

HOW DEEP ARE GEOSCIENTISTS WILLING TO DIG?

**A CITATION ANALYSIS ADDRESSING THE
CHANGING INFORMATION-SEEKING
BEHAVIOR IN THE DIGITAL AGE**

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INTRODUCTION

- **Question: How far back in the literature do geoscientists cite?**
- Method: Using geoscience dissertations, this study compares the age distribution of cited documents at different periods in time.
- Data: The sample consistently cited older literature with interesting variations that might reflect information seeking behavior.



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- Question: How far back in the literature do geoscientists cite?
- Method: Using geoscience dissertations, this study compares the age distribution of cited documents at different periods in time.
- **Data: Looking at the variations of how the sample cited over time, interesting variations might reflect shifts in information seeking behavior.**



LITERATURE REVIEW

- **Citation Analysis (CA) as a method**
- Geology citation behavior
- Why dissertations
- Information Seeking Behavior

*The obsolescence or aging of literature differs by discipline .
(Line & Sandison, 1974).*



LITERATURE REVIEW

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“Rediscovering the Wheel” is all too common in the geosciences (Lazhieka, 2008).



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Dissertations are good indicators of research practices (Gooden, 2001)



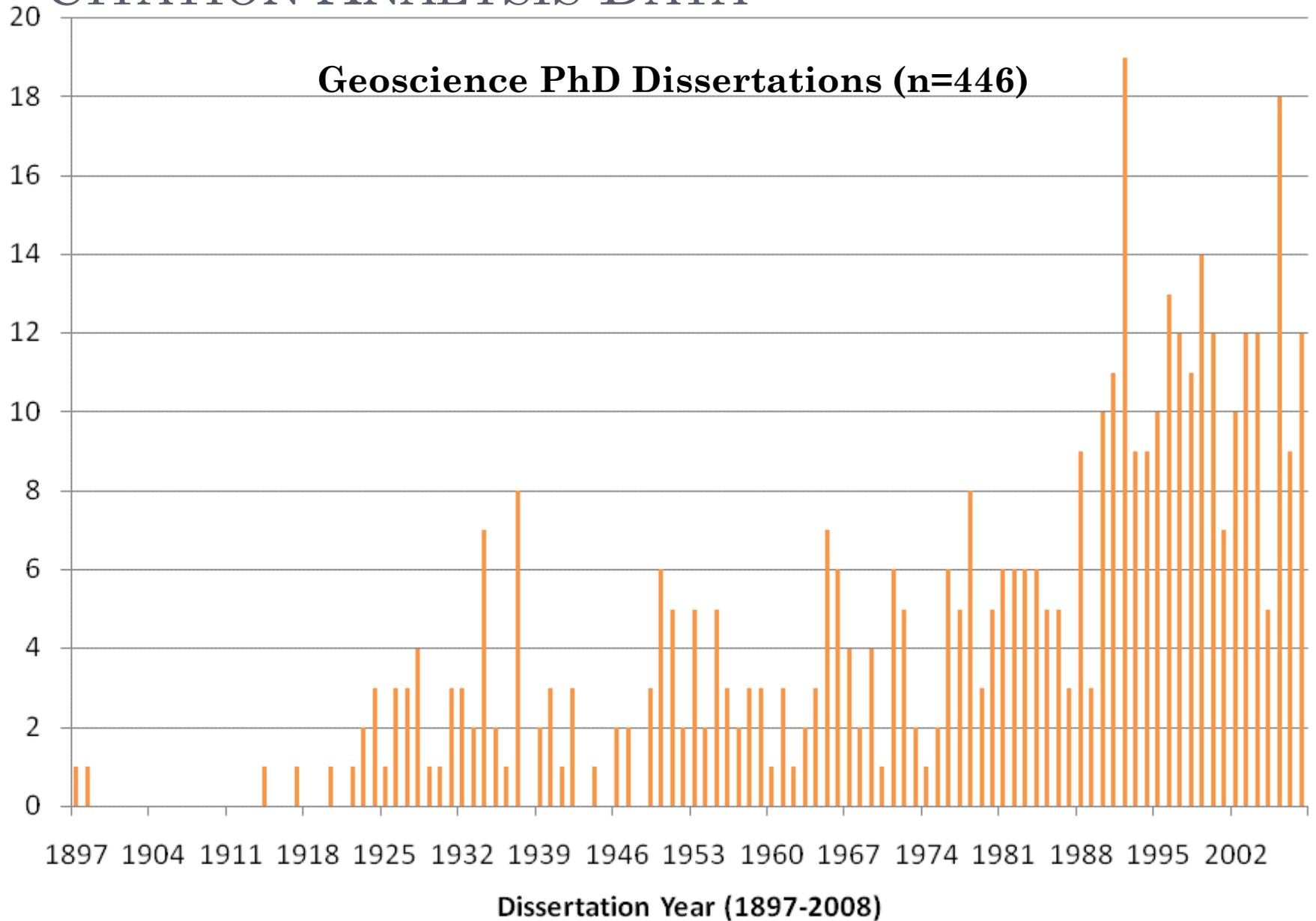
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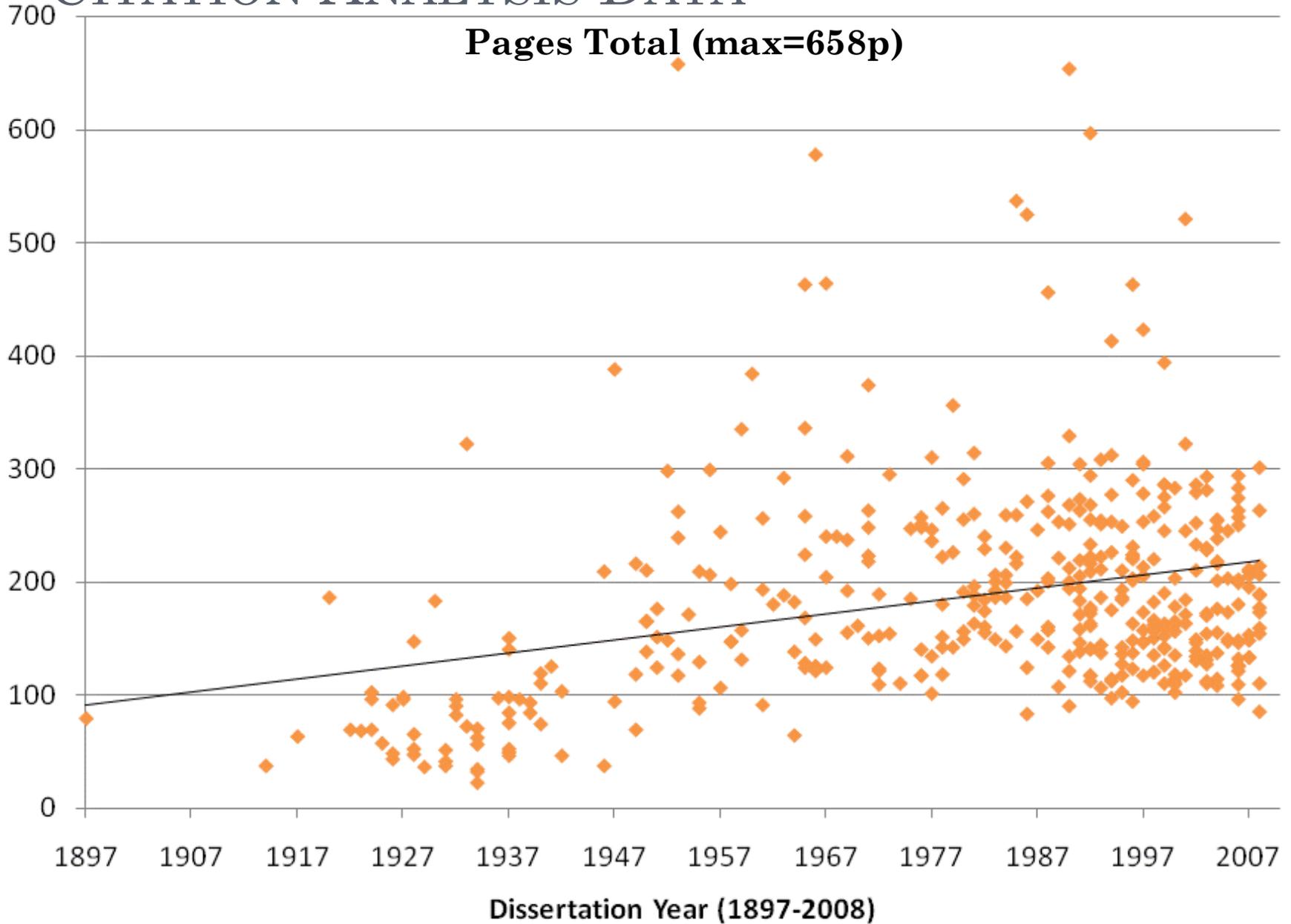
Each article now has a more even chance of being selected and selection is more likely to be determined by information need. We need therefore to look again at the usage of articles by their date of publication (Nicholas, 2005)



