



# What Makes a Good Story: The Naïve Rater's Perception

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## BACKGROUND

- Adults with aphasia produce fewer accurate and complete main concepts/main events and fewer information units when telling stories corresponding with single or sequential picture stimuli (Nicholas & Brookshire, 1993, 1995; Wright, Capilouto, & Wagovich, 2006).
- Their performance on discourse measures is correlated with perceptual measures of language change or story quality ratings (Doyle, Tsironas, Goda, & Kalinyak, 1996; Ross & Wertz, 1999).
- Similar relationships between discourse measures and story quality ratings have been found in the normal aging literature (James, Burke, Austin, & Hulme, 1998) but the discourse measures and discourse tasks differed from those used in the aphasia literature.
- More research is needed to determine which discourse measures are associated with the greatest change in ratings of story quality for individuals without language impairments.
  - Perhaps identifying measures of discourse production impaired in adults with aphasia that are predictive of story quality ratings in non-language impaired adults could have significant clinical implications for components of discourse targeted in aphasia treatment.

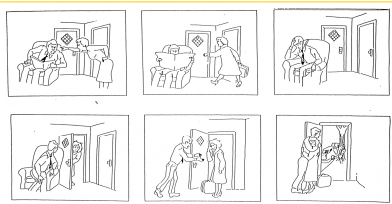
## PURPOSE

- To determine if the measures that predict language quality in individuals with language impairments are sensitive to naïve raters' perceptions of story quality for stories told by adults without language impairments.
- To determine if other linguistic measures that may differentiate language produced by older and younger story tellers are also predictive of naïve raters' perception of story quality.

## METHODS

### Stimuli

- 23 sequential picture descriptions generated from Nicholas and Brookshire's (1993) "argument" scene and 23 stories generated from McCully's (1984) wordless picture book "Picnic"



### Sampling of Picnic Story Stimulus



### Linguistic Analyses

- Story Propositions
- Main Events
- Information Units
- Lexical Errors
- Lexical Diversity
- Global Coherence
- Local Coherence

### Participants

- Story tellers included 13 young (M = 22.47, SD = 2.72) and 12 older adults (M = 67.33, SD = 5.96) randomly selected from a previous study (Wright et al., 2007).
- Raters included 11 college students aged 18-29 years (M = 20.8, SD = 3.8, 10F, 1M).

### Procedures

- Narratives were formatted into paragraphs using consistent rules for minimal punctuation.
- Stories were presented in random order except the first 3 stories in each packet were included to give raters a sense of the variability of the stories and to ensure their understanding of the rating procedure.
- Raters evaluated the narratives using Direct Magnitude Estimation (DME) by assigning numbers to the stories to match their perception of story quality. Better stories received higher numbers. All scores were converted to standard scores for statistical analyses.
- After rating all stories, participants completed a post rating interview indicating what they believed influenced their ratings of story quality using a 5 point scale.

### Reliability

- Intra-rater agreement for linguistic analyses was  $\geq 89\%$  and inter-rater agreement was  $\geq 80\%$ .
- Raters scored one story in each discourse condition twice. Pearson's correlation analyses were performed for the first and second ratings and strong positive correlations were present for the stories,  $r = .92, p < .001$ , and the sequential picture descriptions,  $r = .94, p < .001$ .

## RESULTS AND DISCUSSION

### Results

- Multiple regression analyses were performed with each discourse task to determine the combination of linguistic measures that best predict story quality ratings.
- A model including all the objective measures as predictors was significant for the stories,  $F(6, 13) = 3.93, p < .05$ , but not for the sequential pictures descriptions,  $F(6, 13) = 1.22, p = .35$ .
- Removing the predictors that contributed minimally to each model revealed that different measures predicted story quality ratings for the different discourse tasks.

Table 1. Results: "Picnic" Story

Model	r	B	sr <sup>2</sup>	Adjusted R <sup>2</sup>
<b>PICNIC</b>				
Information Units	.44*	.39*	.14*	.54*
Story Propositions	.63*	.47*	.19*	
Lexical Diversity	.18	.29	.08	
Local Coherence	.36	.33	.10	

Table 2. Results: Sequential Picture Description

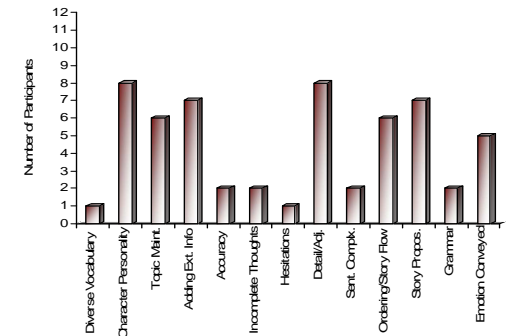
Model	r	B	sr <sup>2</sup>	Adjusted R <sup>2</sup>
<b>ARGUMENT</b>				
Main Events	.42	.39	.15	.22*
Local Coherence	.39	.36	.18	

- Participants completed a post-rating form indicating on a scale of 1-5 the strength of the influence specific story elements had on their ratings of story quality. A rating of 1 indicated the item had no influence on their ratings of story quality and a 5 indicated a strong influence.

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Figure: Number of participants indicating 5 (strong influence) on the post-rating form



### Discussion

- Results indicate that the discourse measures that predict story quality vary by discourse type.
- Story propositions and information units were significant predictors of story quality ratings for stories generated by adults while viewing a wordless picture book, but the same measures did not significantly predict story quality ratings of the sequential picture descriptions.
- Similar relationships found between discourse measures and story quality ratings identified in the language of individuals with aphasia were present for stories told by non-language impaired adults.

## CLINICAL IMPLICATIONS

- These results highlight the importance of information units and story propositions to discourse quality and may have implications for aphasia treatment.

## REFERENCES

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