

## 1 Background

- Stylometry analyzes unconscious aspects of writing style to infer authorship or verify identity.
- This study applies stylometry to two Old Chinese texts with disputed authorship: the *Zuo Commentary* and the *Discourses of the States*.



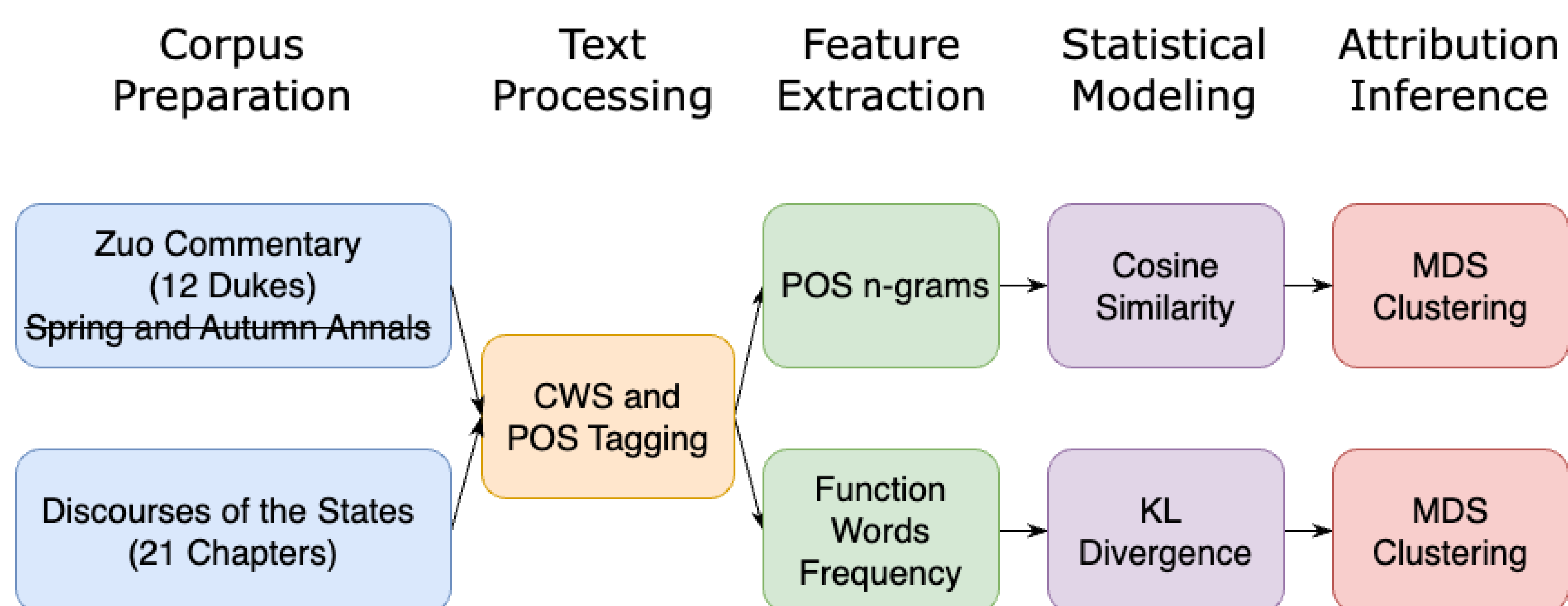
Zuo Qiu Ming (? – ?)

- The *Zuo Commentary* is a chronicle-style historical record documenting events in Central Plains states during the Spring and Autumn period.
- The *Discourses of the States* is a state-by-state historical record during the same period.

## 3 Motivation

- The authorship and formation of the *Zuo Commentary* and the *Discourses of the States* remain debated.
- Traditional stylometric methods were constrained by the scale of data and the available analytical tools.
- If the *Discourses* reflects multiple state traditions, can it serve as a reference to identify the regional imprint within the *Zuo Commentary*?