CITATION ANALYSIS DATA

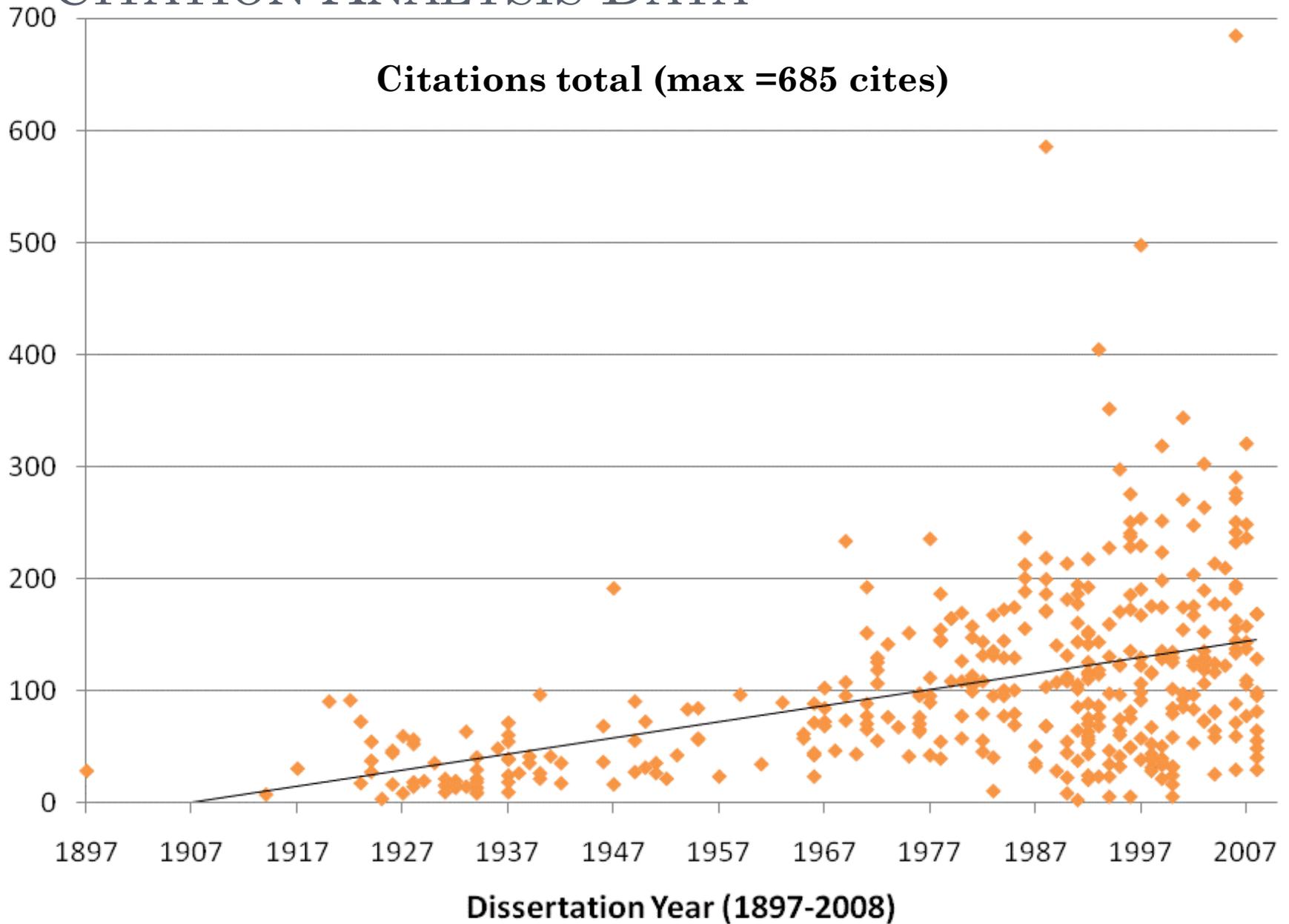


CITATION ANALYSIS DATA



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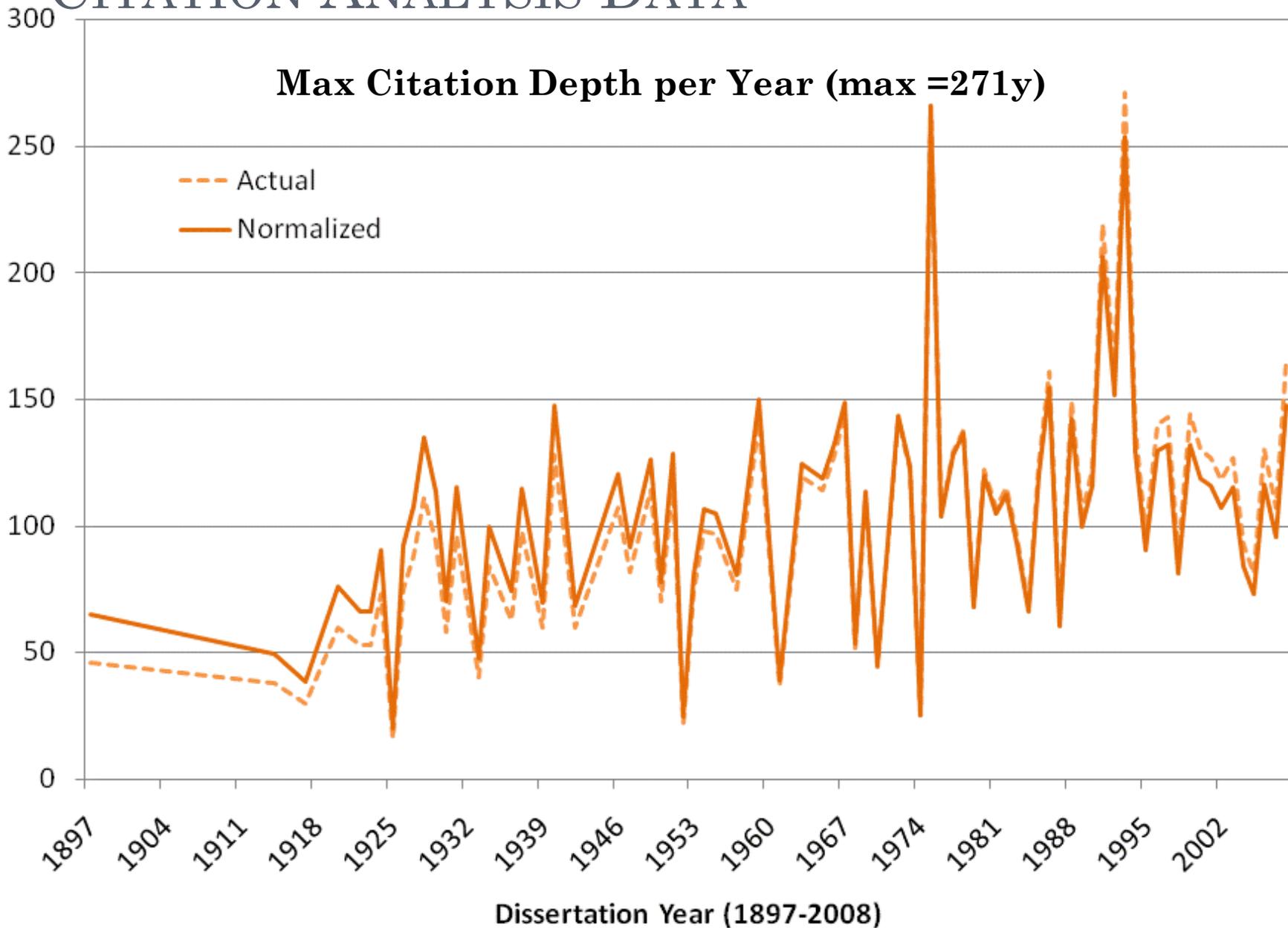
Citations total (max =685 cites)



