1. A. Gerrymandering

Small Multiples: disjoint data and same encoding

B. Olympic Feathers

Small Multiples: disjoint data and same encoding

C. How Much do I Really Use My Favorite Crutch World

Multiform : same data and different encoding

一張含有 兒童藝術, 圖畫, 文字, 寫生 的圖片

自動產生的描述

Line Chart: Q1 , Q2

Showing data changes over time. Different series for each candidate make it easy to track sentiment trends and compare them at any point in time.

Bar Chart: Q2

It is ideal for comparing quantities across categories. Grouped bars enable a direct comparison between candidates within the same city/county.

Choropleth Map: Q3 , Q6

Geographic patterns in data can be effectively displayed using color gradations. It's intuitive for identifying regional sentiment trends.

Scatter Plot: Q4 , Q5

It is useful for identifying relationships between two quantitative variables, such as sentiment and post volume.

Interactive Elements:

Interactivity enhances the user's ability to explore data in depth, making complex data sets more accessible.

Annotations:

They provide context that can explain sudden changes or outliers in the data.

Visual Encodings:

Marks: Points on line charts, bars on bar graphs, regions on maps, and circles on scatter plots.

Channels: Position along the X (time) and Y (sentiment, volume) axes, color for differentiating data, size for volume representation, and opacity to manage overplotting.

Ease of Answering Questions:

Easy: Changes over time, direct comparisons at a point in time, and regional sentiment patterns are straightforward to observe with the proposed visual encodings.

Difficult: Identifying specific points where sentiment flips between candidates might require more interaction, such as selecting two time points and observing the map for changes.

1. First row: Change in hue

Second row: Change in luminance

Third row: Change in saturation

Fourth row: Both hue and saturation