Critique of the #eclipse2017 Visualization

I use the visualization of #eclipse2017 for critique. Overall, the visualization is very effective in demonstrating the Instagram response to the solar eclipse. It displays information about the data in geographical dimension by displaying photos and sum statistics on a map and displays time information by showing the number of photos submitted during one-minute intervals across the eclipse happen time with a histogram. The visualization uses simple visuals that are easy to understand for the general public, and the interaction involved is straightforward for users to explore more insights inside the data.

The visualization uses a wide range of visual encodings. In the second visualization, the author uses color to indicate different forms of Instagram submissions—photos in blue and videos in purple. Also, the author uses circles to indicate submissions in different areas on the map. The opacity of the circles represents the number of submissions in the area. The grey area represents the eclipse trajectory. In the third visualization, the heights of the bars indicate the total number of photos submitted during one-minute intervals across the eclipse happening time, with the x-axis being time and the y-axis as quantity. In the last visualization, the author uses grey bar to indicate the 2017 eclipse trajectory and uses purple bars to indicate the future eclipse trajectory. The color indicates whether the eclipse is happening and the text tells the years.

The interactions in the visualization are also rich and effective. In the first visualization, when the user hovers on certain pictures, a detailed view will show—the photo is bigger, along with information of the location, user name, and likes of the posts. There is also an arrow as a link that users can click to access the original post. The interaction is effective for use to see photos of their interest and explore posts in certain areas. In the second visualization, the user can click on the button and watch the eclipse path across time. The circles will also change their presence and opacity corresponding to the specific time. The interaction is useful for users to explore an overall view of posts at a certain time of the eclipse.

There are several strengths of the design. Firstly, the four visualizations are straightforward to read. They don't require the users to select or input anything, which gives users lots of ease. Secondly, the colors aligned with grey, blue and purple across the visualizations are aesthetically satisfying. Thirdly, the size of the maps is adjusted. The first map is big so that the user can see the photos clearly while the second map is smaller so that the user can see the eclipse path and circle distribution more comprehensively. The interactions are also easy to understand and straightforward so they give users more engagement into the design.

However, there are also weaknesses in the design. Firstly, in the second visualization, the color representations of photo and video—blue and purple are too close so that if the opacity is low, it is not easy to differentiate the two colors. Secondly, in the second visualization, although the points have different sizes and opacity, some users may wonder about their implications. If there is a tooltip indicating statistics of the posts at the time, that will be easier for users to read information. Lastly, there is no interaction between the graphs. For example, when clicked at a certain minute of the eclipse on the second graph, I wish to see photo summaries at the minute on the first graph and bar highlight on the third graph, but there isn't.

There is two potential mis-reading of the visualization. In the third graph, the author uses text to indicate when the eclipse arrives over certain cities. However, at the first sight, the user may consider the histogram represents the number of photos submitted in different cities. If the author can explicitly write Eclipse over … with each labeled city, that will be more clear. Also, in the second graph, the circles grow to a fixed size for a smooth transition, but the size itself may not encode quantity information. However, when the user stops the eclipse, as they find the circles are in different sizes they may think they represent a different number of posts.

I redesigned the first visualization so that when the user click on the empty space of a state, the picture with the most likes will be shown. This will give users more representative information of the eclipse photos in different states. The other features and interactions of the graph is retained.
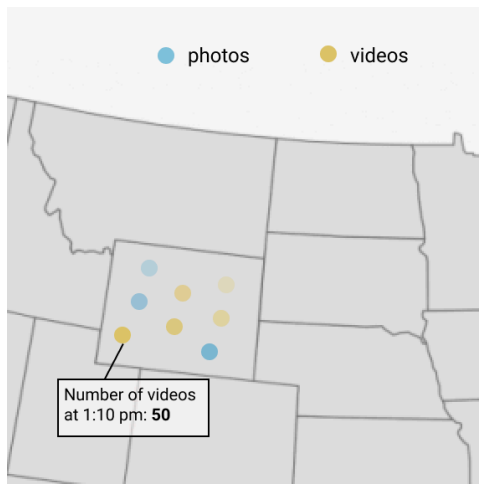
I redesigned the second designs so that the photo posts are in blue circles and the video posts are in yellow circles. The two colors are highly contrasted so that even in high opacity, the users are still able to differentiate them. Also I add a tooltip when hovering on circles so that the exact number of the number of photos or videos at certain minute of eclipse is demonstrated. Other features remain the same.
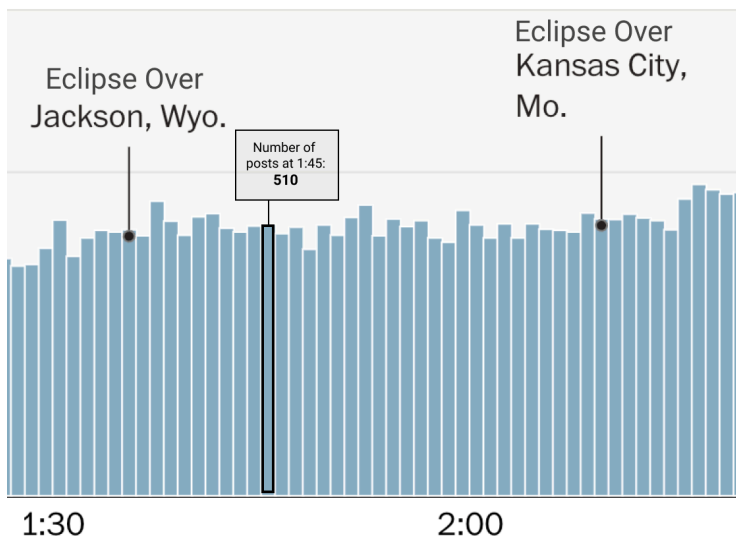
I redesigned the third visualization so that when the user hovering over a certain histogram bar, the bar is highlighted and the specific number of posts at the minute is shown in a tooltip box. This interaction will enable users to better locate the post information across the eclipse time span. Moreover, I add the text "Ecplise Over" before each city name. Therefore, it will not mislead people to consider the bars as different cities. Other features of the visualisation is retained.