CITATION ANALYSIS DATA

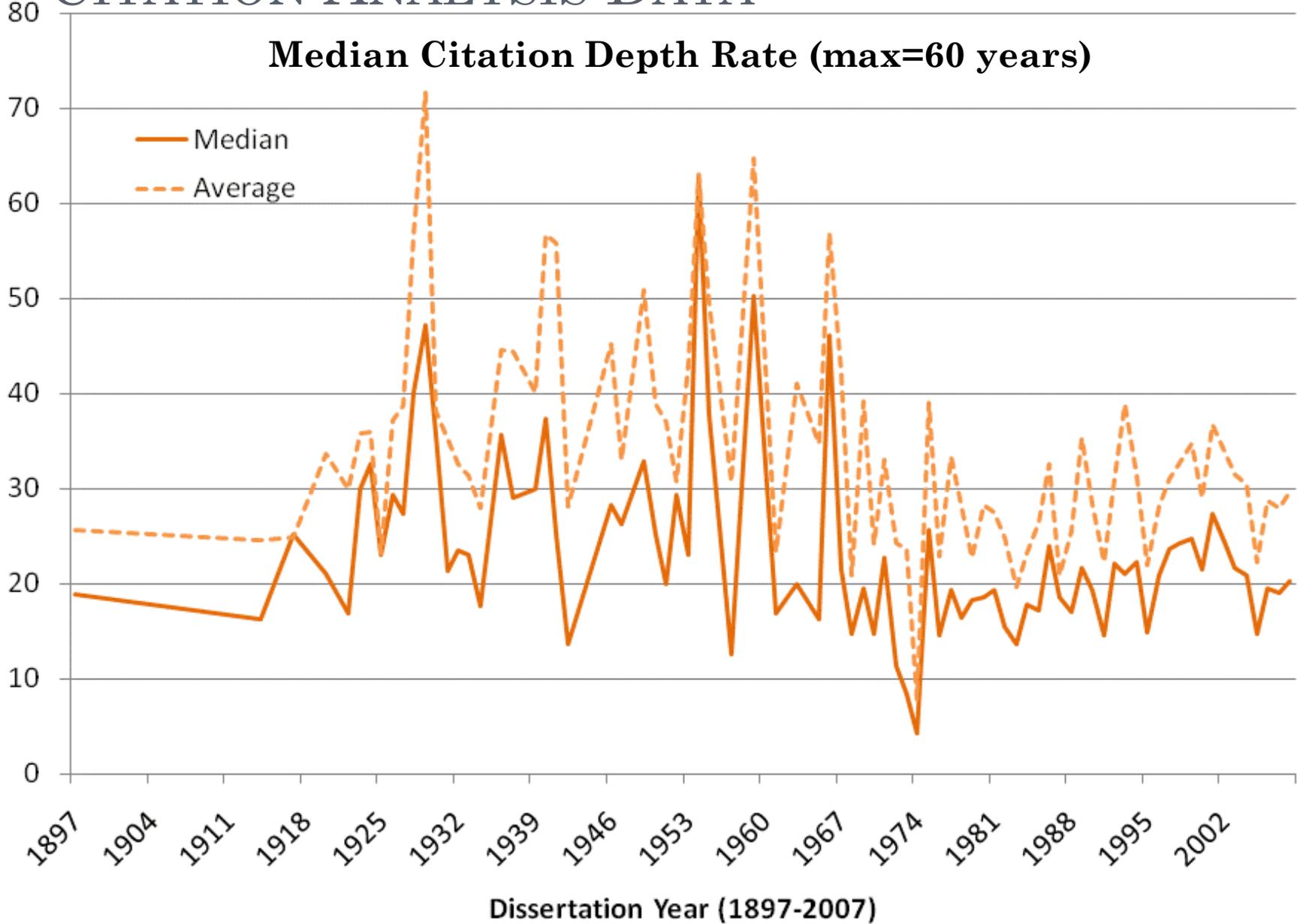
Max Citation Depth per Year (max =271y)

