Visualising structures in ancient texts

By David Musgrave, Amridge University, USA, and Gordon Rugg

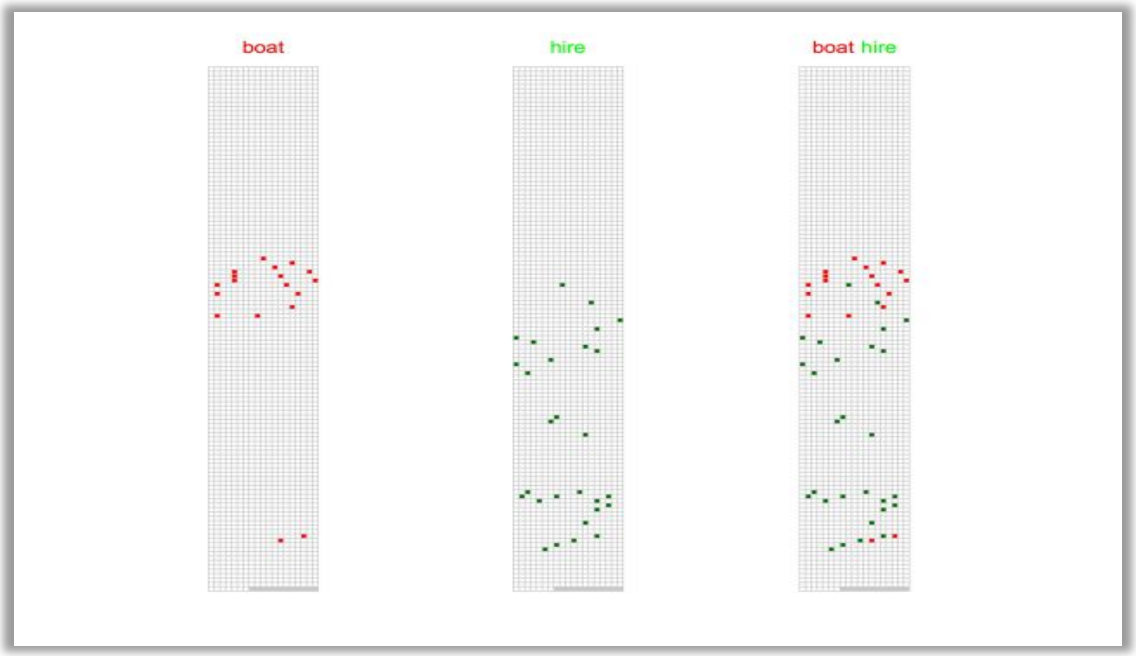
Background: This article uses Search Visualiser images to show rhetorical structures in several ancient texts, ranging from the Code of Hammurapi to the New Testament. Systematic thematic structuring within texts is apparent even in the earliest that we examined.

This article was originally posted on November 16, 2012.

Introduction

Ancient texts made widespread use of a range of rhetorical structures. A simple example is the division of a text into thematic sections. A more sophisticated example is the use of *inclusio*, also known as *bracketing*, where a theme is located between two mentions of another theme that acts as marker for the beginning and end of the main theme.

Identifying such structures can encounter various problems, such as keeping track of a particular theme in long texts. In this article, we show how the identification of themes is made easier by displaying the locations of relevant keywords visually. The example below shows this principle applied to mentions of boats and of hire in the *Code of Hammurapi*. The illustration was produced using the Search Visualiser software.

