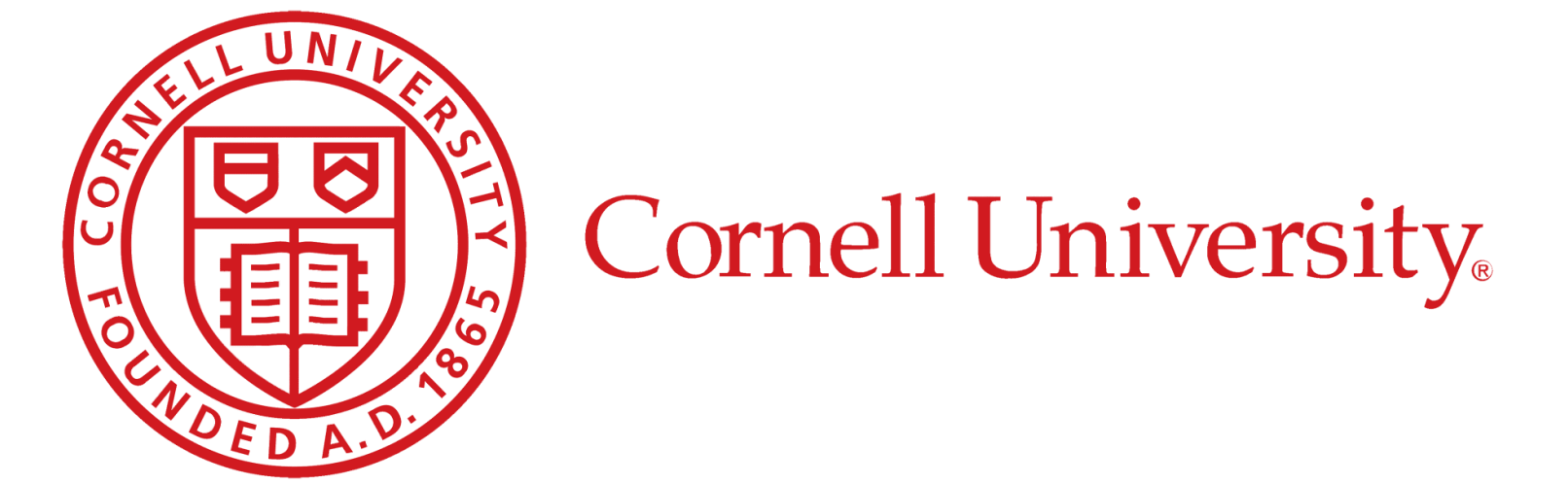


# The Linguistic Expression of Hate Speech: A Corpus Analysis of Causal Constructions in Hate Speech

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## Introduction

Syntactic constructions convey distinct implications, thematic roles, implicit knowledge, etc. (Semin and Fiedler, 1991). How does hate speech use these to assign causal responsibility/blame to minority (targeted) groups and majority groups?

- Are minorities labeled as causers or are majorities labeled as victims?
- Are different types of casual constructions used similarly in hate and non-hate speech?
- How is indirect speech utilized in hate speech?

## Background

Initial words are cognitively salient and verb choice can manipulate perception of causal responsibility (Ng, 2007; Leets, 2000).

1. Immigrants steal hard working Americans' jobs.
2. Immigrants cause hard working Americans' jobs to be stolen.
3. Hard working Americans' jobs are being stolen by immigrants.
4. Hard working Americans' jobs are being stolen.

## Causal Constructions

**Implicit causality construction** (Example 1) is a type of lexical causation construction used to discuss the direct cause of an event.

**Causative construction** (Example 2) uses a causative verb to express causation and is used in more complex events and focuses on the cause's role in the event, meaning it either emphasizes causal responsibility or avoids implying direct causation (Wolff, 2003).

## Dataset

The dataset is comprised of 3 Twitter hate speech datasets.

- Xenophobia dataset
- SemEval-2019 Task 5 (Basile et al., 2019)
- Kaggle Dataset (Brivio, 2022)

Each dataset was labeled with:

- Hate speech vs non-hate speech
- Sentiment (Positive, Neutral, Negative)
- Minority references
- Majority references
- Implicit causality constructions
  - Cause
  - Consequence
  - Thematic roles
- Causative constructions
  - Cause

## Implicit Causality Results

Ex: Immigrants steal hard working Americans' jobs.

