

Introduction

Multilingualism, that is, the regular use of more than one language or dialect, is a common phenomenon, probably representing the majority of people in the world.

(Grosjean & Li, 2013)

Consequently, multilingualism and its possible effects on cognition have become a topic of central interest for researchers in education, linguistics and the broader cognitive sciences

(e.g. Bialystok, 2017)

Two main trends seem to emerge from this body of research.

- Multilinguals often exhibit slower lexical access than monolinguals and smaller vocabularies when each of their languages is considered separately.

→ Normal reflection of the lesser quantity and different quality of language use that multilinguals experience, especially since language use in multilinguals is divided between two or more languages.

(e.g. Bialystok, 2017)

- Some evidence that multilingualism has a positive effect on executive control.

→ Result of managing two languages in the mind through executive control
→ Executive control: Working memory, Inhibition, Task-switching.

(e.g. Bialystok, 2017; but see Paap, Johnson & Sawi, 2015)

Three main views regarding the effect of multilingualism on pragmatic comprehension:

- Bilinguals enjoy a pragmatic advantage.

→ Some studies with children reported superior bilingual pragmatic skills.

(Siegal et al., 2009; 2010)

- Pragmatic interpretation does not differ in bilinguals and monolinguals (as long as bilinguals have adequate proficiency in the target language for semantic processing to proceed unobstructed).

(Antonioni et al., 2020)

- Interface Hypothesis: linguistic phenomena at the interfaces (e.g. semantics-pragmatics) lead to difficulties in bilinguals, which cannot be overcome, even at the highest level of language proficiency. Thus, multilinguals cannot attain monolingual-like pragmatic performance.

(Sorace, 2011)

Two broad models of irony processing:

- Modular view: ironic meanings always take longer to process because they always involve accessing a literal interpretation first.

- Direct access view: ironic meanings can be accessed without processing delay, at least in some situations.

(see in Gibbs & Colston, 2012)

To date, irony comprehension has not been investigated systematically in multilinguals.

Research Questions

☞ Test between three views of multilingual pragmatics, focusing on irony comprehension.

Prediction: Multilingual advantage in irony comprehension.

- From a theoretical perspective, irony is a pragmatic phenomenon that draws on advanced Theory of Mind skills (second-order ToM) and multilinguals have been reported to exhibit superior ToM.

(Spotorno & Noveck, 2014; Rubio-Fernández & Glucksberg, 2012)

- Multilinguals weigh pragmatic information (e.g. intonation) more heavily than linguistic cues during language processing.

(Yow & Markman, 2011; Verhagen et al., 2017)

☞ Does the similarity between the languages spoken by multilinguals modulates a potential multilingual effect on irony comprehension?

→ Tested bi-dialectal speakers of two closely related dialects of the same language.

☞ Adjudicate between two broad models of irony comprehension: modular versus direct access

Method: Participants

Three groups of Greek-speaking young adult participants (age range 18-38) were recruited in Cyprus:

- 29 Greek monolinguals (speakers of Modern Greek).

- 52 bi-dialectal speakers (speakers of Cypriot Greek and Standard Modern Greek).

☞ **Diglossia** in Cyprus: Cypriot Greek (CG) is used in everyday oral communication and Standard Modern Greek (SMG) is used in education, for reading, writing, by the media, and in formal situations.

- 33 multilingual speakers from Cyprus (speakers of CG, SMG and another language).

Method: Background measures

Language Background and Socioeconomic Status Questionnaire: **Family Affluence Scale** (Boyce et al., 2006) and **parental levels of education** as measures of Socioeconomic Status (SES).

Fluid intelligence: **Matrix reasoning test** from the Wechsler Abbreviated Intelligence Scale.

(Wechsler, 1999)

Vocabulary proficiency in SMG: **Mill Hill Vocabulary test** (Definitions and Multiple-Choice parts)

(Raven, Raven, & Court, 2000)

Method: Irony test

- Administered in Standard Modern Greek (SMG).

- Used ironic criticisms: speaker provided a positive reply to mean something negative, with a critical intent.

- Participants watched videos: one actor asked the other which of two objects s/he wanted.

- Based on Deliens et al. (2018).

Method: Irony test

- The second actor's reply could be sincere (literal negative or positive) or ironic and was accompanied by different cue(s):

→ Context only,

→ Distinctive (ironic) Intonation only,

→ Distinctive (ironic) Intonation + Distinctive (ironic) Facial expression,

→ Context + Distinctive (ironic) Intonation + Distinctive (ironic) Facial expression).

☞ Used different ironic cues to test whether multilingualism confers a global advantage in irony or whether the benefit is found only when irony is indexed by non-verbal cues.

☞ Wanted to test if irony is processed as fast as literal meanings in all, none or in some contexts that clearly bias irony.

- Participants had to select the object the second person wanted (for irony, one object corresponded to the literal meaning).

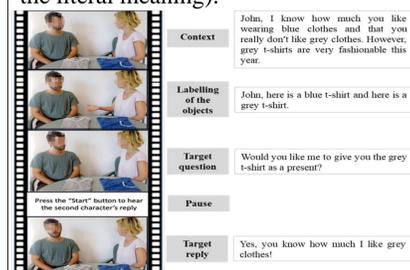


Figure 1.
Example ironic item

Results

- Background measures: no group differences in SES ($F(2, 101)=0.016, p>.05$) or general intelligence ($F(2, 121)=1.511, p<.05$), but multilinguals had a smaller SMG vocabulary than the other two groups ($F(2, 119)=6.46, p<.05$).

- Accuracy in Irony test: only a significant effect of Meaning condition ($F(2, 222)=213, p<.05$).

→ Participants were least accurate in the Ironic condition and less accurate in the Literal-yes than in the Literal-no condition ($ps<.05$).

- Reaction Times in Irony test: only a significant Meaning effect ($F(1, 80)=32, p<.05$).

→ Participants were slower in the Ironic than in the two Literal conditions ($ps<.05$).

- Accuracy for ironic items with Group and Cue as factors: only a significant Cue effect ($F(3, 333)=29, p<.05$).

→ Participants were less accurate in the Context only and Intonation only conditions than in the other cue conditions ($ps<.05$).

Reaction Times for ironic items with Group and Cue as factors: only a significant Cue effect ($F(3, 129)=28, p<.05$).

→ Participants were slower in the Context only than in the Context + Intonation + Face condition ($p<.05$).

→ In fact, in this and the Intonation + Face condition ironic interpretations were processed as fast as interpretations in the two literal control conditions ($ps>.05$).

Summary & Conclusion

- Irony is facilitated when more than one ironic marker are present and can be processed as fast as literal meanings.

- No multilingual or bi-dialectal effect on irony.

- Results provide support to the view of multilingual pragmatics according to which pragmatic interpretation is no different in multilinguals compared to monolinguals (at least at high proficiency level for multilinguals) and to the direct access processing model of irony.

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