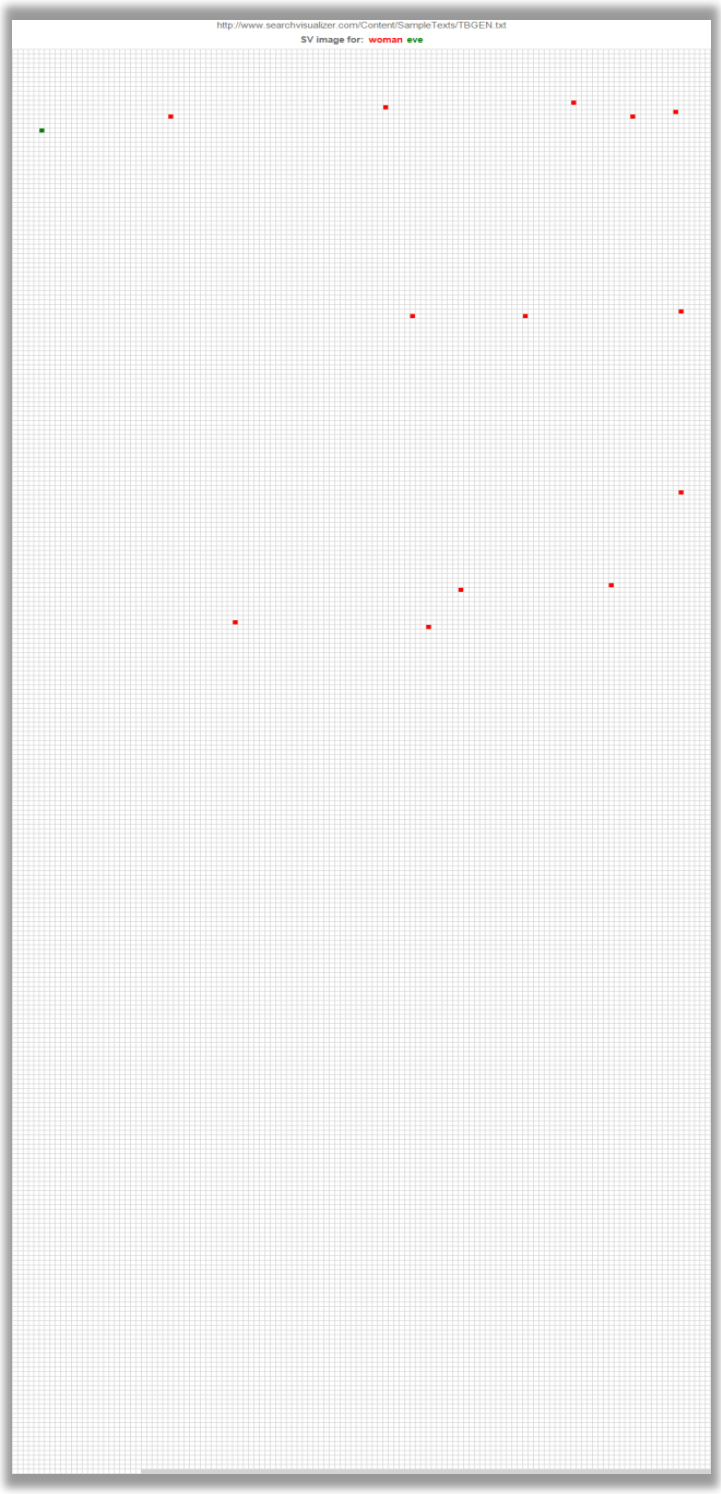


The *Code of Hammurapi* (also transliterated as *Hammurabi*) dates from about 1770 BCE. It is one of the earliest known sets of written laws, consisting of 282 laws on various themes.

The illustration above shows where the codes mention boats (shown as red squares) and hire (shown as green squares). Each square in the illustration represents a word in the Code.

We see that most of the mentions of boats occur about halfway through the Code, with two more mentions near the end; mentions of hire all occur in the second half of the Code. The two themes overlap in the second half of the "boat" segment, where the Code deals with hire of boats; the last two mentions of "boat" are in laws about hiring boatmen.

Similar structuring by theme can be seen in *Genesis*. The image below shows occurrences of “woman” (in red) and of “Eve” (in green) in the King James Version.



The word “woman” occurs only in the first half of the text; the word “Eve” occurs only once, very early in the text.

There are mentions of particular women throughout the text, such as Noah’s wife, but the word “woman” occurs only in the first half.

