

Transformation of Ideological Discourses of China on People's Daily (1977-2003)

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Introduction

In attempt to maintain social control, how do authoritarian states respond to emerging social movements and changing social economic condition? For years, these questions have attracted scholars working in social movement studies as well as political sociology broadly defined. This project mainly focus on one of the authoritarian response strategies: discourse deployment. More specifically, I intend to examine changes of ideological discourses of Chinese authoritarian government in response to economic growth and emerging social movements. What discourses does the authoritarian government deploy before and after movement events? How do such authoritarian discourses become less ideological over time? By addressing these specific questions in the case of China during 1977 to 2003, I seek to advance current understanding of transformation of ideological discourses of China.

Hypothesis

Hypothesis 1: As economy grows, the official discourses of the Chinese state become less ideological.

Hypothesis 2: In response to recurrent social movements, stronger ideological discourses are deployed by the Chinese state, but later are gradually replaced by weaker ideological discourses, to reflect new societal needs.

Methods

To study the transformation of ideological discourses of China, around 100, 000 news reports and editorials from *People's Daily* (*Ren Min Ri Bao*), the most influential official newspaper in China, were scraped and tokenized. By performing the K-means clustering on the vector space of Tf-Idf model and word embedding model, the ideological words were identified and further categorized. Combining with the social economic data, a linear regression model was applied to capture the relationship between official ideology and GDP, CPI and social movements.

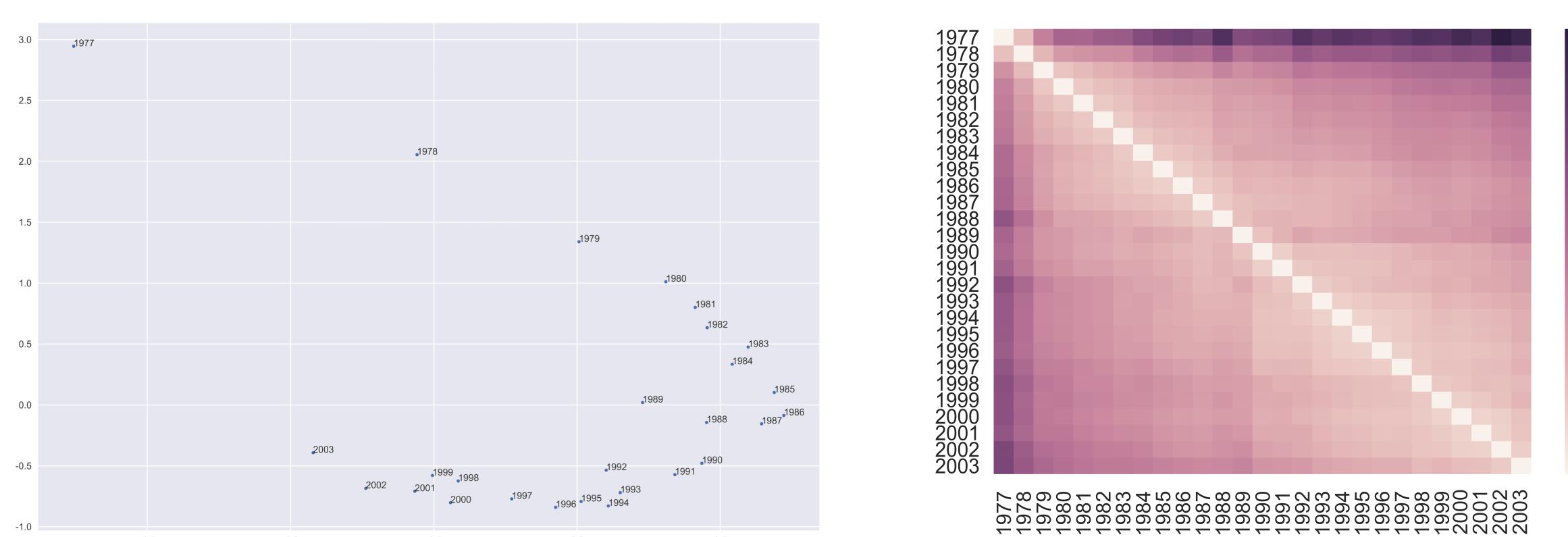


Figure 1. Kullback–Leibler divergence analysis: according to word distribution of each year's articles from *People's Daily*, the official discourses gradually change from 1977 to 2003. Year 1989 was a turning point for the word distribution on *People's Daily*.

