Effects of Interpretation on Deception Detection Performance

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Introduction

- Language proficiency can affect people's deception detection performance.
- One solution set by the Canadian Charter of Rights and Freedoms (1982) is the right to the assistance of an interpreter.
- There is no empirical evidence suggesting interpreters mitigate the disparity.
- Does interpreter assistance affect deception detection performance across language proficiencies?

Hypotheses

- Discrimination will be worse for truth- and lie-tellers speaking in their non-native (vs. native) language without an interpreter present.
- Non-native (vs. native) speakers without an interpreter present will be viewed more negatively.

Method

- **Research Design:** 2 (Veracity: lie vs. truth) x 4 (Proficiency: beginner vs. intermediate vs. advanced vs. native) x 2 (Interpreter Presence: yes vs. no) mixed-factors design.
- **Participants:** *N* = 187, 17-55 years old (*M* = 20.79, *SD* = 5.21; 112 female) undergraduate students from Ontario Tech University.
- **Procedure:** Participants watched 8 audiovisual clips (4 truthful, 4 deceitful) in one of 8 Proficiency x Interpreter Presence conditions and provided a veracity judgement after each clip.

Results

Accuracy

A Veracity x Proficiency x Interpreter Presence mixed-factors ANOVA was performed on observer accuracy.

- Observers were significantly more accurate at classifying truth- and lie-tellers when interpreters were present than when they were not, $F(1, 179) = 5.46$, $p = .021$, $\eta_p^2 = .030$.
- Observers were significantly more accurate at classifying lie- than truth-tellers, $F(1, 179) = 17.15$, $p = <.001$, $\eta_p^2 = .087$.

Discrimination

A two-way ANOVA was performed on observers' discrimination (*d'*) scores.

- Observers were significantly better able to discriminate between truth- and lie-tellers when interpreters were present than when they were not, $F(1, 179) = 5.59$, $p = .019$, $\eta_p^2 = .030$.

A one-sample t-test was performed comparing *d'* to 0 (i.e., no sensitivity).

- Observers performed significantly below chance in the advanced absent, $t(25) = -2.10$, $p = .046$, $d = .61$ and native absent, $t(25) = -4.16$, $p < .001$, $d = .64$ conditions.
- Observers did not perform significantly different from chance in all other conditions.

Bias

A two-way ANOVA was performed on observers' bias (*c*) scores.

- There was no significant difference in bias across conditions.

A one-sample t-test was performed comparing *c* to 0 (i.e., no bias).

- Observers displayed a significant truth bias in the beginner present condition, $t(22) = 2.90$, $p = .008$, $d = .43$.
- There were no significant differences from 0 in all other conditions.

Table 1

Means (M) and Standard deviations (SD) for Discrimination (d') and Bias (c; With and Without Interpreters)

	Beginner		*Intermediate*		*Advanced*		*Native*	
Measure	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
d'								
Present	.0024	.60	-.17	.75	.24	.66	-.31	.73
Absent	-.21	.69	-.21	.70	-.25	.61	-.51	.64
c								
Present	.26	.43	-.053	.38	.17	.47	.13	.42
Absent	.13	.45	.12	.46	.18	.50	.10	.37

Conclusion

- Interpreter presence (vs. absence) improves observer deception detection performance across all proficiency groups.
- Observers' discrimination abilities were not significantly different from chance when interpreters were present.
- Interpreters do not seem to level the playing field.
- Data collection is still ongoing to achieve 95% power.

References

Canadian Charter of Rights and Freedoms, s. 14, Part I of the Constitution Act, 1982, being Schedule B to the Canada Act 1982 (UK), 1982, c11.

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