## 4 Pipeline



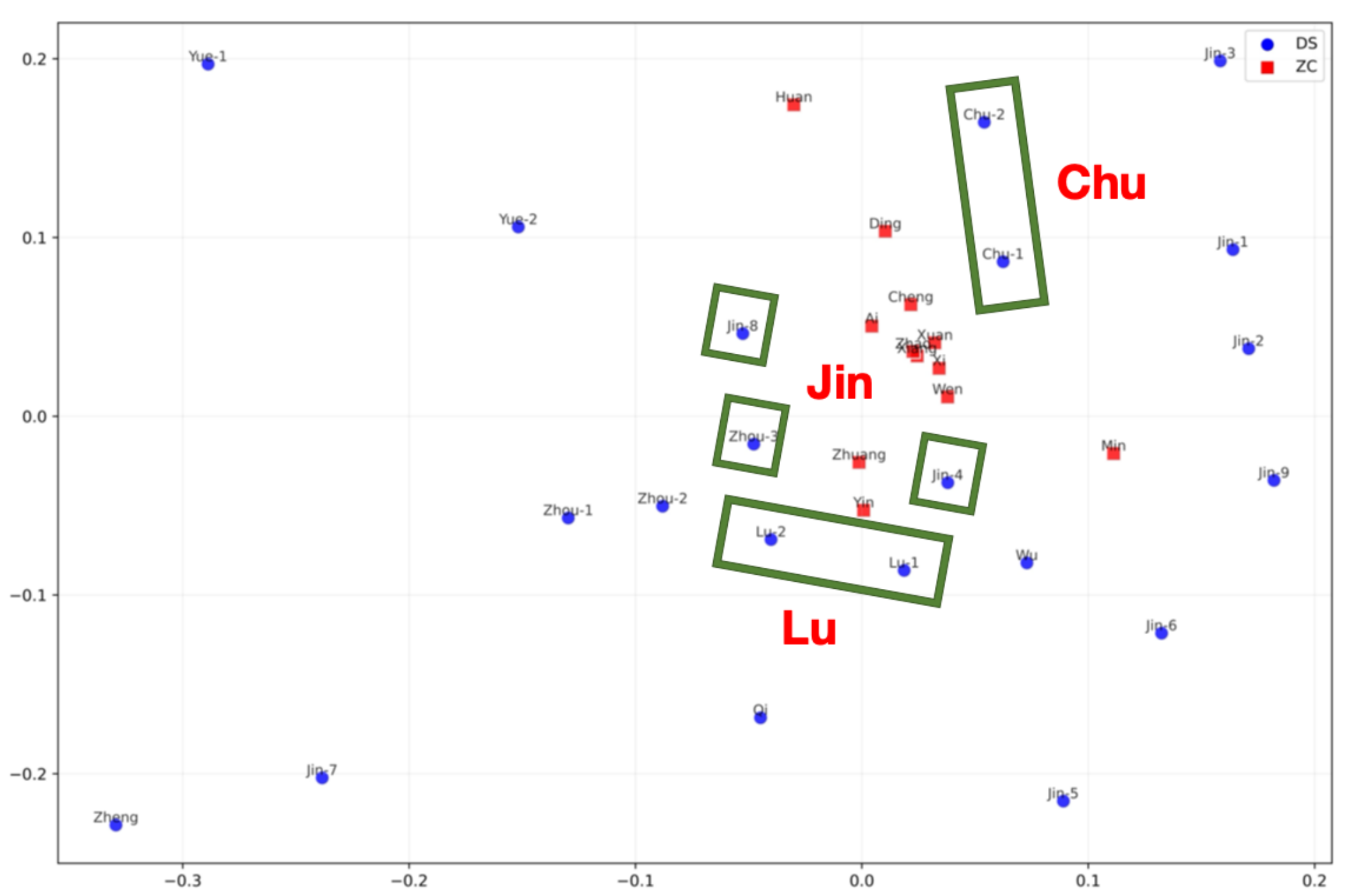
## 2 Theories of authorship

- Traditional attribution** identified Zuo Qiu Ming as the **author of both** the *Zuo Commentary* and *Discourses of the States*.
  - Sima Qian (145-86? BCE) : The gentleman of Lu, Zuo Qiu Ming, compiled the *Zuo Commentary*.
  - Ban Gu (32-92 AD) : The *Discourses of the States*, by Zuo Qiu Ming.
- Bernhard Karlgren (1968) manually compared several **function word** patterns and concluded the *Zuo Commentary* shows high internal consistency.
- Yao Nai (18th c.), Zhang Taiyan (1986), and Liu Shipai (2008) hypothesized **Wu Qi's** involvement.
- Tong Shuye (2006) proposed the *Zuo Commentary* was compiled by **persons related to Lu, Jin, and Chu**, and their followers.
- Zhang Xincheng (1939) and Wang Shumin (1986) proposed the *Discourses of the States* was a **multi-source compilation** from different states.