Identification of Ideological Words

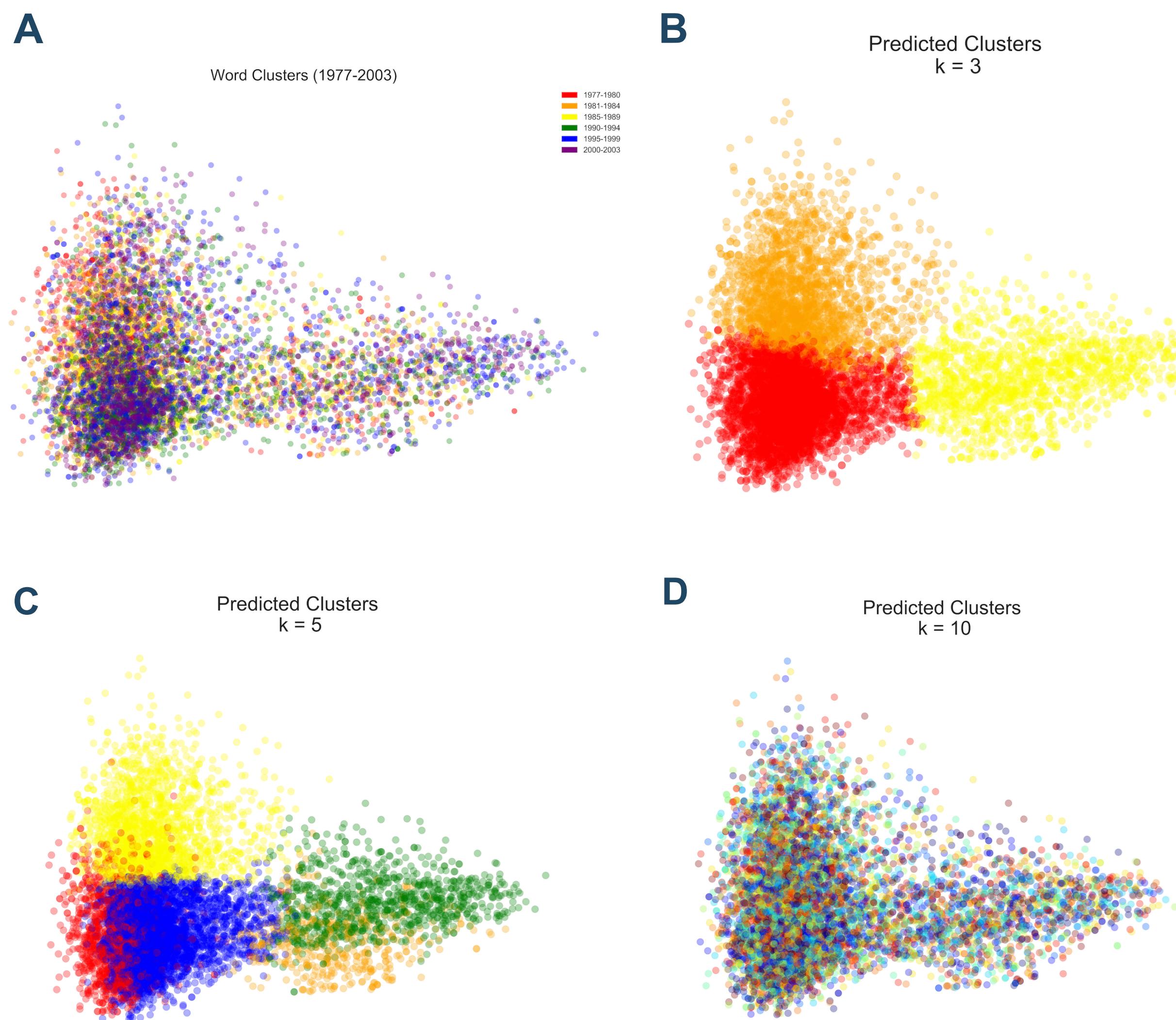


Figure 2. K-means clustering for the Tf-Idf model. By this method, 1041 words were categorized into the group of ideological words. A) Clustered by periods of 4~5 years during 1977- 2003; B-D) Clustered by K-means method, clustering number: 3, 5, 10.

