

# 統計偏離值分析於人文研究上的應用： 以《新青年》為例<sup>1</sup>

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## 摘要

數位方法應用於人文研究，在近幾年逐漸變的重要。數位方法不但增進了學者的研究效率，也提供了另一個角度去思考各種文本。然而，目前仍然有許多技術或方法有待深入探討。本文研究動機運用了齊夫定律偏離值計算來找出文本的關鍵詞，並以《新青年》為文本來分析是否可行。本研究特點是將關鍵詞的概念加以量化，並從統計理論出發得出一個較客觀的指標。實驗結果發現，利用此統計與數位方法，除了解決主觀判斷的爭議外及減少人工篩選的負擔外，也具有三項突破。一、能夠更加準確地將關鍵詞篩選出來，從而更加細緻地觀察思想變化，以及反映在文本上的語言現象，前者透過「國家」與「青年」這兩個關鍵詞來說明，後者透過「他們」、「我們」、「社會」、「主義」、「階級」、「產階」來說明；二，應證了偏離值大小能夠代表詞的關鍵性，從而揭示出《新青年》的思想變化，從無共識觀念，到思想討論，最後到意識型態確立的過程；三，應證了關鍵詞詞數能夠部份反映文本的思想變化，由於觀念濃縮於關鍵詞，關鍵詞的多寡能夠反映明顯觀念的多寡。

**關鍵字：**齊夫定律、偏離值、新青年、關鍵詞

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<sup>1</sup> 本文所有從《新青年》引用的資料，以及實驗的文本，皆來自國立政治大學的「中國近現代思想及文學史專業數據庫（1830-1930）」，在此特誌感謝。此外，文中有關統計的部份，亦頗受益於國立政治大學統計系教授余清祥老師的指導，在此表示非常感謝。

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# Application of Statistical Residual Analysis to Art and Humanities Studies: Using *Xin Qing Nian* as Example

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## Abstract

Application of digital methods on art and humanity studies had become crucial research in recent years. Digital methods can help to improve the effectiveness of studying, and also to have another point of view to rethink the materials. However, there have much issues need to be studied in details. Our aim is to propose a residuals calculation based on Zipf's law, in order to find out the key-words of the materials with using *Xin Qing Nian* as an experiment example. We redefine the concept of key-words in quantifying way, and establishing an less-subjective criterion from statistical theory. The experiment had found out that, as using statistic and digital method, we have three breakthroughs others from diminishing the criticality caused by subjective judgments and the burdens of handmade selections. First, as the reason of be able to assure more accurately of the key-words, we can have more precise observation to thoughts changing and the language phenomena. Second, giving an evidence of how the importance of the key-words can be demonstrated by residual quantities. Third, giving an evidence of how the quantity of key-words can more or less demonstrated the emerging of obvious ideas.

**Keywords: Zipf's Law, Residual, Xin Qing Nian, Key-words**

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