

Eye-tracking & Visualization Evaluation

Michael Sedlmair
Visualization & Data Analysis Group



My position

Eye-tracking can help us **evaluate**
visualization tools and techniques

Why evaluate: make better



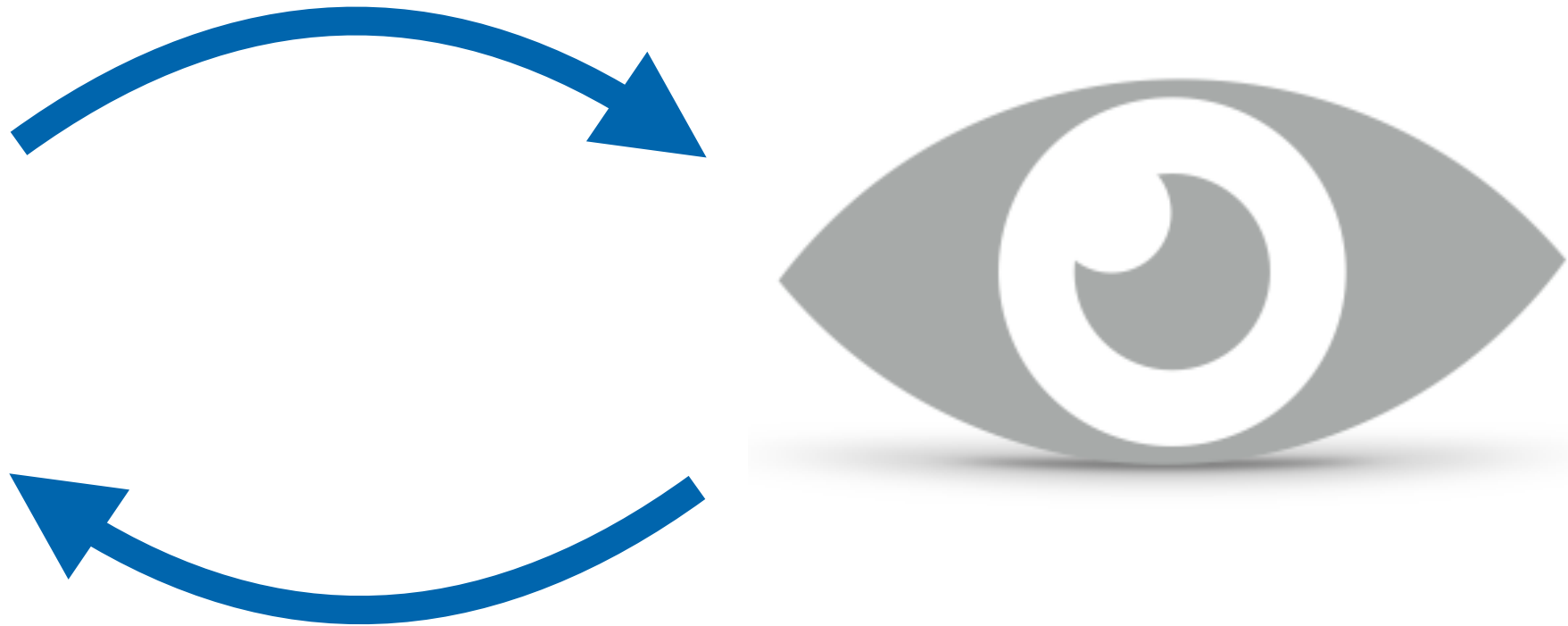
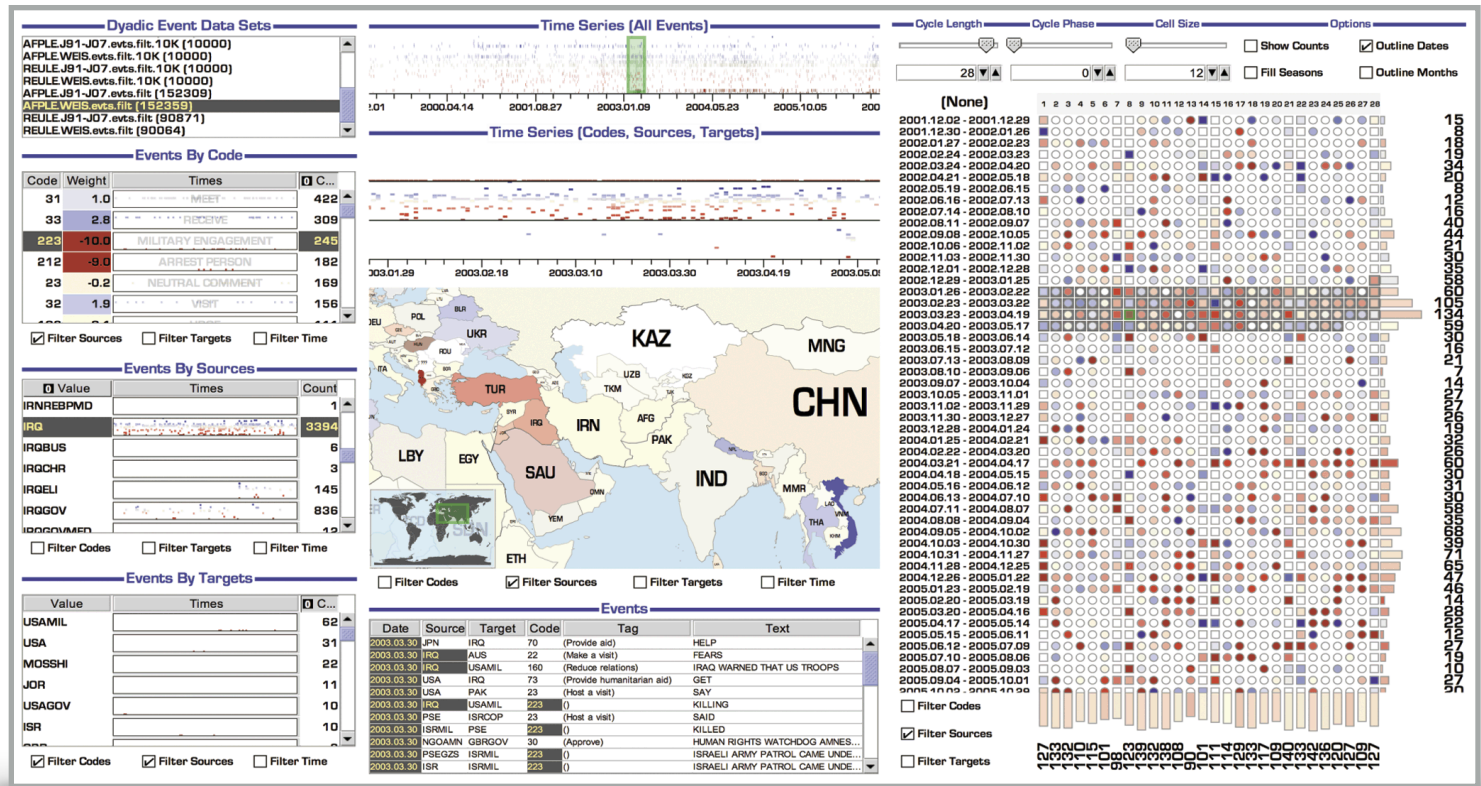
- Are our tools usable?
- Are they understandable?