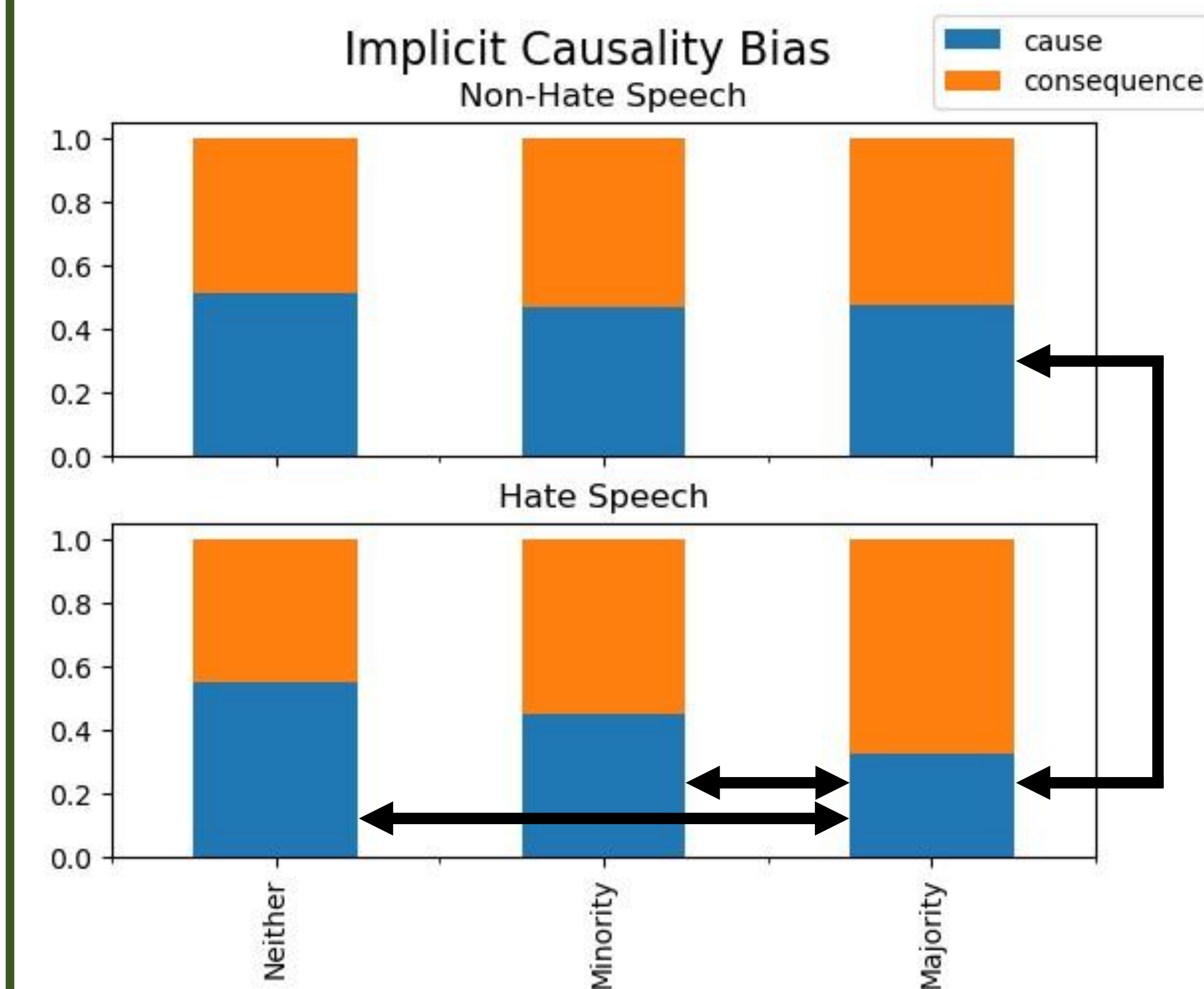


Figure 1: Cause is the entity that causes the event and consequence is who the event happened to. The arrows indicate statistically significant comparisons.

The majority group has less causal responsibility in hate speech.

- The percentage of majority group references in hate speech that are the cause is significantly less. (Figure 1)
- Thematic roles assigned to majority group references in hate speech have less agency and intention. (Figure 2)

Class	Example Verbs
Experiencer-Stimulus	envied, loathed
Stimulus-Experiencer	angered, unsettled
Agent-Patient	warned, corrupted
Agent-Evocator	penalized, ridiculed

Table 1: Examples of implicit causality verbs in each class. Classes are distinguished by the thematic roles they assign.