Projection of Ideological Words into Semantic Space

The identified ideological words were further clustered in the vector space of word embedding model, and categorized as strong ideological words (e.g. Communism, Maoism, Revolution, ...) and weak ideological words (e.g. Economic Construction, Social Stability,...).

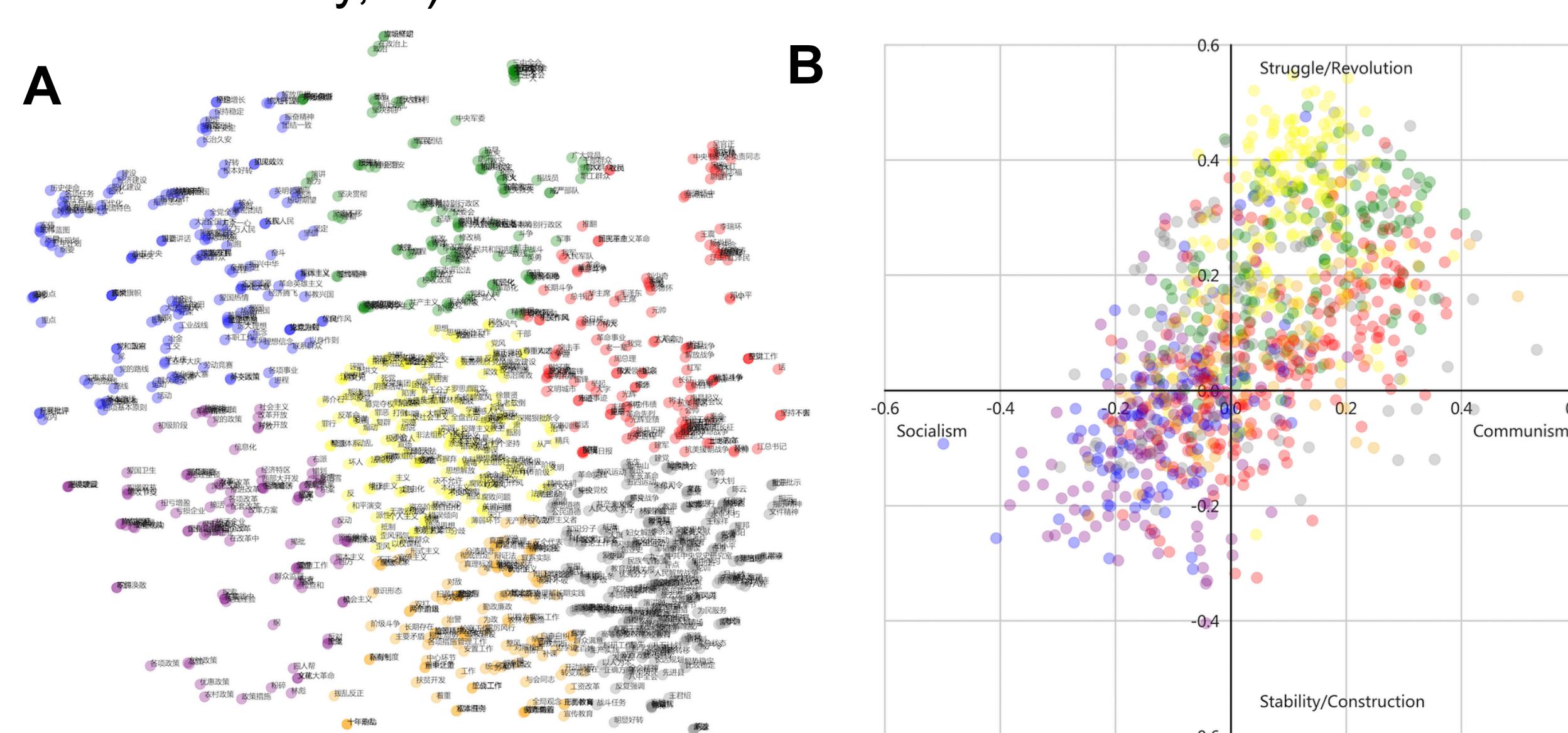


Figure 3. A) K-means clustering for the word embedding model, cluster number: 7; B) The clustered words were plotted in a two-dimensional space (X-axis : from Socialism to Communism; Y-axis: from Construction to Revolution).