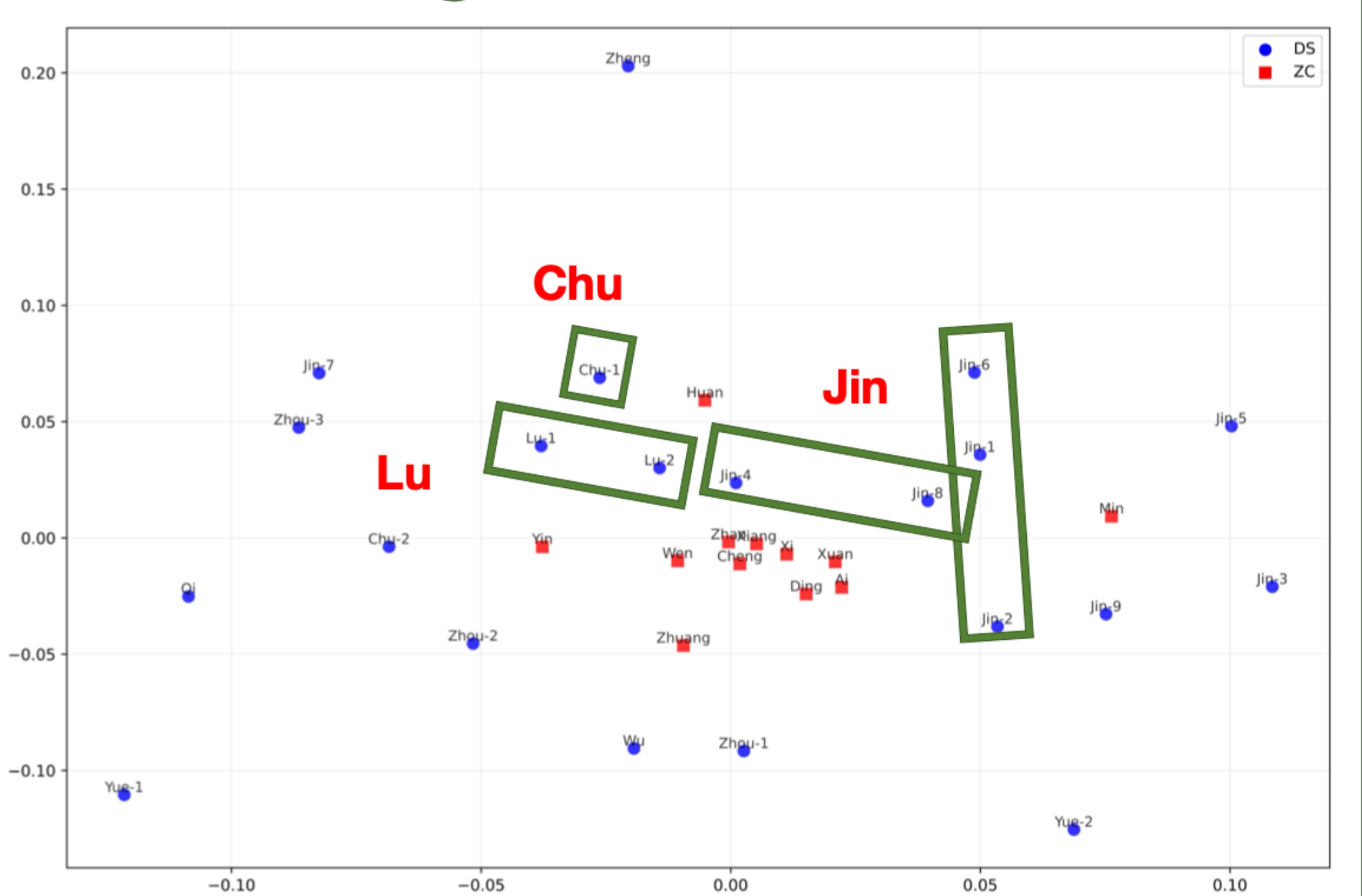
## 5 Key findings

- The *Zuo Commentary* shows strong **internal stylistic consistency**, especially across the chapters of the later eight Dukes.
- The *Discourses of the States* shows broad stylistic variation, consistent with a **multi-source compilation** hypothesis.
- Chapters from the *Discourses* of **Lu, Jin, and Chu** display notable stylistic proximity to the *Zuo Commentary*.
- Results provide quantitative evidence supporting the theory that the *Zuo Commentary* was compiled by a unified school, likely drawing on materials from **Lu, Jin, and Chu**— linked to **Wu Qi** and his followers.

### a Result on function words



### b Result on n-grams



Wu Qi (440 – 381 BCE)

Thank you so much for your attention!

Let's talk:

huawenjie@whu.edu.cn

Paper:



Data:

