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# An Information-Based Procedure for Measuring Semantic Change in Historical Data

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#### 1. Introduction

For various academic and practical contexts, it may be important to study the way in which the <u>meaning</u> of certain target concepts has changed in historical data records, that is records spanning over a significant time period. For example, an investment bank may be interested in the way the meaning of an investment theme (e.g. Clean Energy or Robotics) has changed in its analysts' reports over the last fiscal year, and historians may be interested in studying the way in which the meaning of "Sin" has changed from the 18th century.

The problem is that while the concept of information has been well defined, the study of <u>meaning</u> within information sciences has gained relatively little attention (e.g. 1, 2, 3) and therefore it is not quite clear how to measure semantic change using

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