Ideological Transformation

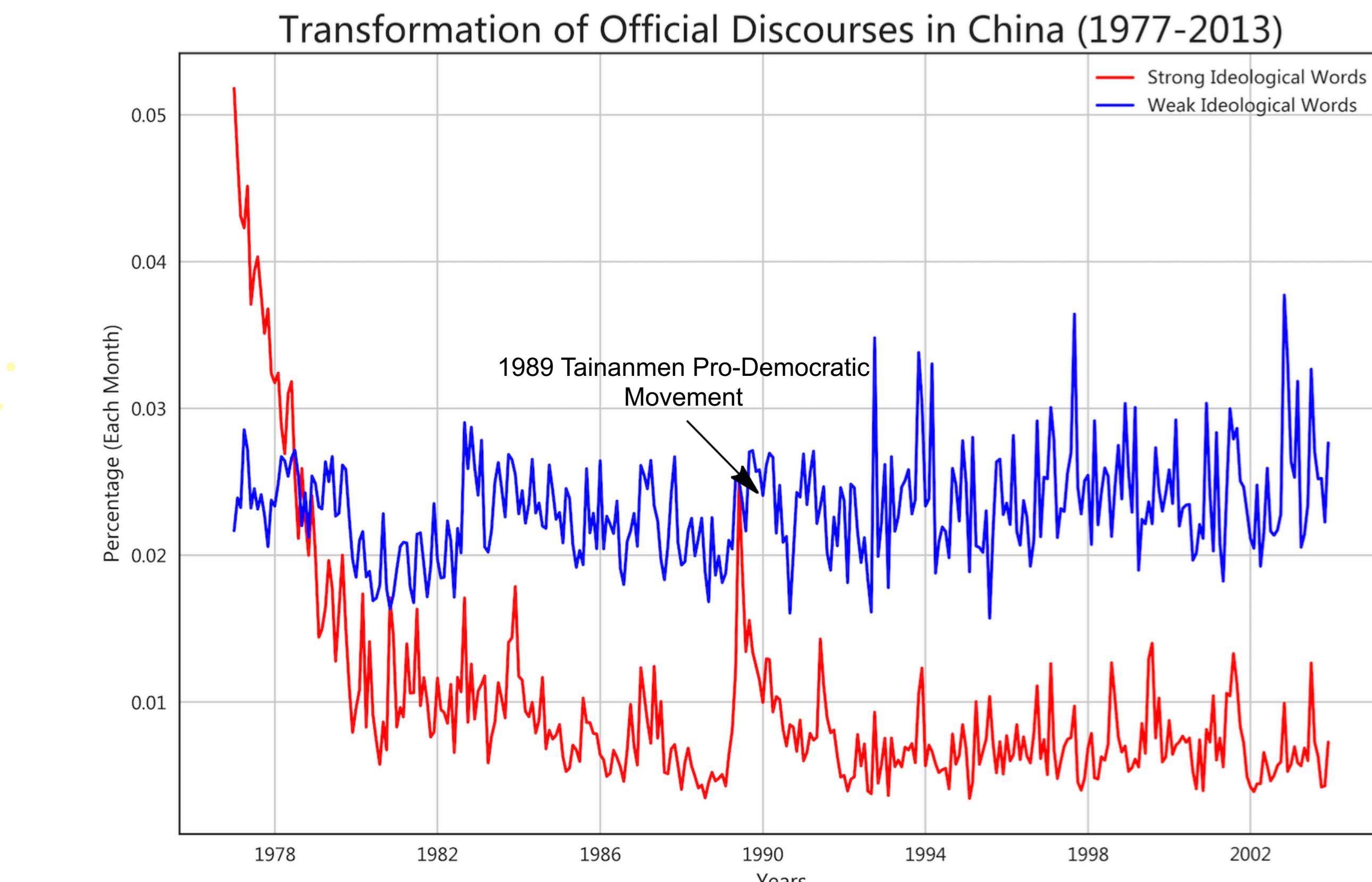


Figure 4. Transformation of official discourses in China during 1977 to 2013: the monthly word frequency of strong ideological words and weak ideological words were plotted over time. Since 1977, the official discourses of China deployed less strong ideological words, while the weak ideological words became dominant after 1989.

Linking the Official Ideology with Social Economic Data

OLS Model:

