As Dasgupta and Kosara (2012) state in *The Importance of Tracing Data Through the Visualization Pipeline*, “We achieve this by extending the Chi model of the visualization pipeline by including the perception and cognition stages: data mapping and visual mapping constitute the encoding stages on the machine-side, while perception and cognition constitute the decoding stages on the human side of the pipeline.[[1]](#footnote-1)”

The former model of visualization is ended up with representations on screen. However, the authors find that it is necessary to extend the model to include human perception. It is impossible for a blind people to look and understand the best visualization.

Human or user centered design is a very popular topic among recent years. Thinking about user centered design, people mostly think about web or app. It is interesting for me to read a journal about make data visualizations user friendly. Although visualization includes some interactions with users nowadays, there are some flaws within interaction, like the loss of precision of data. For audiences from different backgrounds, visualization analytics should use different kinds of visualization to show their insights. In my opinion, analytics are not only responsible to analyze data but also their audiences.

1. Dasgupta, A., & Kosara, R. (2012). The importance of tracing data through the visualization pipeline. *Proceedings of the 2012 BELIV Workshop on Beyond Time and Errors - Novel Evaluation Methods for Visualization - BELIV '12*. doi:10.1145/2442576.2442585 [↑](#footnote-ref-1)