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4-21-2023

## **Text Analysis Identified Semantic Differences in Ideologically-Motivated News**

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## Text Analysis Identified Semantic Differences in Ideologically-Motivated News

### Abstract

In recent years, there has been a dramatic increase in polarization of public opinion on some topics of global importance, leading to increasing public reliance on partisan-based online news.<sup>1</sup> However, news outlets may manipulate public opinion through misinformation or subtle modifications of news text's semantic, stylistic, and affective characteristics.<sup>2,3</sup> We hypothesized significant differences in news text characteristics between sources with different ideological orientations, levels of radicalism, and levels of public interest for highly divisive topics in our society: immigration, gun control, and vaccination. Data was collected from 360 articles on these topics from MSNBC News (left-leaning non-radical), Fox News (right-leaning non-radical), and Breitbart (right-leaning radical) during times of lowest and highest public interest. Text analysis with DICTION software identified characteristics of text, and a two-way ANOVA in SPSS 29 evaluated the effects of source and public interest on text characteristics. Results showed significant differences in text characteristics based on the source's ideological leaning and radicalism level, as well as public interest in the topic. Right-leaning sources exhibited more categorical thinking, a greater tendency to overstate opinions, and a lower predisposition to invite readers to engage critically and evaluate the presented information than the left-leaning source. More radical sources displayed greater authoritarian inflexibility and robustness in their opinions. These differences suggest that news sources may aim to sway public opinion in a specific direction, potentially misrepresenting information. This study highlights the importance of critically evaluating news sources and the need for unbiased reporting to promote informed public opinion.

# Text Analysis Identified Semantic Differences in Ideologically-Motivated News

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## Background

In recent years, there has been a dramatic increase in polarization of public opinion, leading to increased reliance on partisan-based online news.<sup>1</sup> However, news outlets may manipulate public opinion through misinformation or subtle modifications of news text's semantic, stylistic, or affective characteristics.<sup>2,3</sup> We hypothesized significant differences in news text characteristics between sources with different ideological orientations, levels of radicalism, and levels of public interest for highly divisive topics in our society: immigration, gun control, and vaccination.

