Barney, Sesame Street, & Pronouns: A Discussion of Pronoun Modeling on Two Popular Cartoons

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Introductions

- Who are you?
  - SLPs
  - Audiologists
  - Students

- Who we are:
  - Melissa Norris Cory - SLP with the Sangamon Area Special Education District
  - Valerie Boyer, Ph.D - Assistant Professor at Southern Illinois University Carbondale
  - Kathryn Martin - Instructor and Clinical Supervisor at Southern Illinois University Carbondale

- Why are we here?
Toddlers watch **2-3 hours** of television daily by the age of 3 (Huston, et al., 1990).

Children with language impairment watch significantly more TV than typically developing peers and at earlier ages (Chonchaiya & Pruksananonda, 2008).

Quality impacts outcomes of TV viewing – children who viewed Sesame Street at age 2 scored better on academic readiness tests at the age of 3 in the areas of vocabulary and letter-word skills (Wright et al., 2001).
Pronoun Significance

- Children with LI including ASD omit or incorrectly utilize pronouns (Hobson et al., 2010)

- Adolescents with ASD either substituted “you” for “he” or used the proper name instead of “he”.

  - Example: instead of saying “Scott took the iPad from me. He made me mad.”

  - A child with ASD might say: “Scott to the iPad. Scott makes me mad.”
Pronoun Development

- Typically develop in early childhood.
- Wells (1985) documented 75% of typically developing children produce all subject pronouns by 45 months.
- Subject pronouns precede object pronouns.
- First person pronouns precede second person pronouns, which precede third person pronouns.
- Comprehension of pronouns has been documented as early as 12 months (Saylor, Ganea, & Vazquez, 2011).
Research Questions

- Do Sesame Street and Barney and Friends produce developmentally appropriate subject pronoun models for young children?
- Are there significant differences between the two TV shows in subject pronoun use both in accuracy of use and in the types of pronouns produced during episodes?
Procedure

- Five episodes of Sesame Street and also Barney and Friends were recorded on DVD over a 1 month period.

- The first 100 opportunities for subject pronoun use were transcribed and coded as correct use, omission, or substitution. They were also additionally coded as first, second, or third person.

- Percentage of occurrence was calculated for each episode. Means for each show’s total were calculated and independent-samples t tests were calculated to determine statistical significance.
Both shows average greater than 90% accuracy for subject pronoun modeling.

- Sesame Street had a mean of 92.6%
- Barney and Friends had a mean of 99.4%

Subject pronoun omissions were very rare with 3 occurrences total between the two shows.

- Sesame Street used significantly more singular pronouns while Barney and Friends used significantly more plural pronouns.
- Sesame Street also used significantly more second person pronouns than Barney and Friends.
### Table 1: First 100 Opportunities for Pronoun Use By Type.

<table>
<thead>
<tr>
<th>Show</th>
<th># correct</th>
<th># substitutions</th>
<th># omissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sesame Street 1</td>
<td>80</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Sesame Street 2</td>
<td>92</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Sesame Street 3</td>
<td>97</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Sesame Street 4</td>
<td>95</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Sesame Street 5</td>
<td>99</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Barney 1</td>
<td>99</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Barney 2</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Barney 3</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Barney 4</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Barney 5</td>
<td>98</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

### Table 2: First 100 Opportunities for Pronoun Use by Tense.

<table>
<thead>
<tr>
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<th>Tense</th>
</tr>
</thead>
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<td>Sesame Street 1</td>
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</tr>
<tr>
<td>Sesame Street 2</td>
<td>82</td>
</tr>
<tr>
<td>Sesame Street 3</td>
<td>98</td>
</tr>
<tr>
<td>Sesame Street 4</td>
<td>84</td>
</tr>
<tr>
<td>Sesame Street 5</td>
<td>90</td>
</tr>
<tr>
<td>Barney 1</td>
<td>53</td>
</tr>
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<td>Barney 2</td>
<td>70</td>
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<tr>
<td>Barney 3</td>
<td>73</td>
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<tr>
<td>Barney 4</td>
<td>71</td>
</tr>
<tr>
<td>Barney 5</td>
<td>51</td>
</tr>
</tbody>
</table>
Discussion

Sesame Street had more substitutions of subject pronouns in the first two episodes described due to an outlier.

Barney and Friends had significantly more plural pronouns in the various songs the characters sang in each episode.

Sesame Street had significantly more second person pronouns because they ask open-ended questions of their viewers in each episode.

Ex: “Can you say _____?” or “Can you count to 10 with me?”
Literature review revealed children learn from television.

This study revealed both shows are appropriate models for subject pronoun use.

If you have a student/client displaying difficulty with subject pronoun use, this data could help guide SLPs in suggesting appropriate shows to watch at home.

Future research could examine other aspects of language displayed in television programming.

Limitations:
- This was a small study, however it serves as a model for future research regarding language modeling in television.
Conclusions & Questions

- Both shows analyzed were good language models.
- Sesame Street is more interactive which indicates possible increased language stimulation and development.
- Be mindful of what your clients/students are watching and how often – it has an impact on their development of language.

Questions???