## Roles Assigned to Each Group (Implicit Causality)

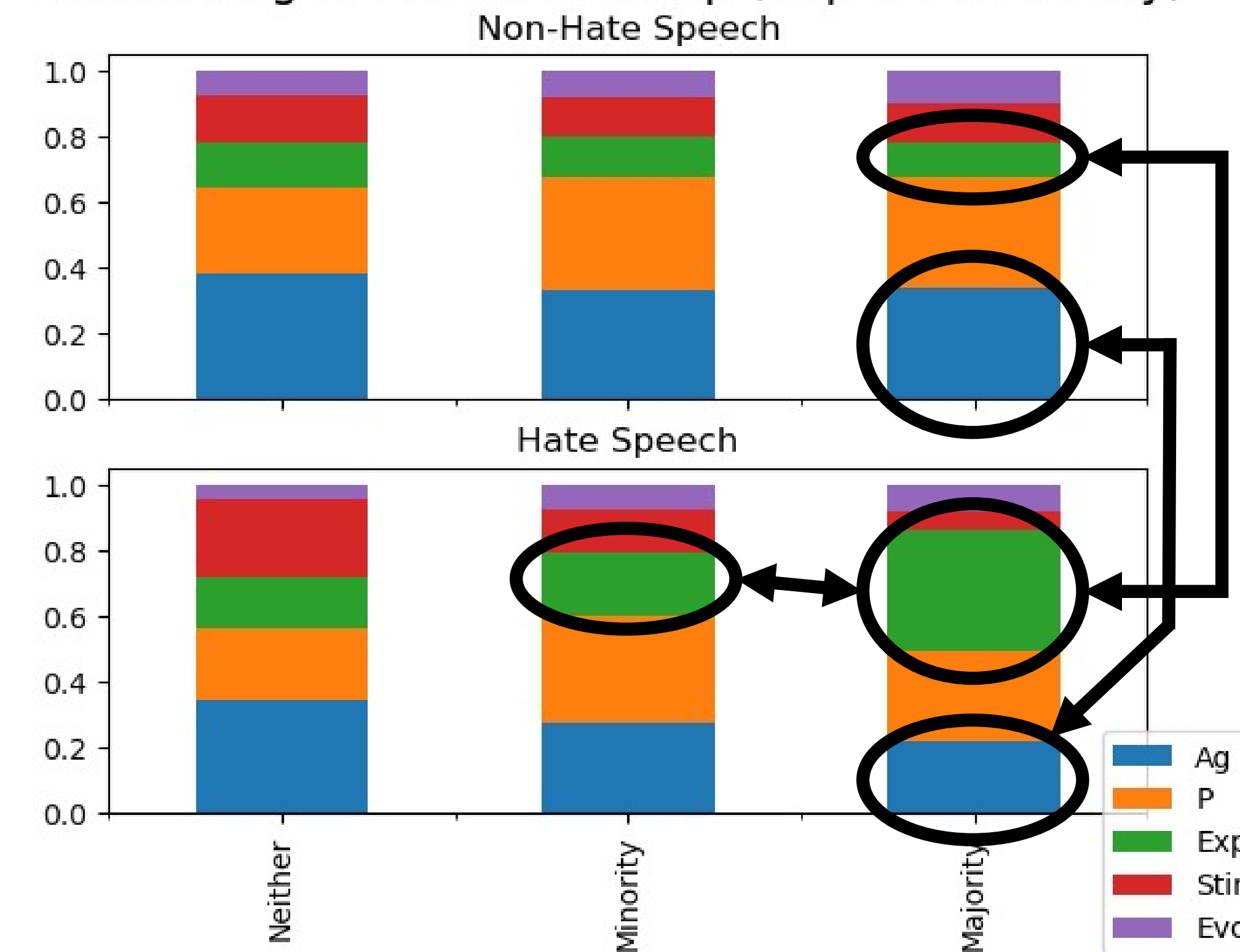


Figure 2: The thematic roles assigned by the implicit causality verbs broken up by hate vs non-hate speech and what group was being referenced. The arrows indicate statistically significant comparisons.

## Causal Constructions Results

The causal constructions behave differently in hate speech.