--- Actual
— Normalized

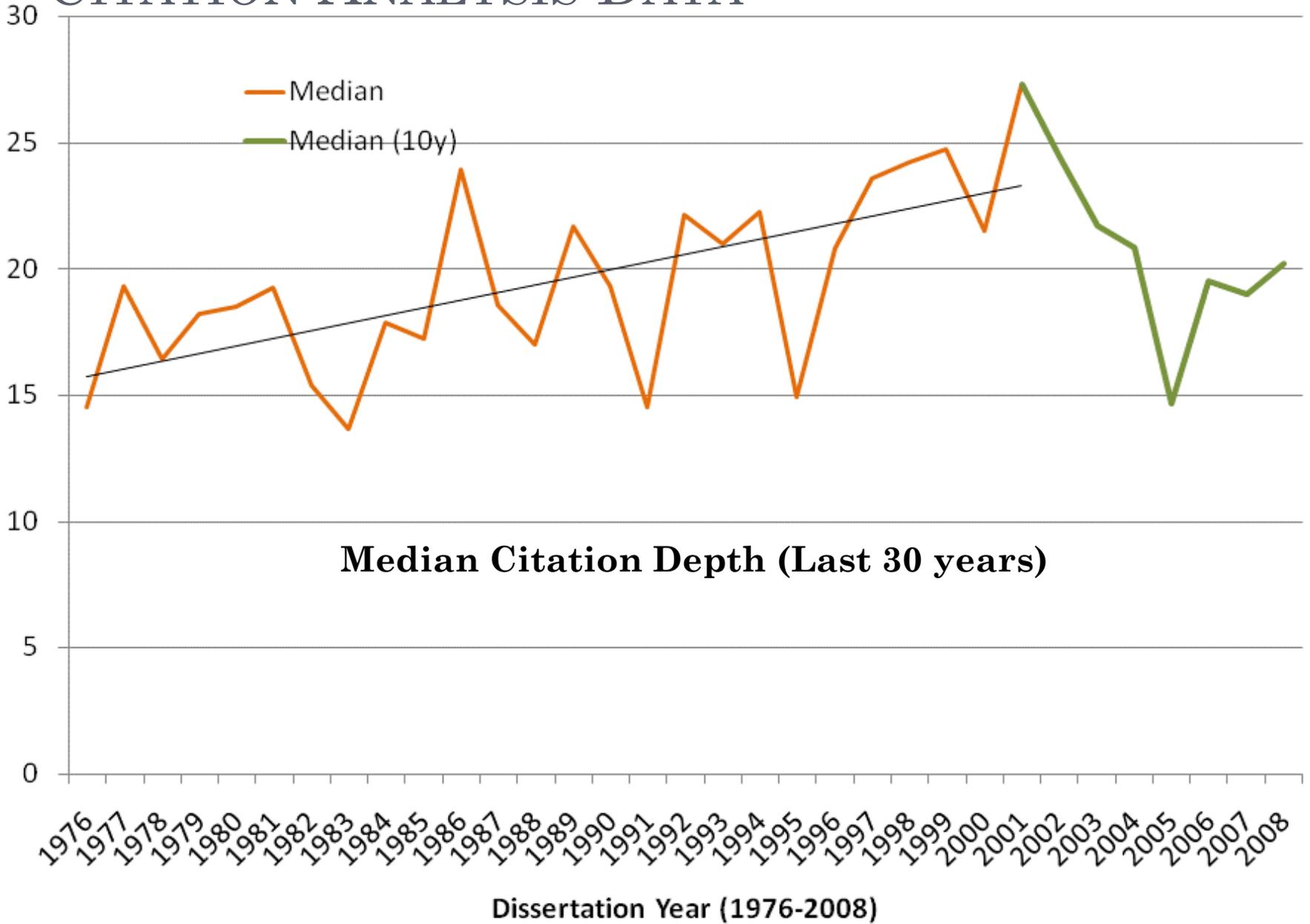


CITATION ANALYSIS DATA

Median Citation Depth Rate (max=60 years)