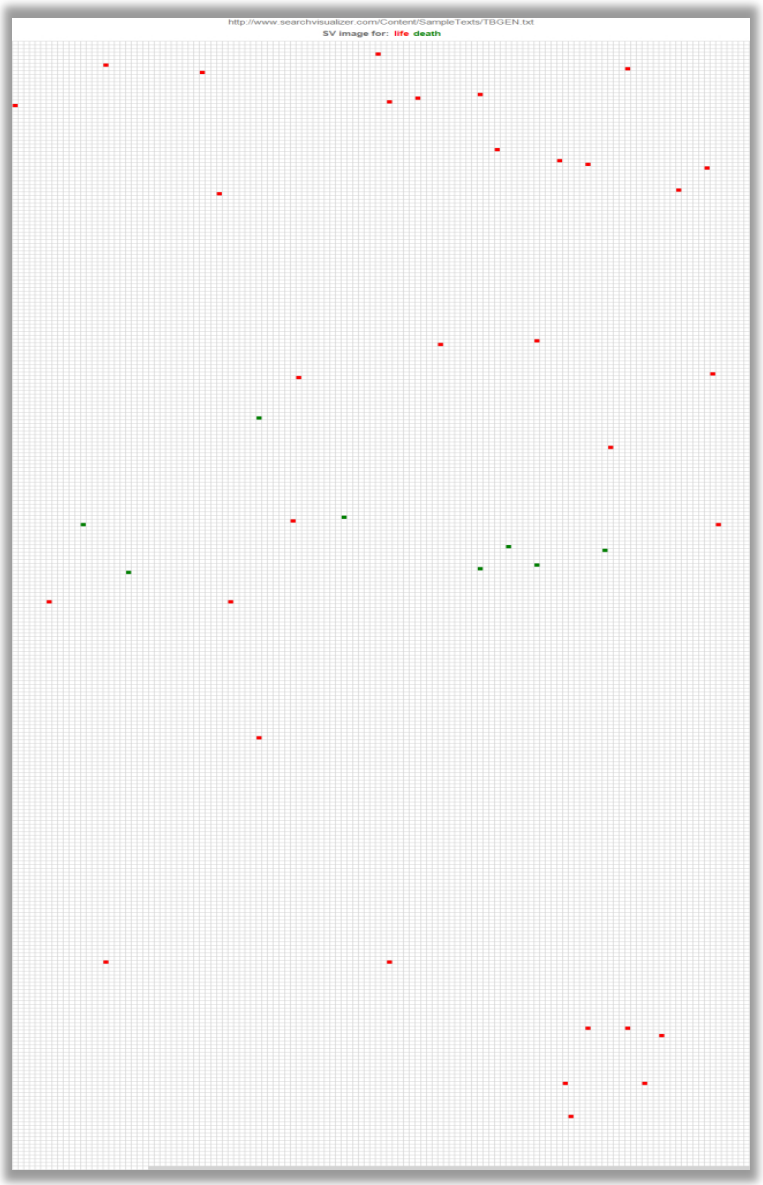
Another example of limited distributions involves a possible case of inclusio within *Genesis*.

Two key themes in *Genesis* are life and death – the creation of life is the theme of the opening verses, and the arrival of death is a key theme in the biblical story of the Fall.

The locations of the words “life” and “death” within *Genesis* show a pattern. Death is mentioned only in the middle section of the text. There are numerous mentions of people dying throughout the text, but the word “death” occurs only in the middle. Life is mentioned in a layer of frequent mentions at the beginning, and another layer of frequent mentions at the end, and in a looser cluster around the middle, where it is interspersed among the mentions of death.

This looks like a large-scale example of inclusio, where the theme of death in the middle section is bracketed by the mentions of life in the opening and closing sections.