- In hate speech, the majority group is spoken about with less negative sentiment using the causative construction. One of the following could explain why:
  - The causative construction is being used to emphasize the role the majority group played in events that the speakers have a non-negative attitude about.
  - The causative construction is being used to emphasize the role the minority group played in events that the speakers have a negative attitude about.

Negative	Neutral	Positive
Ex: Berating comments	Ex: Leading Questions	Ex: Supporting hateful policies

Table 2: Examples of hate speech comments with different sentiment.

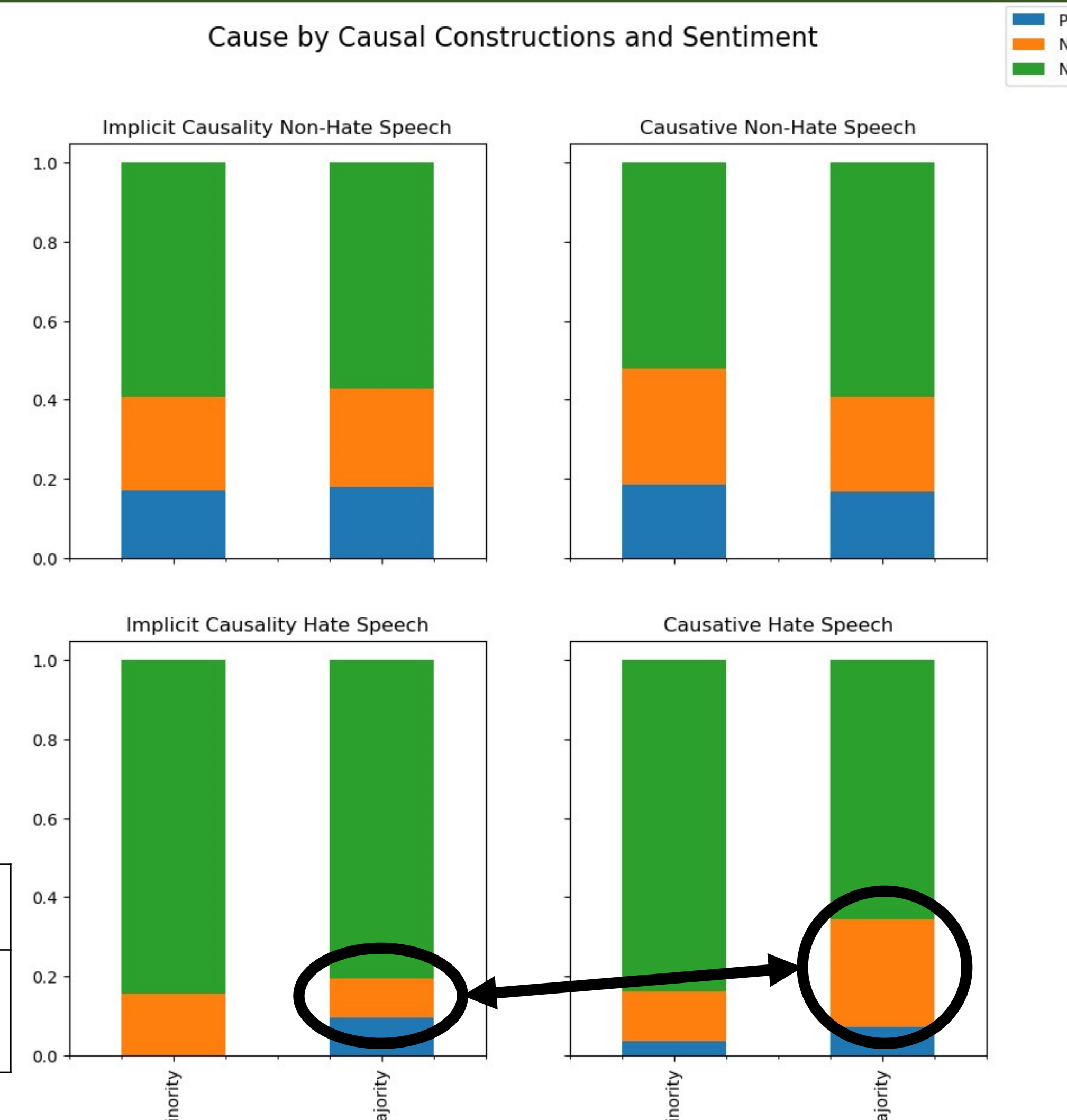


Figure 3: The causes in implicit causality constructions and causative construction sentences that refer to majority and minority groups. The arrows indicate statistically significant comparisons.

