CS 171/CSCI E-64: Visualization
Homework 3, Problem 1: Design Critique

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For this problem I chose the Blogging: Not for the young?

http://www.ngonlinenews.com/news/blogging-not-for-the-young/

Questions

1. Who is the targeted audience?

    The info graphic was created by Next Generation Online, which seems to be an online magazine for people interested in Internet trends and news. The visualization attempts to answer the question of whether young people are engaging in traditional blogging as much as they had in years past. The target audience would be Next Generation Online's readers – anyone interested in online news and information, specifically those interested in the current trends in blogging.

2. What tasks does the visualization enable?

    The visualization attempts to show that there has been a decline of traditional blogging by younger people (18 to 29 years of age) and an increase in the use of blogging by those ages 30 and over. The graphic also shows that there has been an increase in micro blogging by those in the younger demographic.

3. What data is represented in this visualization? Be specific.

    The visualization shows Internet usage by age at the top. It also shows data by type of activity/gadget ownership (blogging, social networking, twitter, etc.) categorized by percent. This data is shown for the years of 2004 to 2009.

4. How is each data type visually encoded? Do you think the encodings are appropriate?

    The graphic encodes the percentage of Internet usage by age and the usage by activity/gadget as horizontal bars of varying color. The graphic also attempts to show the change over time on a vertical scale starting with 2004 at the bottom and 2009 at the top. Vertical dashed lines represent the percentage of usage with line for 25%, 50% and 100%. Additionally there are curved lines connecting many of the horizontal bars, but it is unclear what they represent if anything at all – no explanation of their usage is provided and it appears that they may just be chartjunk.

    I do not agree with the encoding on this visualization and I actually found it very difficult to read. I think that the 'Internet Use by Age Group' summary section should have been broken out to make it more separate from the detail middle section. I also think that the combination of the vertical time lapse and the horizontal bars made it difficult to compare year over year. I think that to show a trend, as this graphic is attempting to do would be better suited to a line graph.

Another alternative would be either a grouped bar graph showing each year and the different activities grouped together or a series of small multiples graphs.

5. Does the visualization have graphical integrity? Why or why not?

No, it does not have graphical integrity for the following reasons:

a) The horizontal bars are based on percentages. There are lines for 25%, 50% and 100% (though not 75% for some reason) that look like they are accurately spaced, but the 100% mark does not go out to the end of the visualization so the 100% mark actually looks like it is at 75%.

b) Not all activities/gadget usage is present in every year. Only years 2008 and 2009 have data for mp3 usage. Cell phone ownership is only present in years 2007 and 2009.

c) Some years have users age, some years don't have this data. For the years that do have this data not all age categories are present. For instance in 2006 the only age category represented is 65+ (were they only ones using the internet in 2006?).'

d) The graphic goal is to explain data about blogging usage. There seem to be extraneous categories that have nothing to do with this such as mp3 ownership.

e) The way the categories are broken out clouds the data. For instance why is twitter broken out and not just included in the Social Networking category?

f) There seems to be some implied correlation with the curved lines connecting the horizontal bars, but I think it is just chart junk.

g) The later years do not have labels on the bars (maybe that is what the curved lines are trying to show?) which makes it hard to understand.

h) Some of the bars in the different activities have different age groups. As an example Blogging has three categories: 12-17 year old, 18-29 year olds and 30+. Twitter has only two: 12-17 year olds and 18+.

Redesign

In my redesign I chose to use two line graphs, not quite small multiples, but it could be expanded to that if additional categories were added in. The original visualization was attempting to show that traditional blogging by young people was going down, while micro blogging among this age group was going up. Similarly the original graphic was attempting to show that for people 30 years or old traditional blogging usage was going up. The authors were trying to show a trend which is best shown by a line graph.

Additionally, I removed all the extra categories such as mp3, cell phone as well as getting rid of the Internet usage by age bars – none of this data had any bearing on the question being asked. If I was redesigning this I would have presumably have access to the data so I broke it down into two age groups – 30 and older and 30 and younger, instead of the three (though sometimes

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two) the original author used. I also changed the activity groupings to traditional blogs and micro blogs vs. social networking and twitter.