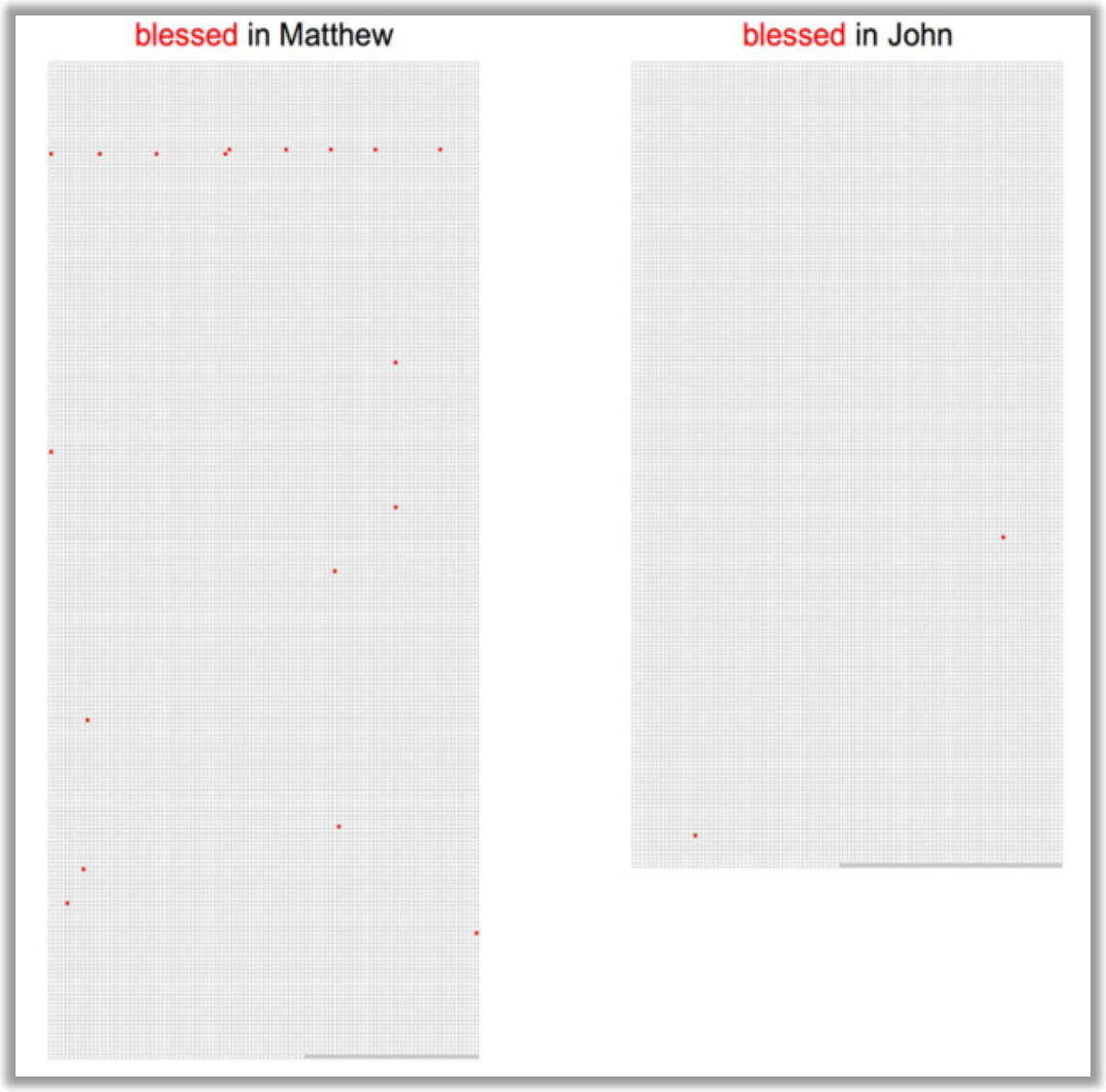
The illustration below shows the location of mentions of “life” (in red) and of “death” (in green).



