

SNS COLLEGE OF TECHNOLOGY, COIMBATORE –35 (An Autonomous Institution)



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Purpose, Visualization function and tone

What is Tone?

At first, it may not seem to make sense to think about Tone when talking about data visualization. At the end of the day, a quick search in any Portuguese dictionary (and here I used Priberam), we found that Tone is, among other definitions:

- 1. Each of the differences that can be noticed in the voices or sounds.
- 2. Way of speaking.
- 3. [figurative] Strength, vigor.

However, if we stick to Tone as the Way of Speaking, and return to the definition proposed by

Andy Kirk

, author of **Data Visualization: A Handbook for Data Driven Design**, we soon understand what tone is:

"Tone: The distinction between 'reading' and 'sentiment' data."

When we talk about data visualization, Tone is nothing more than how we will build the visualization to transmit the information we want to users — a way that is revealed in the stylistic and cognitive choices we make, such as choosing a color palette, typography, which graphic to use (a simpler and more objective one or a more sophisticated one with more added information) or even where on the screen to display each piece of information.

Put another way, the tone conveyed by a visualization influences the perception phase of understanding. When judging the tone most appropriate for your project, you are deciding whether you want to place more emphasis on the viewer being able to read or feel the data — whether it is more important for them to look at the data with a certain coolness and objectivity common to rational decision making., or if, on the other hand, it is more important to take the context of the data into account before making a decision.



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The importance of Tone becomes clear when we take into account that from the same set of data we can filter more than one piece of information. And from the same set of information, it is possible to construct different stories. But as we have no control over how the public will filter this data, how it will transform it into information, or what stories it will build, it is exactly through Tone that we will emphasize what we consider (most) important. The objectivity of the data alone or the context in which the data was collected? A purely rational and data-based decision, or the sensitization and persuasion of someone regarding a certain topic?

How can knowing about Tone help me?

According to what Andy Kirk himself proposes, there are two possibilities for Tone when building a visualization: the emotional tone (also known as an Emotive Tone) and the reading tone (also known as a pragmatic tone).

Reading Tone is suitable for situations in which you will not have control over how users will access the data and/or when more important than the user's feeling when accessing the data to trigger a strategy is the pure and simple extraction of insights in the most objective way possible. With this tone, the ideal is to optimize the ease with which consumers can accurately estimate the magnitude and relationships between values and perceive the data efficiently. Most enterprise visualizations are developed with this tone.

Feeling Tone, on the other hand, is not developed from precision or magnitude. Its use offers a contrast where the emphasis may not be on the data itself but on the essence of the values and an overview of what the data shows.

What should I consider to set the right tone?

Identify your main intent.

If you intend to guarantee the agility with which insights are analyzed or to emphasize the precision and efficiency in the perception of the data represented, understand how to build a visualization with a reading tone. In these situations,



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there is no need to employ any form of visual stimulation to convey a message more powerfully, nor to seduce the audience through aesthetic appeal — although they can aid perception. In this type of visualization, the most important thing is to be as clear and objective as possible. Therefore, use simple cards with big numbers to address the correct context, and deliver the results directly. Here, presenting the "So what?" before presenting "What" is a good idea.

If your intention, on the other hand, is to convey a message to those who know little about the context, persuade someone of something, or even impact someone using a certain set of data, the tone you should use the Feeling. Here, perceptual judgments are sometimes more important for your viewer — so that there is alignment between the parts and he captures the essence. As Andy Kirk wrote, in these cases:

"A representation of data that makes it easy to see 'at a glance' is sometimes the most appropriate way to portray a subject's values. The consequence of this is that the perception of accurate readings is diminished."

Here, therefore, it is appropriate to use more complex visualizations, more sophisticated designs, use of innovative stylistic resources, more planned color palettes, etc.

Finally, I leave you with two examples by way of illustration. One built with a pragmatic tone and the other with a feeling tone.