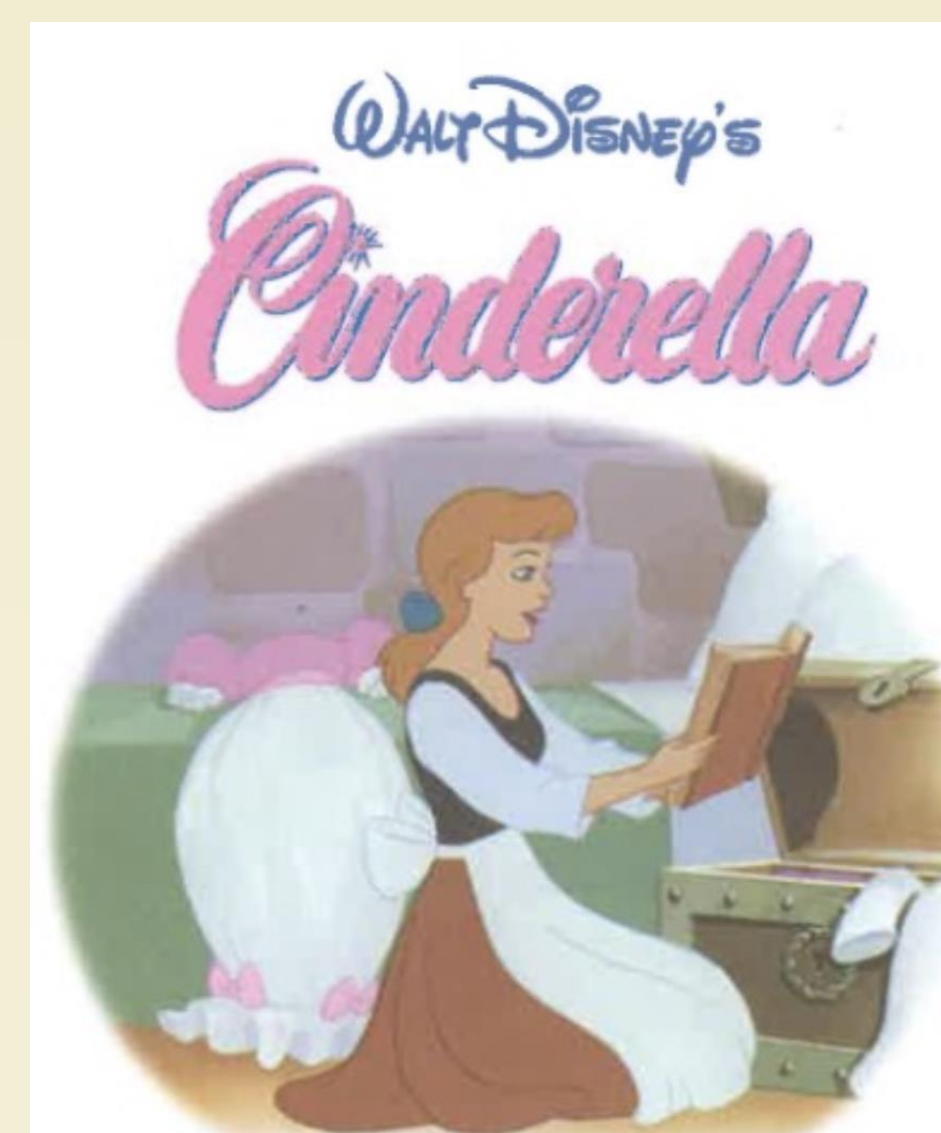
Methods

- Analyzed discourse transcripts of older adults (MCI = 61; CU = 34) from the DementiaBank Delaware Corpus (Lanzi et al., 2023)
 - Transcripts included spoken language samples elicited from 6 discourse tasks
- Extracted 3 semantic variables using Computerized Language Analysis (CLAN) software (MacWhinney, 2000)
 - Pronouns (out of total nouns + pronouns)
 - Verbs (out of total words)
 - Nouns (out of total words)

Analyses & Results

- Removed outliers (3) & assessed normality
- Found no significant interaction effect of cognitive group x task
- Aggregated data & conducted one-way ANOVAs for each variable (all p 's < .001)
 - F_{pronoun} (5, 544) = 31.88 (Fig. 1)
 - $F_{\% \text{Verb}}$ (5, 544) = 30.14 (Fig. 2)
 - $F_{\% \text{Noun}}$ (5, 544) = 44.13 (Fig. 3)
- Completed post-hoc comparison procedures (Table 1)

