In recent times, much has been written about the trend toward political polarization in the United States. This phenomenon describes the increasing prevalence of partisan divides at both the national and local levels of our government. Currently, the literature has heavily documented voting trends that point towards partisan polarization as well as congressional behavior and media consumption patterns. However, one limitation of the current literature is a lack of mathematical-based computational analysis of statements made by political actors. Additionally, while extensive mathematical research has been done discerning differing sentiments towards issues, the application of cross-subject bias models has been limited.

In our work, we present an application of developed Natural Language Understanding techniques to characterize the partisan bias in cable news. Sentiment analysis is performed on individual statements made in cable news transcripts and statements are sorted by topics discussed within each transcript. This allows for an understanding of the varying sentiment different speakers have towards each topic within the transcript. Then, using the words associated with each topic, the similarity between topics in different transcripts is graphed. As a result, we are able to compare how different channels, programs, or speakers vary in sentiment towards topics and whether that sentiment changes over time. Speakers that are part of divided groups of sentiment across topics represent more partisan voices while speakers whose sentiment matches a varying group of other speakers depending on the topic likely hold less of a partisan bias.

The method presented in our work allows for a more versatile approach to characterizing bias than much of the previous work in the field. Because our method does not rely on controlling for the subject being discussed in the text studied, it can be easily applied to a broad range of political content. Additionally, as Information Advantage has become a key component of future war fighting concepts, versatile methods like the one we present are necessary to understand a broad and diverse information environment.