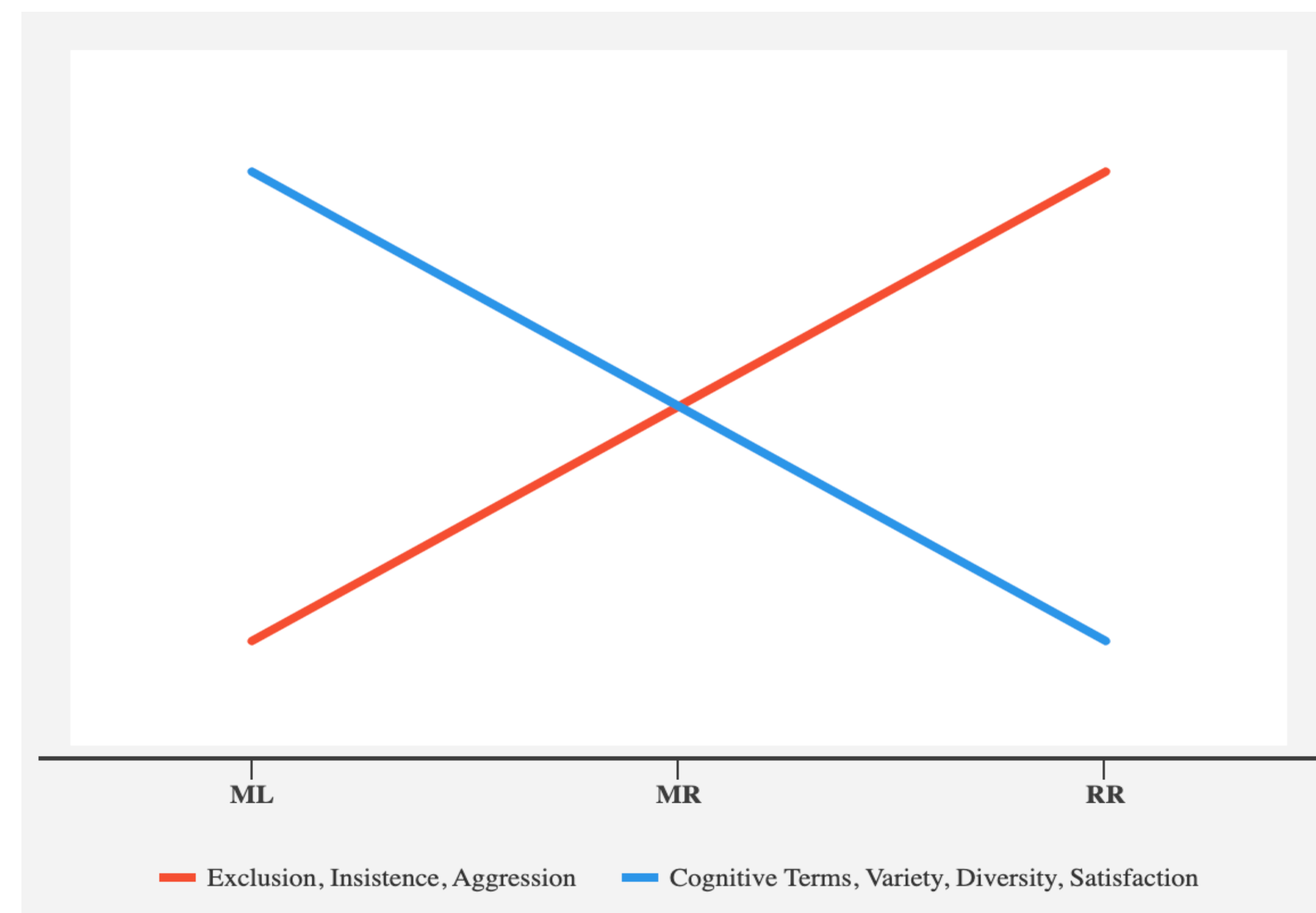
## Methods

- 360 news articles were collected from three news sources along the ideological spectrum (MSNBC – left/low radicalism; Fox News – right/low radicalism; Breitbart – right/high radicalism)
- Text analysis in DICTION software
- Two-way ANOVA in SPSS 29

## Results

MSNBC and Fox News showed more unique words than Breitbart. The decrease from MSNBC through Fox News to Breitbart was observed in the variables of variety, cognitive terms, diversity, and satisfaction. MSNBC showed much more ambivalence than Fox News or Breitbart. By contrast, the increase from MSNBC through Fox News to Breitbart was observed in the variables of insistence, aggression, and exclusion. MSNBC showed much lower scores than both Fox News and Breitbart in activity, collectives, and liberation. Breitbart showed much more certainty than MSNBC or Fox News.

## Semantic Patterns Found Across Moderate Left (ML), Moderate Right (MR), and Radical Right (RR) News Sources



**Cognitive Terms -**  
Words like learn, consider, deliberate, compare, logic, question, examine, interpret, analyze<sup>4</sup>