Discourse Task Stimuli

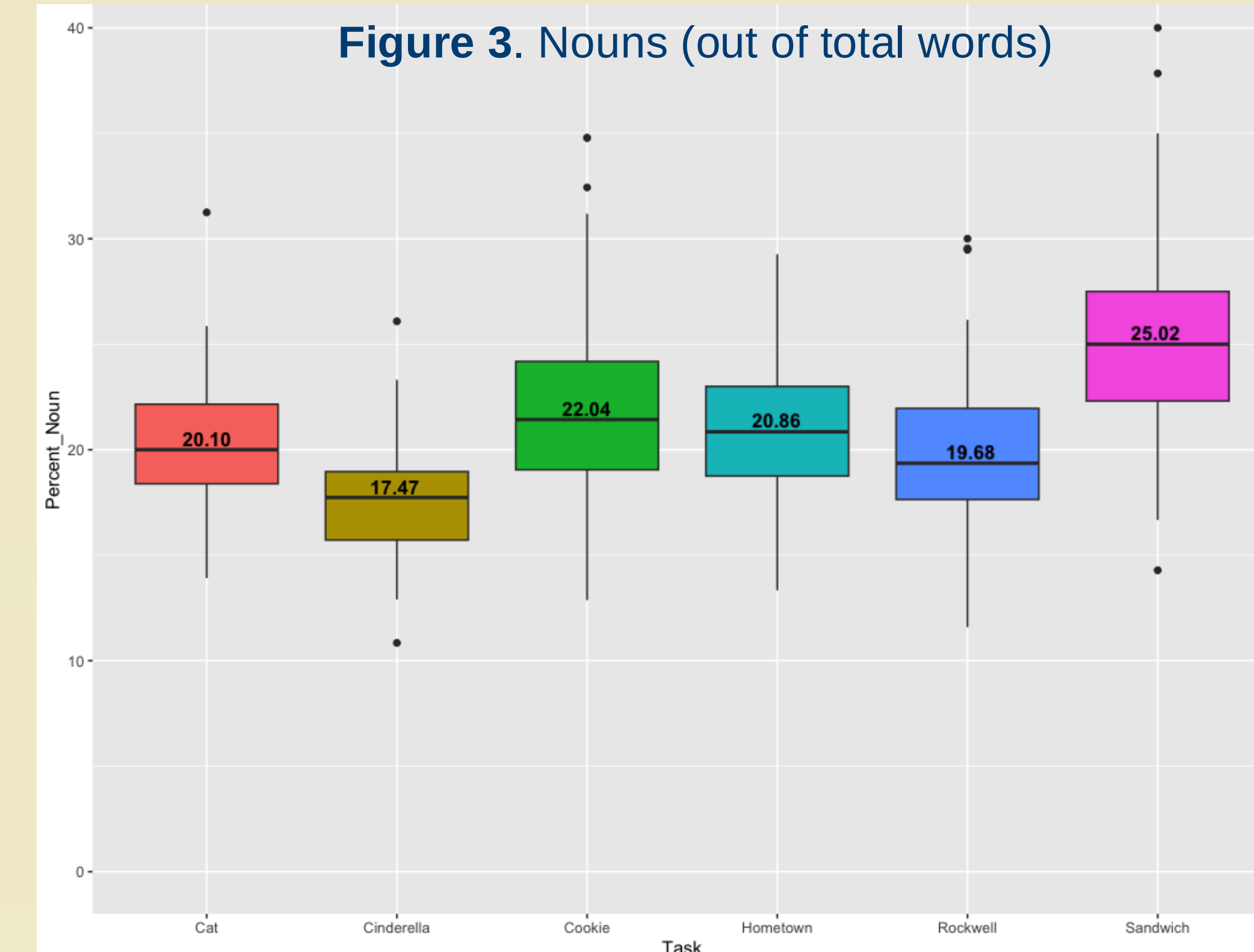
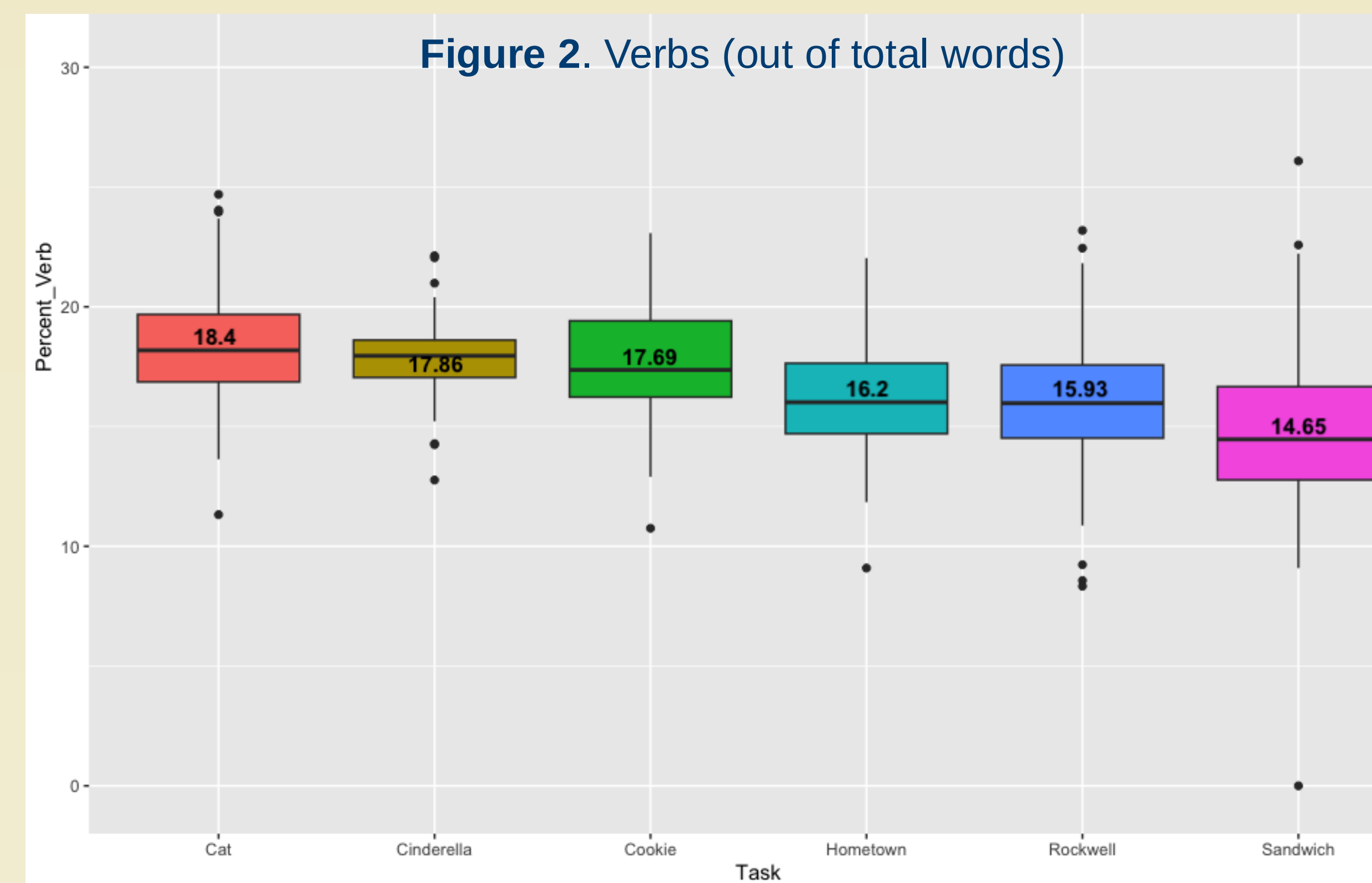
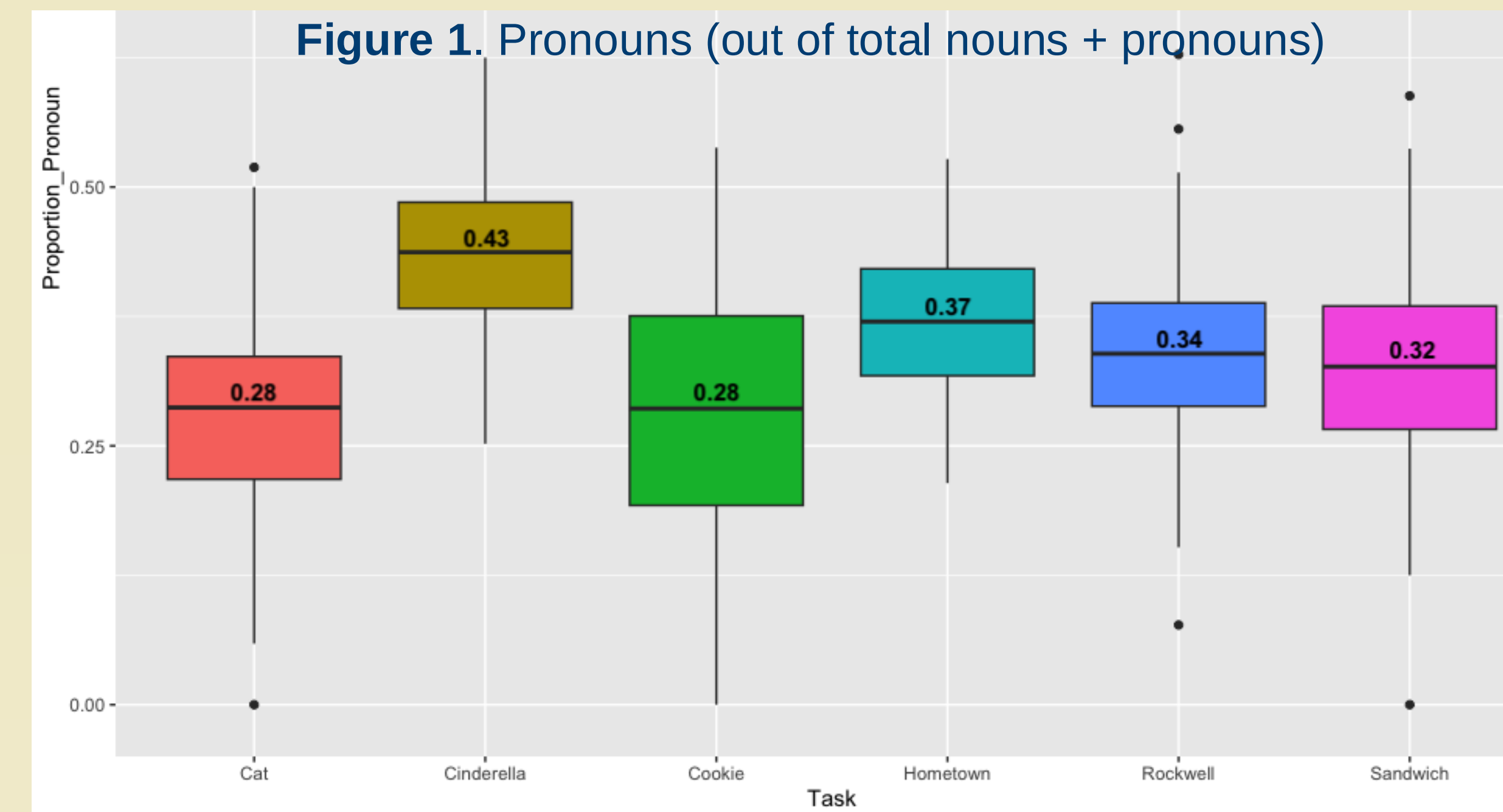
Cookie Theft Stimuli
(Goodglass et al., 2001)Cat Rescue Stimuli
(Nicholas & Brookshire, 1993)Norman Rockwell Stimuli
(Rockwell, 1947)Cinderella Story Stimuli
(Grimes, 2005)