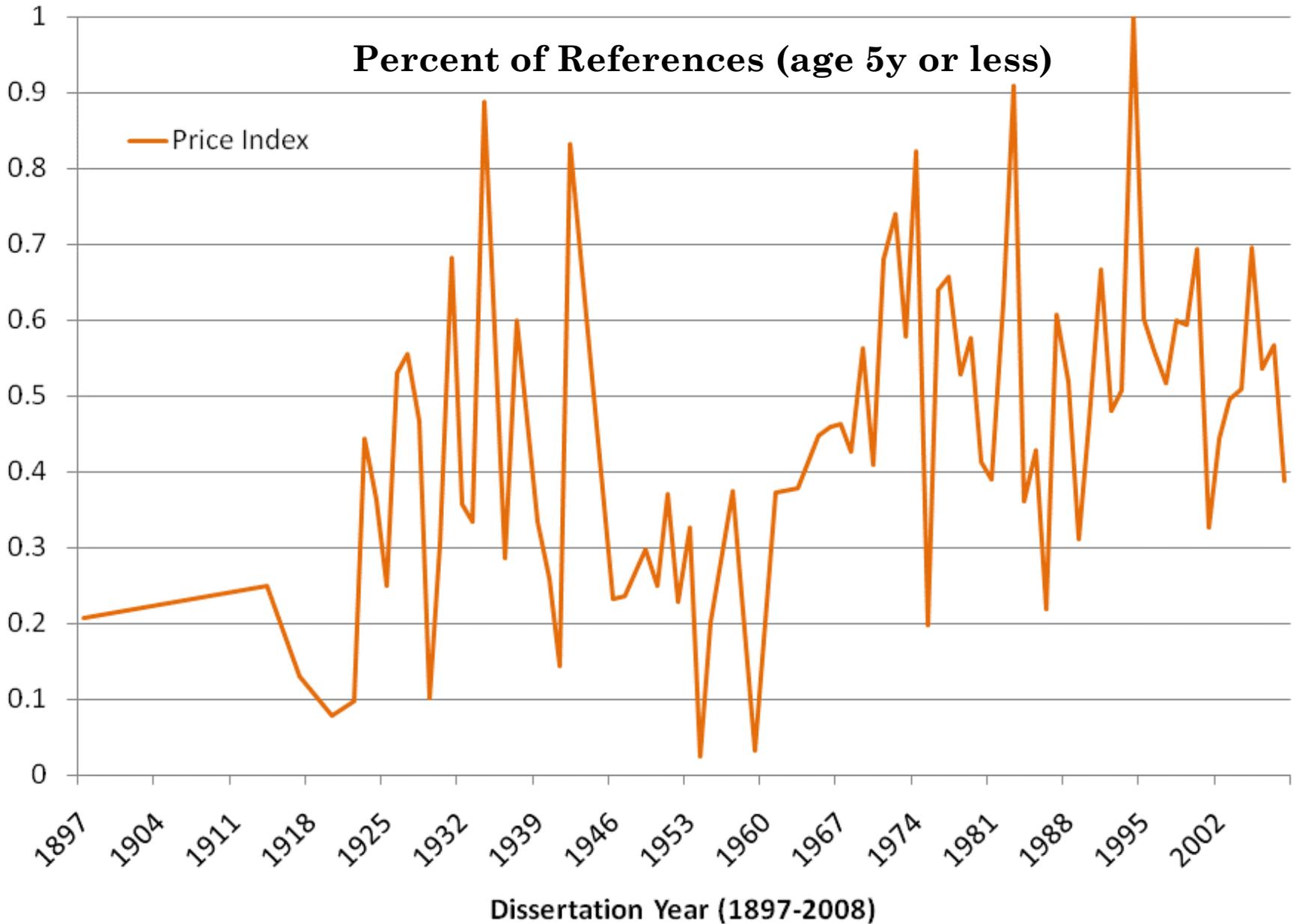
CITATION ANALYSIS DATA



CITATION ANALYSIS DATA

Percent of References (age 5y or less)

Price Index



DISCUSSION

- **Growth of literature over time (Exponential vs. Steady State)**
- Search mechanisms
- External Factors
- The “Advisor” factor

The rise and fall of cited literature is a mechanical reflection of the rise and fall of the growth rate of the existing literature (Larivier, 2008)