**Variety -**  
Avoidance of overstatement  
preference for precise, molecular statements<sup>4</sup>

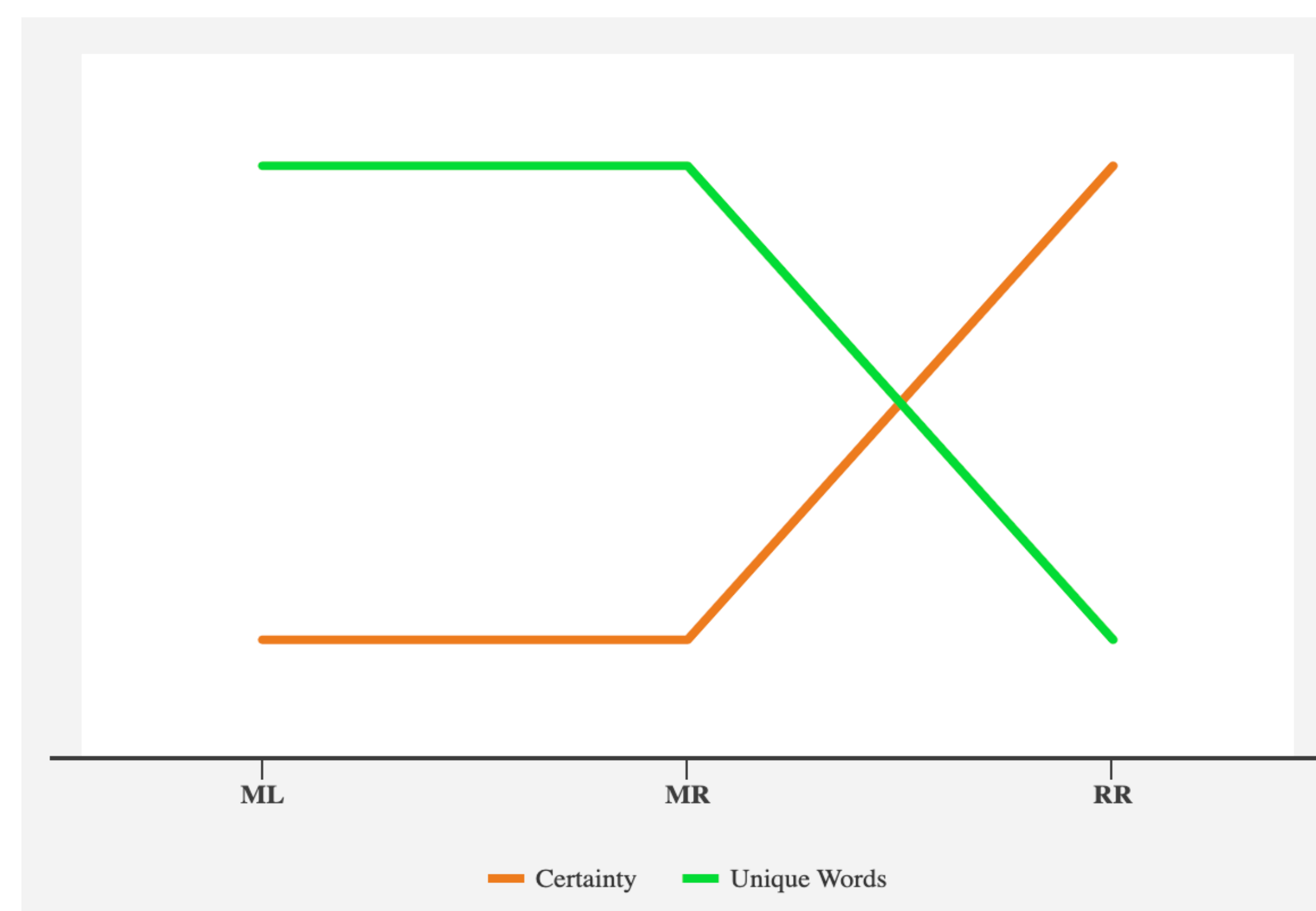
**Diversity -**  
Words describing individual diversity in orientations, affiliations, or opinions<sup>4</sup>

**Satisfaction -**  
Words featuring positive affective states, positive outcomes, security, healing, and encouragement<sup>4</sup>