## Word Order Results

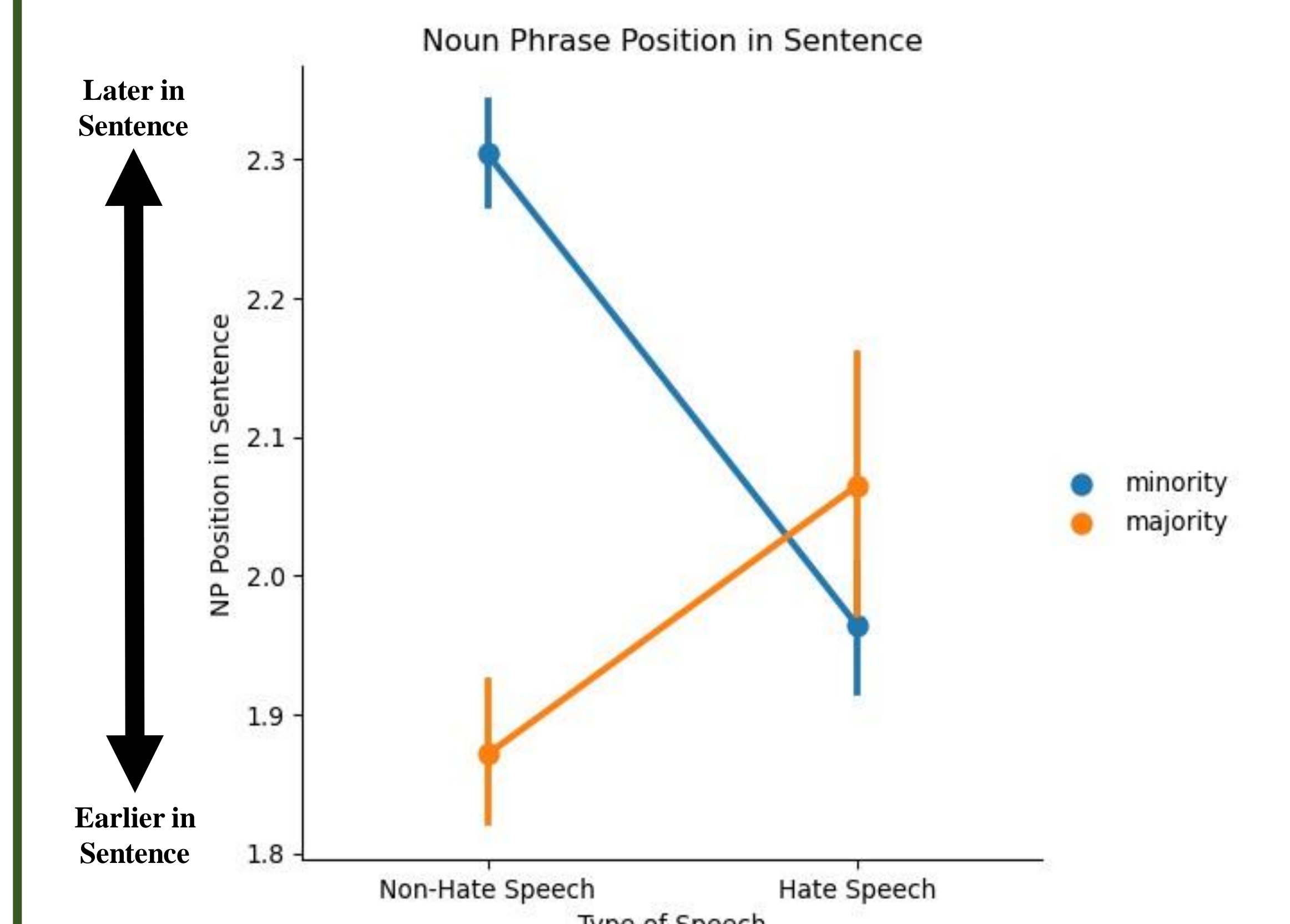


Figure 4: The causes in implicit causality constructions and causative construction sentences that refer to majority and minority groups.

## Conclusions

- Implicit causality minimizes agency of majority group
- The causal constructions seem to be used differently in hate speech when referring to each group.
- Hate speech uses word order to emphasize minorities and de-emphasize majorities.

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