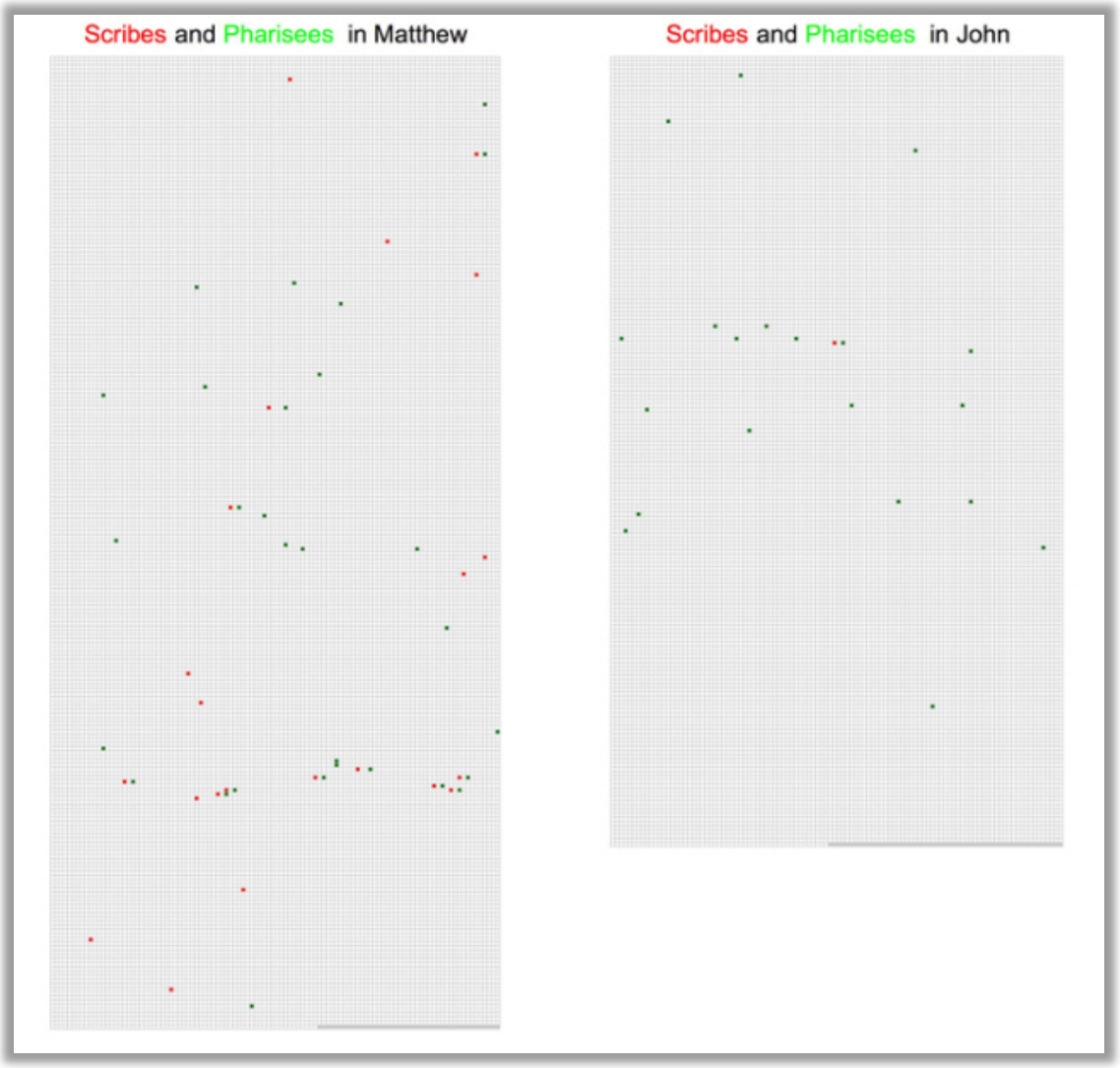
Similar structures are visible in the gospels.

The example below shows where the word “blessed” (in red) occurs in the gospels of Matthew and John.

The red layer near the start of Matthew is where the Sermon on the Mount occurs, with its regular mentions of the word “blessed” being mirrored in the regular occurrences of the red squares across the image.



The illustration below shows the near-absence of a theme. In Matthew, there are numerous mentions both of Scribes (red) and Pharisees (green). In John, Pharisees are mentioned about as often as they are in Matthew, but Scribes are mentioned only once, about a third of the way down.



These examples show how displaying positions of keywords visually can show thematic and rhetorical structures within texts.

We hope this approach will be useful to other researchers.

This article describes topics covered in our presentation at ASOR 2012 – the annual meeting of the Association of Schools of Oriental Research, in Chicago.

http://www.asor.org/am/index.html

Technical details:

The illustration of the *Code of Hammurapi* was made using the Sacred Texts online edition, at:
http://www.sacred-texts.com/ane

The Search Visualiser is available for online use, free, at:
www.searchvisualiser.com

You can search texts on a specified site using the “Single site” option of Search Visualiser. This option is located on the the menu linked to the “Entire Web” option toward the left of the SV screen.

The biblical illustrations were made using the Project Gutenberg text of the King James Version, located at: http://www.gutenberg.org/ebooks/10

The Search Visualiser site contains the texts of the Pentateuch and of the Gospels from the Project Gutenberg text, in the “Sample texts” section of the SV site. You can reach this section of the site using the menu linked to the “Entire Web” option.

The texts are under the terms and conditions of the Project Gutenberg copyright, whose details are available in the “Texts & Resources” section of the site. That section can be reached via the “Texts & Resources” tab at the top of the site homepage.