**Exclusion -**  
Words suggesting social isolation, displacement, discrimination, ostracism<sup>4</sup>

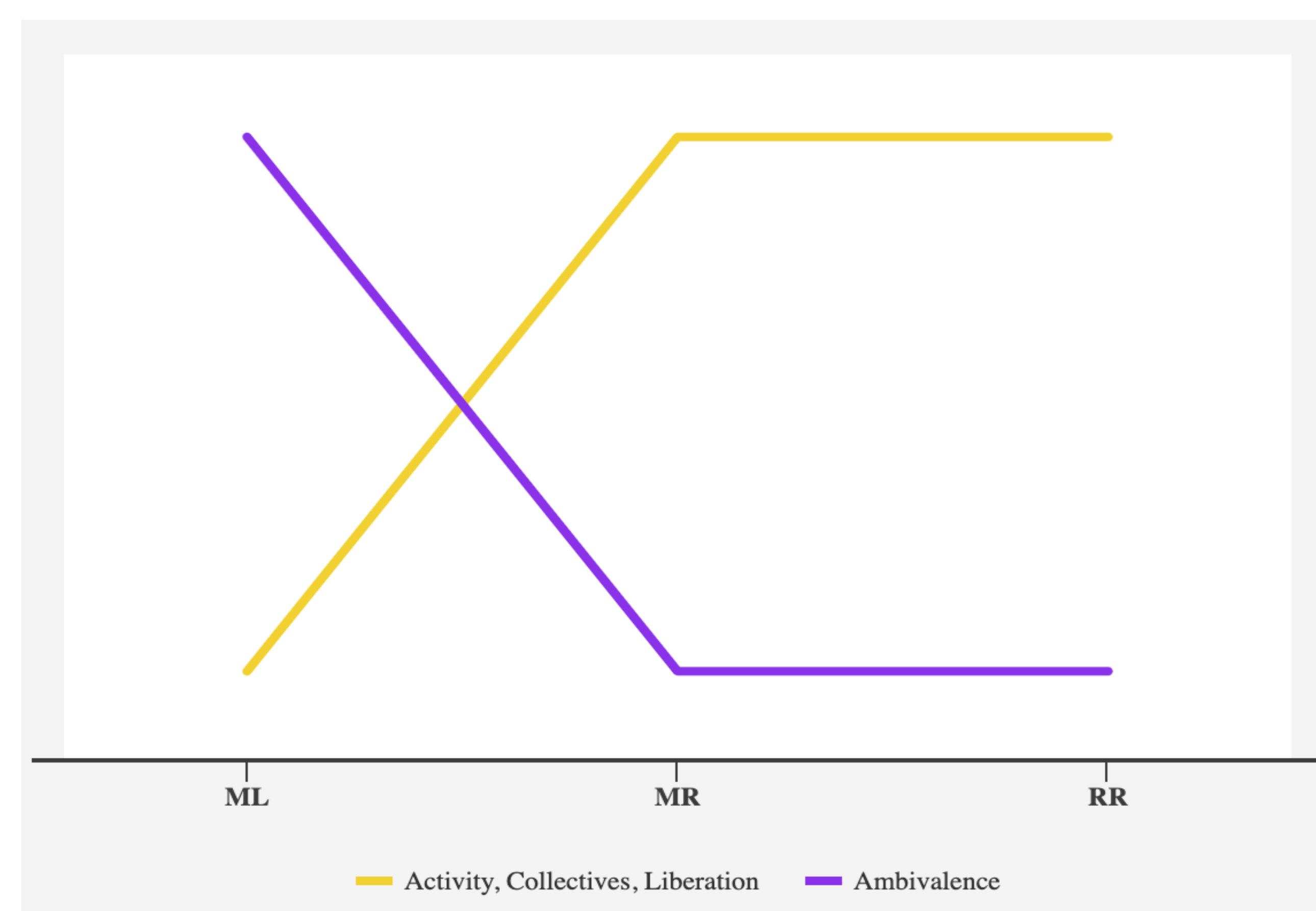
**Insistence -**  
Repetition of key terms indicates a preference for a limited, ordered world<sup>4</sup>

**Aggression -**  
Words featuring human competition, social domination, forceful action, resistance<sup>4</sup>



**Certainty -**  
Resoluteness; inflexibility; completeness; tendency to speak ex cathedra<sup>4</sup>

**Unique Words -**  
Richness of text<sup>4</sup>



**Activity -**  
Language featuring movement, change, the implementation of ideas and the avoidance of inertia<sup>4</sup>

**Collectives -**  
Words denoting plurality, decrease in specificity, and the dependence on categorical modes of thought<sup>4</sup>

**Liberation -**  
Rejection of social conventions<sup>4</sup>

**Ambivalence -**  
Expressing uncertainty to strongly commit to the statements made<sup>4</sup>

## Conclusions

Results showed significant differences in text characteristics based on the source's ideological leaning and radicalism level, as well as public interest in the topic (not presented here). Right-leaning sources exhibited more categorical thinking, a greater tendency to overstate opinion, and a lower predisposition to invite readers to engage critically and evaluate presented information than the left-leaning source. More radical sources displayed greater authoritarian inflexibility and robustness in their opinions. These differences suggest that news sources may aim to sway public opinion in a specific direction, potentially misrepresenting information.

## References

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