Week (8) - "The Public Life of Data:Investigating Reactions to Visualizations on Reddit"

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For week8 reflection, I chose "*The Public Life of Data: Investigating Reactions to Visualizations on Reddit*" that professor Harrison mentioned during last week's lecture. The goal of this paper is to explore the way people engage with vis on Reddit.

Based on the Grounded theory approach, the researchers investigated the characteristics and motivations of commenters' reactions. The reactions analyzed were only the comments where the nested replies to those comments were ignored. They studied 475 textual reactions from r/dataisbeautiful/, which led to classifying the reactions to four scopes, namely **Data**, **Visualization**, **Insight**, and **Topic**. They classified the reactions further into ten types. The types are shown in the following table:

Type	Description	#
OBSERVATION	Stating the obvious; point out specific data points or trends; express insights and interpretations	62
CONCLUSION	Taking a step back to provide an overview over the presented information and draw conclusions or call to action	29
HYPOTHESIS	Providing a speculative explanation to explain the presented information. This can range from tentatively asked questions to bold claims that introduce additional data to argue for an explanation	56
CLARIFICATION	Asking for information to better understand the data, a visualization or its insight	50
PROPOSAL	Propose future work and possible adaptations of the data or visualization	43
CRITIQUE	Feedback to the visualization author, ranging from expressing constructive feedback and pointing out improvements to disagreement with the visualization and contestation of data.	90
ADDITIONAL INFORMATION	Introduce additional information to allow people to better contextualize or relate to the presented data. Includes background information, comparisons with similar data, trivia, and links to external sources with additional data.	58
TESTIMONY	Providing personal information by speaking from first-hand experiences and sharing anecdotes or memories	41
OPINION	Providing a personal perspective by sharing opinions, but also feelings and emotional reactions.	92
OTHER	Unfitting in other categories, off-topic or not understandable reactions	19

Table : Reaction types, their meaning, and frequency of occurrence (#). The sum of occurrence is larger than number of reactions due to some double encodings

The researchers also have surveyed to get some insight into the motivations behind these reactions. One hundred sixty-eight users have responded to that survey. Their motivations were categorized into two main goals: **Personal Perspective and Experience** and **Informing the Public Discourse**. For the former one, people like to **express their opinions**. They believe that their opinions

are a middle layer between the data presented and the reader's perception. Another motivation is **matching knowledge**. People tend to compare their own familiarity with the new information. **Sharing emotions** is another motivation where Redditors write comments to share their feelings when exploring the vis. Some Redditors like to post reactions that show **personal interest**; for example, they might be interested to know more about different perspectives of the dataset. **Adding anecdotal evidence** is the last motivation in this category. Sometimes, adding such evidence is to humanize the data or to add context that helps people with little background understand the vis. For the latter category, the first motivation is **participation in public sensemaking,** where many participants like to give and get constructive feedback. The second motivation is **adding one's own story,** which humanizes the data and makes the reaction more effective. The third motivation is **Rectifying what's wrong**. The commenter critique and give suggestions that might play an essential role in avoiding the visualization bias. The fourth motivation is **sparking discussion**. People like to know what others think about their point of view, and they would like to feel engaged.

For the design implications, the researchers suggested:

1. Providing **type-specific annotations** to reinforce the discourse.

2. Reinforcing **personalized stories and visualizations**.

3. **Visualizing the discourse** to draw attention to the contentious parts.

4. Considering **guidance and moderation** when participating in discourse.

5. **Gratify people's participation** since some of the motivations were personal.

I like the idea of having discourse around the vis and the data. It significantly helps in clarifying the meaning of some aspects, especially when someone has little background about a subject, and it is an opportunity to know how people are reasoning about the visualization. I believe that the thread comments would have more rich information that can reveal more motivation categories.

Sources:

1. https://arxiv.org/abs/2103.08525