DISCUSSION

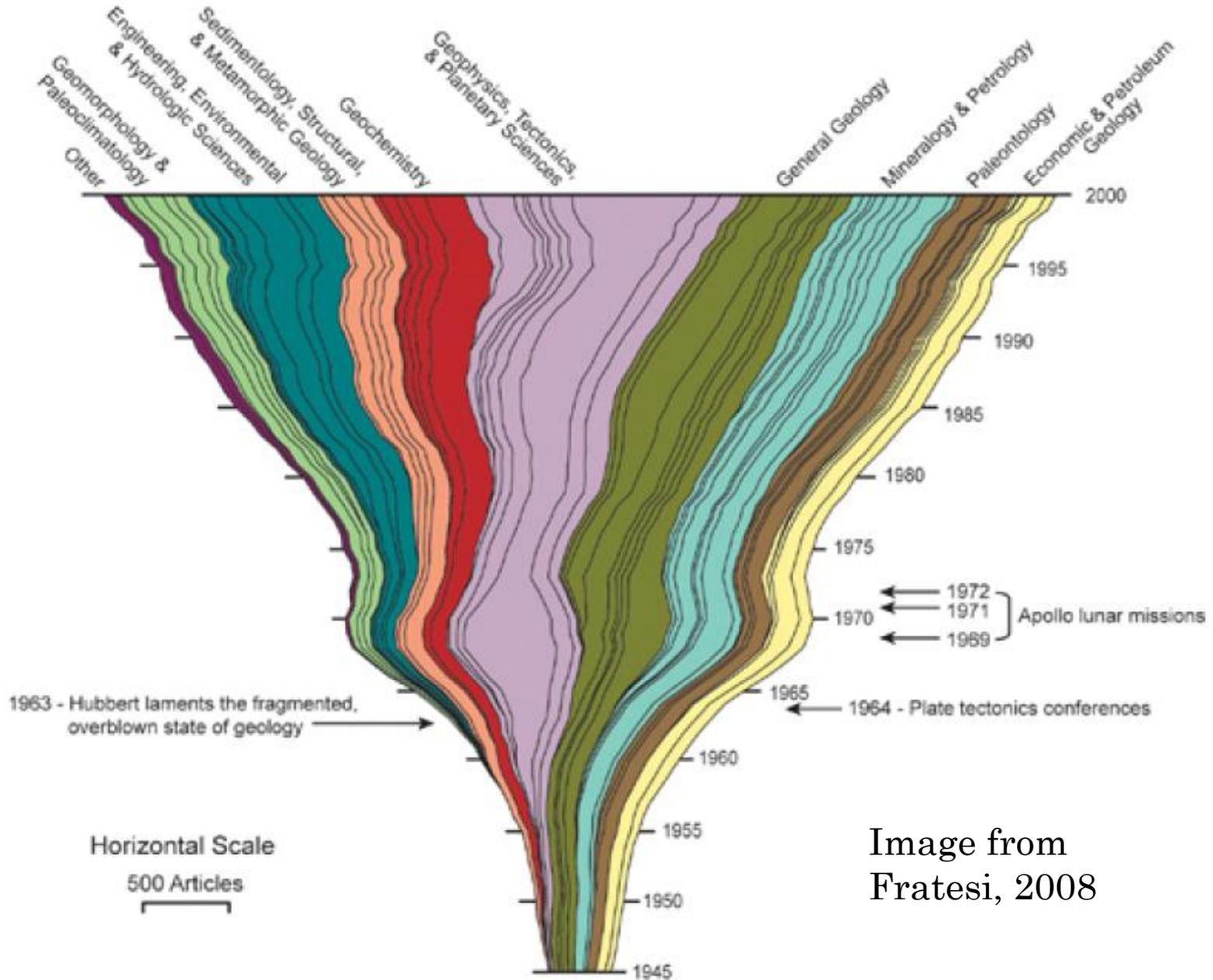
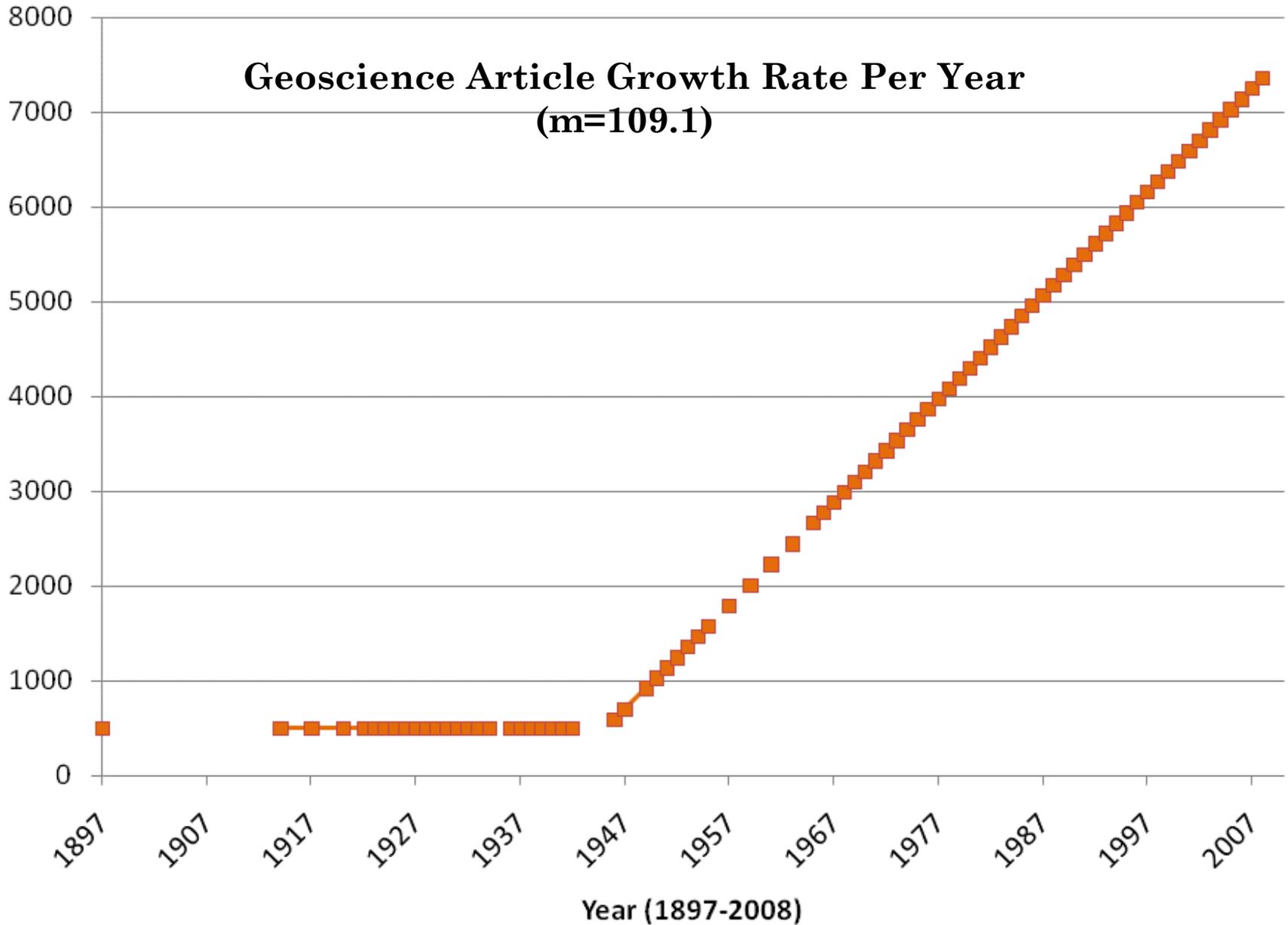