Tell me how to make a peanut butter and jelly sandwich.

PB&J Sandwich Stimuli

Tell me about your hometown.

Hometown Stimuli



Conclusions

- Using tasks that are more sensitive to specific semantic variables may allow us to **better detect cognitive decline in older adults and/or differentiate between cognitive groups.**
 - e.g., studying pronoun use in the Cinderella story
- Using a variety of discourse tasks may also **better capture the different cognitive-linguistic demands that reflect everyday language use.**

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Note. The effect size (d) is provided if the difference between tasks is significant ($p < .05$); blank cells indicate no significant difference between tasks

Table 1. Post-hoc comparisons

Task A	Task B	Effect size (d)		
		Noun	Verb	Pronoun
Cat	Cinderella	-1.54		0.72
	Cookie			-0.53
	Hometown	-0.92	0.88	
	Rockwell	-0.61	0.99	
	Sandwich	-0.46	1.50	-1.35
Cinderella	Cookie	1.55		-1.25
	Hometown	0.62	0.67	-0.92
	Rockwell	0.94	0.77	-0.60
	Sandwich	1.08	1.29	-2.06
Cookie	Hometown	-0.92	0.60	
	Rockwell	-0.61	0.71	0.65
	Sandwich	-0.46	1.22	-0.82
Hometown	Rockwell	0.21		
	Sandwich	0.46	0.62	-1.14
Rockwell	Sandwich		0.51	-1.46