

SOCIAL SENSITIVITY IN BILINGUAL CHILDREN

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INTRODUCTION

Background

Bilingual children exceed their monolingual peers in cognitive abilities (Hakuta, 1971; Perner & Lang, 1999; Bialystok & Barca, 2001; Blakemore & Choudhury, 2006) and social cognition (Greenberg, Bellena & Bialystok, 2003; Goetz, 2013). Bilingualism might therefore influence social sensitivity, which is the ability to accurately perceive and comprehend the behavior, feelings and motives of other individuals.

There has been little research demonstrating how social cognition and cognitive abilities influence one another, and even less that also considers the role of bilingual language exposure. Further, studies typically have segregated participants into either a monolingual or bilingual group for research purposes, thus failing to acknowledge the complex nature of bilingualism. Indeed, participants with significant exposure to, but not fluent in, a non-native language may have similar cognitive and social abilities as the bilingual participants (Carlson & Meltzoff, 2008; Genesee, Tucker, & Lambert, 1975; Verreyt, Woumans, Vandelanotte, Szmalec & Duyck, 2016).

Objective

The current study is designed to determine how children's social sensitivity increases with their level of language exposure, as well as to explore other factors—such as age, general perspective taking skills and executive function skills—that might contribute to social sensitivity.

HYPOTHESIS

As the degree of bilingualism increases, scores will also increase from the day and night task, perspective taking task, and communication task

METHODS

Participants

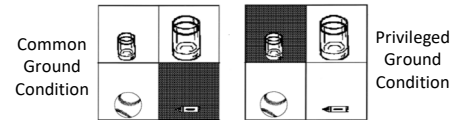
- Children were recruited through the Children's Research Center database
 - 36 to 95 months (n = 13); M = 61.308, SD = 13.708

Measures

- Child & Parent Language Questionnaire:** Evaluates children's language history, usage, exposure, proficiency and education to create a combined score for the child's degree of bilingualism. This measure was adapted from the Bilingual Language Profile (Birdsong, Gertken, & Amengual, 2012) by Ramirez (2017) to make it applicable to children.
- Communication Task:** A comprehension and production task in which children describe target objects in three conditions: (1) common ground, (2) privileged ground, and (3) baseline condition (Nadig & Sedivy, 2002). In the common ground condition only, adjectives are needed to distinguish two similar objects.
- Day and Night Task:** An inhibitory control task in which the child is presented with two pictures: (1) a picture of the moon and stars and (2) a picture of the sun. The participant is required to say "day" for the moon and stars and "night" for the sun (Gerstadt, Joo Hong, & Diamond, 1994).
- Perspective Taking Task:** Children were asked to take the perspective of a Lego photographer taking pictures across a series of trials that varied in: (a) the difference between the child's and photographer's perspective (0°, 90°, or 180°) and (b) complexity of the display (1, 2, or 4 objects; Frick, Mohring, & Newcombe, 2014).

MEASURES

Communication Task



Perspective Taking Task



Day & Night Task



"NIGHT"



"DAY"

TABLES

| Coefficients* | | | | | | ANOVA* | | | | | | |
|---------------|---------------|-----------------------------|------------|----------------------------|--------|--------|----------|----------------|----|-------------|-------|-------------------|
| Model | | Unstandardized Coefficients | | Standardize d Coefficients | t | Sig. | Model | Sum of Squares | df | Mean Square | F | Sig. |
| | | B | Std. Error | | | | | | | | | |
| 1 | (Constant) | -37.522 | 44.293 | | -.847 | .422 | 1 | 3876.807 | 4 | 969.202 | 1.750 | .232 ^a |
| | CombinedScore | .068 | .140 | .143 | .486 | .640 | Residual | 4430.885 | 8 | 553.861 | | |
| | Age | -.171 | .717 | -.089 | -.238 | .818 | Total | 8307.692 | 12 | | | |
| | Tot_0 | 9.727 | 5.098 | .678 | 1.908 | .093 | 2 | 3845.322 | 3 | 1281.774 | 2.585 | .118 ^b |
| | EFPerCor | .241 | .312 | .203 | .771 | .463 | Residual | 4462.370 | 9 | 495.819 | | |
| 2 | (Constant) | -45.197 | 28.789 | | -1.570 | .151 | Total | 8307.692 | 12 | | | |
| | CombinedScore | .084 | .117 | .176 | .716 | .492 | 3 | 3591.054 | 2 | 1795.527 | 3.807 | .059 ^c |
| | Tot_0 | 8.897 | 3.524 | .620 | 2.525 | .033 | Residual | 4716.638 | 10 | 471.664 | | |
| | EFPerCor | -.227 | .291 | -.192 | -.782 | .454 | Total | 8307.692 | 12 | | | |
| | (Constant) | -39.765 | 27.087 | | -1.468 | .173 | 4 | 3242.807 | 1 | 3242.807 | 7.043 | .022 ^d |
| 3 | Tot_0 | 9.110 | 3.425 | .635 | 2.660 | .024 | Residual | 5064.885 | 11 | 460.444 | | |
| | EFPerCor | .243 | .283 | .205 | .859 | .410 | Total | 8307.692 | 12 | | | |
| | (Constant) | -19.962 | 14.061 | | -1.420 | .183 | ANOVA* | | | | | |
| | Tot_0 | 8.969 | 3.380 | .625 | 2.654 | .022 | 1 | 3242.807 | 1 | 3242.807 | 7.043 | .022 ^d |
| | (Constant) | -19.962 | 14.061 | | -1.420 | .183 | 2 | 5064.885 | 11 | 460.444 | | |

a. Dependent Variable: CG_PG

a. Dependent Variable: CG_PG
 b. Predictors: (Constant), EFPerCor, Tot_0, CombinedScore, Age
 c. Predictors: (Constant), EFPerCor, Tot_0, CombinedScore
 d. Predictors: (Constant), EFPerCor, Tot_0
 e. Predictors: (Constant), Tot_0

CONCLUSIONS

Discussion

- In these analyses, children's performance on the Perspective Taking Task was the only variable that significantly predicted their social sensitivity, as measured in the Communication Task.
- Because perspective taking is an important component of communication, this finding suggests that both tests are capturing their respective constructs.
- The small sample size may account for the failure to find relations between language exposure, age or executive function and performance on the Communication Task.

Future Directions

- By increasing the sample size significantly, there may be a fuller range in children's degree of bilingualism which could permit a better assessment of its influence.
- The next step is to modify or find a new communication task, as the current measure has brought challenges throughout the study.

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