$$\text{Strong Ideology} = \beta_0 + \beta_1 \log(\text{GDP}) + \beta_2 \text{CPI} + \beta_3 \text{Social Movement} + \beta_4 \text{Weak Ideology}$$

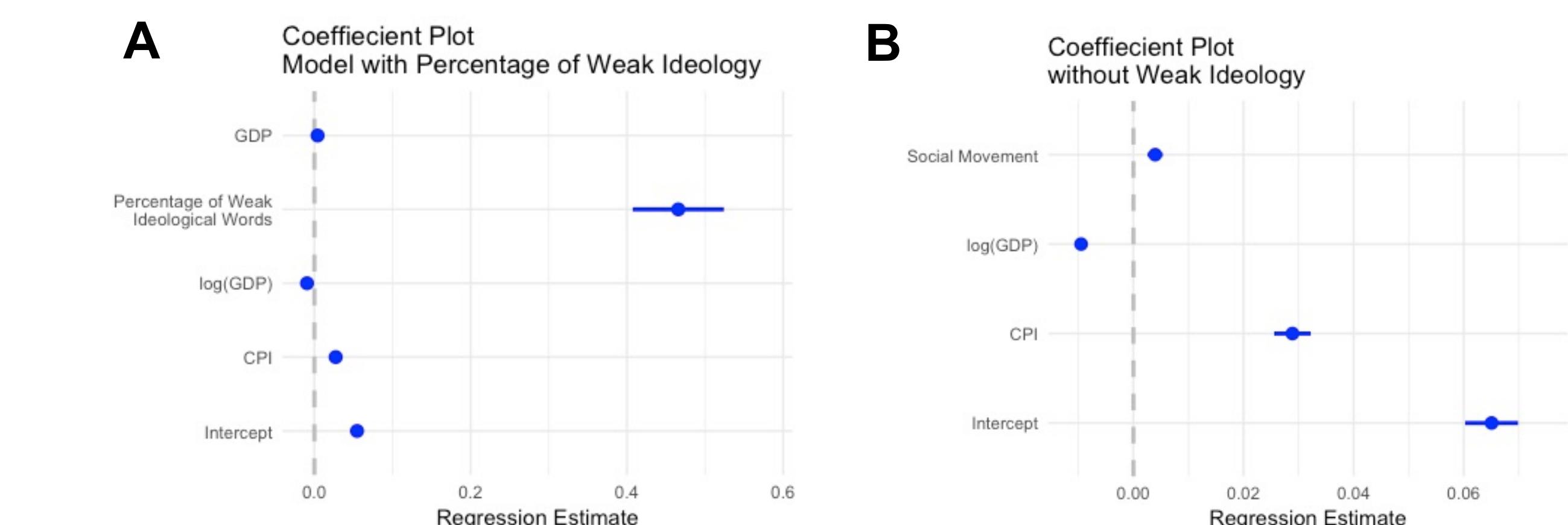


Figure 5. Co-efficient Plots for OLS models.

Conclusion

By projecting the identified ideological words into semantic space, I categorize them into two sub-groups. I find that since 1977, in the official discourses of the Chinese state, strong ideological words were replaced by weak ideological ones. Also, this ideological transformation is highly associated with the economic growth and social movements.