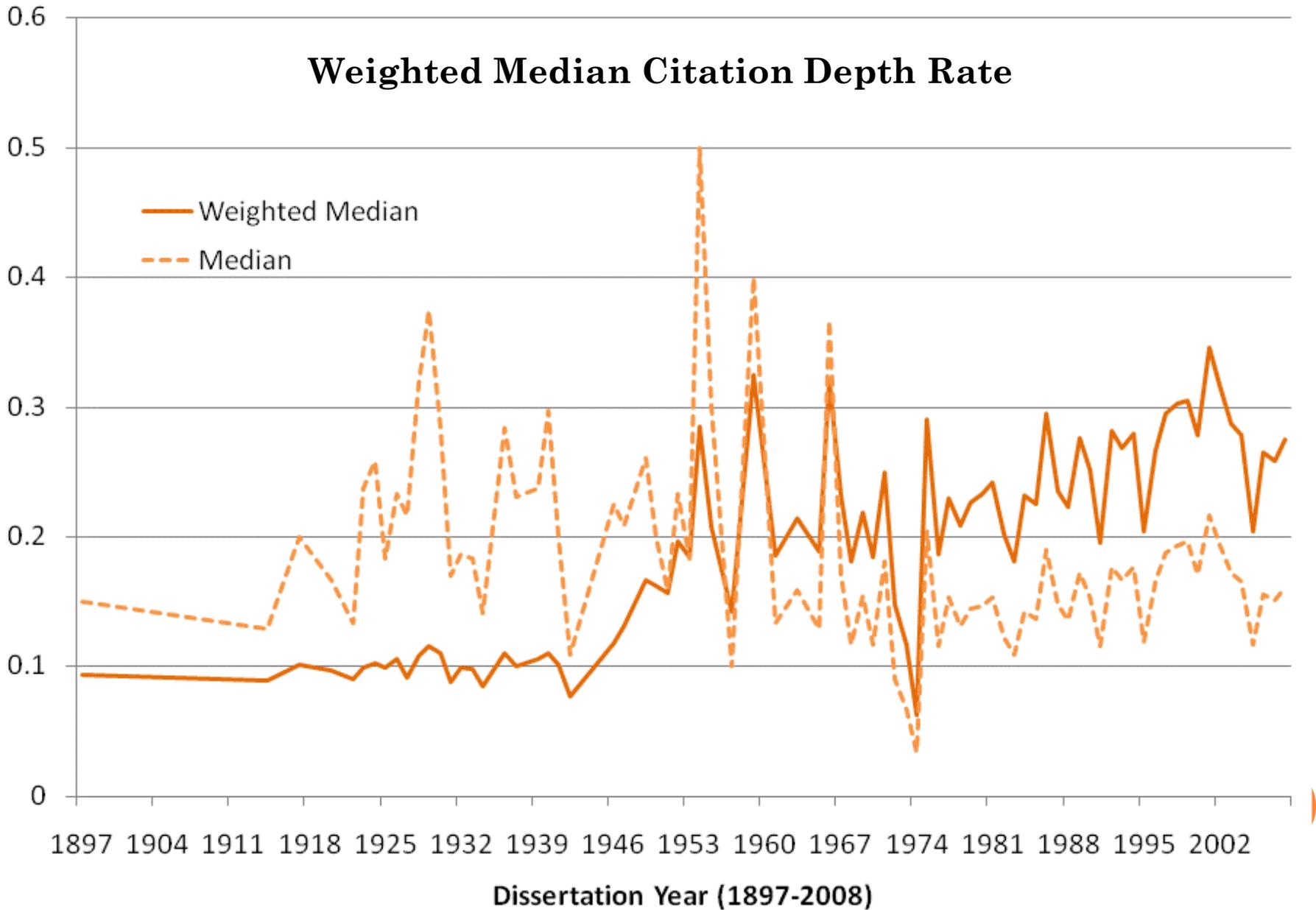
Image from Fratesi, 2008

DISCUSSION



DISCUSSION

Weighted Median Citation Depth Rate



DISCUSSION

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- **Search mechanisms?**
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- The “Advisor” factor

Google, and deep literature databases, “level the playing field” of journal literature... no longer are older citations buried chronologically due to their age. (Nicholas, 2005)



DISCUSSION

- Growth of literature over time (Exponential vs. Steady State)
- Search mechanisms
- **External Factors?**
- The “Advisor” factor

Physical Location of the Geology library?
Availability of online indexes and journals?



DISCUSSION

- Growth of literature over time (Exponential vs. Steady State)
- Search mechanisms
- External Factors
- **The “Advisor” factor?**

Information Seeking Behavior as a “learned” practice?



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