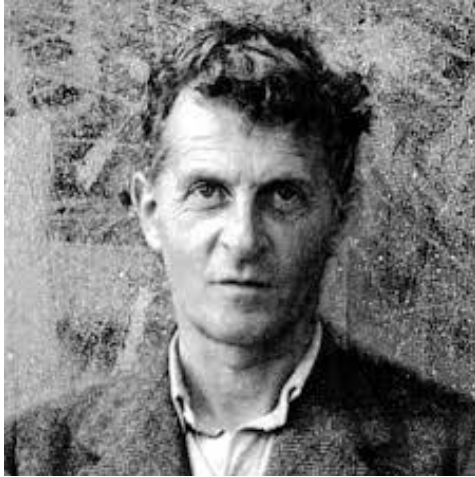


VISUALIZING CLINICAL TRIAL DATA: DYNAMIC DATA DISCOVERY

**(SLIDE DECK TO ACCOMPANY LIVE DEMONSTRATION
OF SAS VISUAL ANALYTICS/VISUAL STATISTICS,
PHUSE @UNC 6/4/2015)**

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“What can be shown
cannot be said.”

Ludwig Wittgenstein
*Tractatus Logico-
Philosophicus* (4.1212)

LIVE DEMO



For more information on use of Visual Analytics with Clinical Trial Data:

support.sas.com/resources/papers/proceedings15/SAS1888-2015.pdf

Or blogs.sas.com/content/sascom/2015/04/27/short-strange-trip/

- The visualization is responsive.
- The user is actively engaged with the visualization.
- The visualization can be used to drive the analysis.
- The dynamic aspect of the process does not just occur during the development of the visualization, but is an essential aspect of the use of it which remains dynamic.

- Reduces the cognitive complexity of understanding the data.
- Reduces the mental energy of constant translation: code > graph > code > graph > code.
- Rewards exploration and encourages use of data.
- Facilitates the development of a more complete mental map of the data.

Data is the *lingua franca* of the 21st Century

PLUS Increases in data gathering and data sharing

PLUS Shifting public role from passive to active consumers of data

PLUS Increasing dependence on data as deterministic in decision-making

DOES NOT EQUAL Corresponding increase in the number of people educated about the use of statistics.

Have we made this too easy?

Is it too easy to misrepresent data?

Have we valued aesthetics over accuracy?

Have we lowered the bar so low that we have undermined the value of training and experience with statistics?

DATA VISUALIZATION GONE WRONG

VISUALIZATION AS AN ARTISTIC STATEMENT?



Data Scientists should not dump data onto an electronic canvas like Jackson “Jack the Dripper” Pollock splattering paint on a canvas on the floor.

<http://www.telegraph.co.uk/culture/art/9044177/Jackson-Pollock-transcends-time-and-fashion.html>

Data Scientists must be involved in all aspects of visualization:

- Basic Research on graphing, software...
- Software Development
- Implementation and Use

Educators designing and implementing training for Data Scientists must include sufficient training in data visualization methods to allow Data Scientists to fulfill their role in the process.

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POWER
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