What Does That Mean?  
Experimental Evidence Against the Principle of No Synonymy  
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Abstract

A foundational question of linguistics asks whether true synonymy can exist in natural language—that is, whether sentences of different syntactic form can truly have identical meaning. One prima facie counterexample to this hypothesis of no synonymy is the phenomenon of phenomenon of optional THAT: the sentences  
(a) This is the ball that I hit.
(b) This is the ball I hit.

differ in form but do not seem to differ in meaning. Some have argued that there is indeed a subtle meaning difference between these sentences, yet they provide no more than anecdotal evidence. This study tested these meaning-difference claims empirically, finding no evidence to support them. This questions the principle of no synonymy, and suggests that a more nuanced approach must be taken to account for the differing forms than this simple semantic account.

Introduction

Principle of No Synonymy

Whether true paraphrase exists in natural language has been a foundational question in question in theoretical linguistics for decades. Bolinger (1968) famously proposed that proposed that “a difference in syntactic form always spells a difference in meaning,” a position directed against Chomsky’s (1955/1975) generative grammar, which posited shared deep structures between sentences with different forms.

The Phenomenon: Optional THAT

One prima facie counterexample to this principle of no synonymy is the phenomenon of phenomenon of optional relativizer and complementizer that. When THAT serves as a complement to verbs, it can often be omitted: 

(2a) I think that the sky is blue.
(2b) I think the sky is blue. [Denotes a “zero” or omitted relativizer]  

Similarly, when THAT serves as a relative pronoun in certain contexts (when its antecedent does not serve as the subject of the embedded sentence), it can be omitted: 

(3a) This is the ball that I hit.
(3b) This is the ball I hit.

The Meaning-Difference Claims

Some have claimed that there is a meaning difference between these pairs with and without THAT (Jespersen 1927; Storms 1966; Bolinger 1972; Yaguchi 2001, inter alia). Yet they present no more than anecdotal evidence in favor of the claims. We focused on two of Yaguchi’s particular claims, as representative of the most the most easily testable meaning-difference claims in the literature: emotionality and time and distance.

Emotionality

Yaguchi claims that the THAT-forms are less emotional than the NULL-forms. For example, she cites two different newspaper quotations of Princess Diana’s father after her death:  

(4a) “Always believed that the press would kill her in the end.” [Newswear]
(4b) “Always believed the press would kill her in the end.” [Time]

and claims that the Time journal must therefore have interpreted the father as being being more emotional than the Newsweek journalist.

Time Distance

Yaguchi claims that presence of THAT suggests a temporal distance between the main clause and the embedded clause. Thus, in  

(5a) He told me that he got divorced.
(5b) He told me he got divorced.

According to Yaguchi’s theory, in the THAT-form there would be a bigger time distance between when he told the speaker and when the divorce occurred.

The Experiments

We tested these meaning difference claims. 

We asked native speakers to rate meaning of sentences with/without THAT for:  
• emotion with optional complementizer THAT  
• time with optional relativizer THAT, and with optional relativizer THAT  

For the emotion experiment, after reading the sentence as part of a longer paragraph, the paragraph, the experimental subject was asked how emotional the speaker was, for the for the time distance experiment, the subject was asked to estimate how the time gap gap between the main clause and embedded clause.

Example Experimental Item: Emotion

John and Mary were chatting at lunch about one of their colleagues. “I surprised [that(Ø)] he got in an accident,” John said.

Example Experimental Item: Time

John was talking on the phone to his sister. “Yeah, I was talking to Bob [that(Ø)] I had divorced my wife recently.”—Estimate as closely as you can the time difference between when John was talking to Bob and when John divorced his wife.

The Four Experimental Conditions

<table>
<thead>
<tr>
<th>THAT</th>
<th>ZERO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adv. 1</td>
<td>“I think [that] this is a bad idea,” he said calmly.</td>
</tr>
<tr>
<td>Adv. 2</td>
<td>“I think this is a bad idea,” he said angrily.</td>
</tr>
</tbody>
</table>

\[24 \text{ items in } 6 \times 4 \text{ conditions for emotion experiment} \]

Ref.: References

Conclusion

This study finds no evidence for two of the claimed meaning differences between THAT and zero, thus buttressing a counterevidence to Bolinger’s principle. The burden of proof is on those those claiming that there is a meaning difference.

References


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