The Gift of Gab:
An Investigation of the Influence of Toy Type on Preverbal Infant Volubility

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Purpose

The broad purpose of this research was to explore the relationship between toy type and volubility in preverbal infants. More specifically, this research examined whether electronic or traditional toys were associated with a greater number of prelinguistic vocalizations in infants between 8 and 12 months of age.

Method

I used an experimental research design to collect data.

- I videorecorded all dyads in the Freedlander Speech and Hearing Clinic.
- I asked parents to play with their children as they do "at home."
- Dyads played with all of the following toys for 5 minutes each:
  - The "Warm-Up Toy" was always first.
  - I presented the Electronic Rings, Traditional Rings, Electronic Truck, and Traditional Truck in counterbalanced order.

I tallied the infants' vocalizations from the recordings with guidance from the following definitions:

- "Speech like utterance[s] consisting of, at minimum a voiced vowel. Non-speech-like utterances, such as cries, grunts, and laughs were not coded as child vocalizations" (Sosa, 2016, para. 16).
- "…a *breath group*. If one could hear a breath (ingress) within a vocalization, an utterance boundary was to be placed there. If no breath could be detected, the breath group was defined as a vocalization separated from other vocalizations by at least one second" (Oller & Lynch, 1992, p. 519).

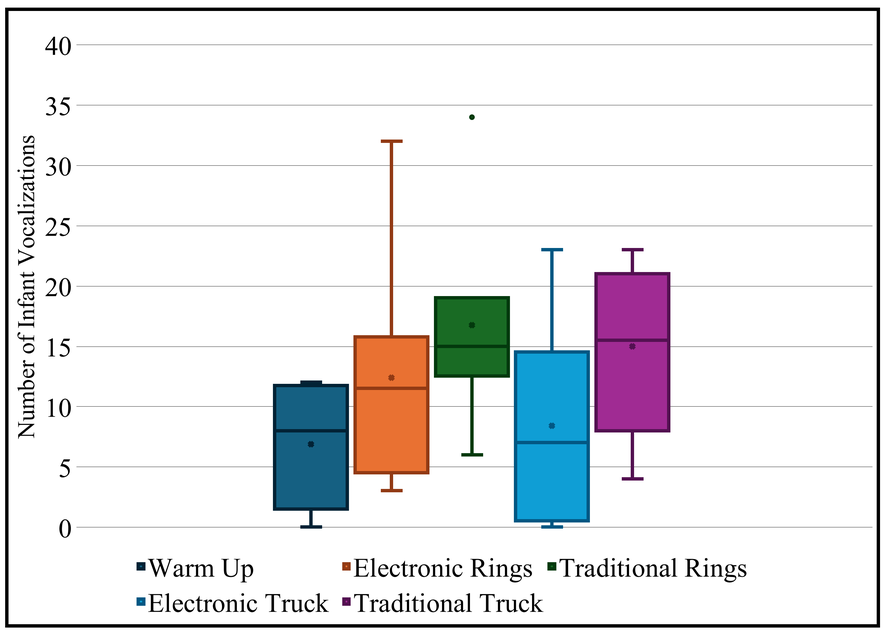
Participants

Eight infants (4 female and 4 male) participated in the study.

Mean age of 9 months and 17 days old (range of 7 months and 17 days old to 11 months and 14 days old).

Experimental Materials

I would like to thank The College of Wooster's Henry J. Copeland Fund for Independent Study, without which, I would not have been able to purchase the toys that made this study possible.



Note. With the exception of the warm-up toy, experimental toys were presented in counterbalanced order. The infants played with each toy for 5 minutes. The medians are denoted by the middle line in the box. The means are denoted by the 'x'. Outliers appear as separate data points, indicating extreme values.

Results

- There was no relationship between age and number of vocalizations.
- I ran four paired samples *t*-tests to compare the mean number of vocalizations across toy groups.

Results of Paired Samples t-test Comparisons

Relationship Explored	*M*	*SD*	*t*	*df*	*p*
Electronic vs Traditional					
Electronic Rings	12.38	9.30	-1.15	7	.289
Traditional Rings	16.75	8.12			
Electronic Truck	8.38	8.30	-2.50	7	.041*
Traditional Truck	15.00	6.70			
Warm Up vs Experimental					
Warm Up Toy	6.88	4.91	-1.28	7	.242
Electronic Toys	10.38	8.00			
Warm Up Toy	6.88	4.91	-5.40	7	.001**
Traditional Toys	15.88	6.49			

Note. An asterisk (*) denotes a significant difference of $p < .05$. (**) is a significant difference of $p < .01$. 'Warm Up Toy' is the mean number of vocalizations across children for the warm-up toy. 'Experimental' is the mean number of vocalizations for each of the experimental toys: 'Electronic Rings,' 'Traditional Rings,' 'Electronic Truck,' and 'Traditional Truck.'

Major Conclusion & Implication

The effect of toy type on infant volubility is complicated. The results of this study demonstrate that the features of the type of toy (electronic vs. traditional) can influence the number of vocalizations a child makes.

Early intervention specialists and guardians of young children who are seeking to increase the number of vocalizations in preverbal children need to carefully consider the toys they employ during therapy and play.

References

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