

# *Quantitative assignment*

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## *Introduction*

The main purpose of this paper is to find the relationship between several keywords which are related with my research questions by exploring sets of archaeological keys words in corpus based on archaeological journals. I expect that the results of this project will provide background knowledge about my topics and tendency of relating studies.

## *Hypothesis to test*

Three potential questions are related with my research subject that is about stemmed points in Upper Paleolithic Korean peninsula and main focus of the subject is to figure out the driver(s) that let people produce the lithics and the cause(s) of the changes in stemmed points throughout the Upper Paleolithic in Korea. My hypothesis is that possible causes of producing stemmed points might be interpreted with evolutionary theory, extinction theory, and climate change. For example, due to climate change, the main food resources such as animals and plants were extinct so hunter-gatherers tried to survive adapting the new environmental with using new tools in the mechanism of evolutionary theory.

Based on my hypothesis, I make three questions: (1) How can I connect the theory of evolution and the starting point of new lithics such as stemmed point in the Upper Paleolithic period? (2) Is there some relationship between the extinction of mammals such as mammoth and change of stone tool? If so, I would like to see the transition between phase to phase of stemmed point based on the theory of the extinction. (3) Which attributes on lithics I should choose to figure out changing aspect of lithic according to climate change?

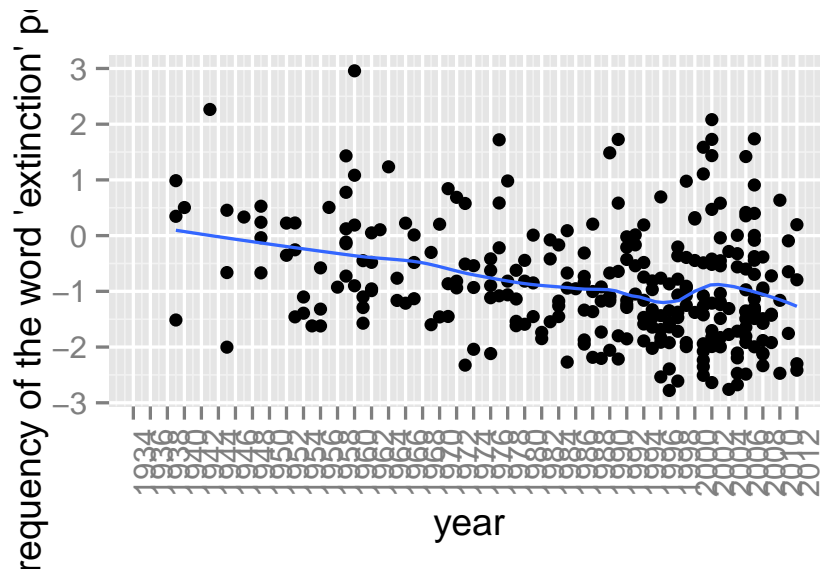
## *Key terms*

### *Exploratory Data Analysis*

provides data of five journals (American Antiquity, Journal of Archaeological Research, World Archaeology, Journal of World Prehistory, and Journal of Field Archaeology) as corpus. Even though JSTORr couldn't contain data of all Journals relating archaeology but still the data is quite big to run the code in my computer, I used

Amazon cloud computer service. (Hester 1960),(Dunnell and Wenke 1980),(Meltzer and Holliday 2010)

*extinction, extinction&lithic*



```
## word_ratio year V2
## 1: 19.2506 1960 10.2307_277160
```

Dunnell, Robert C., and Robert J. Wenke. 1980. "Cultural and Scientific Evolution: Some Comments on 'The Decline and Rise of Mesopotamian Civilization'." *American Antiquity* 45 (3): 605–9. doi:10.2307/279882.

Hester, Jim J. 1960. "Late Pleistocene Extinction and Radiocarbon Dating." *American Antiquity* 26 (1): 58–77. doi:10.2307/277160.

Meltzer, David J., and Vance T. Holliday. 2010. "Would North American Paleoindians Have Noticed Younger Dryas Age Climate Changes?" *Journal of World Prehistory* 23 (1): 1–41. <http://www.jstor.org/stable/23211035>.