Why evaluate: understand

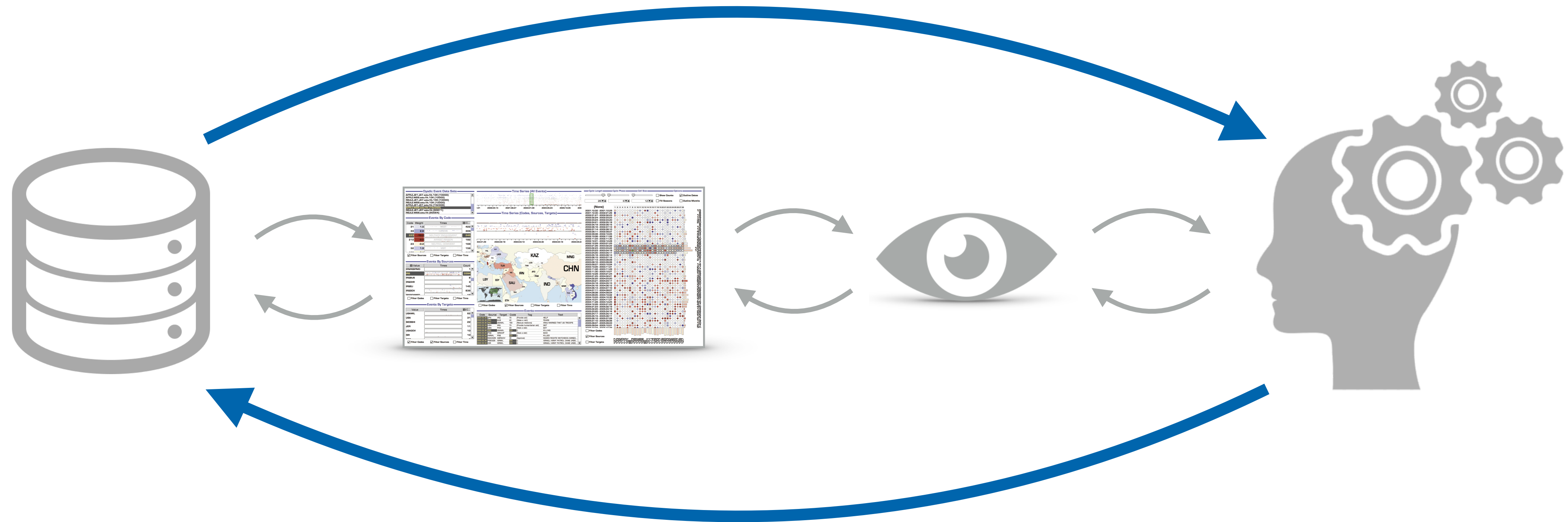


- Are they better than state-of-the-art?
 - faster/less errors
 - more insights/completely new things
- How do people process & work with data?

Eval & ET: make better



Eval & ET: understand



Eval & ET: understand

- open the cognitive black box
 - A is faster than B \longrightarrow Why is A faster?
 - how are multiple-coordinated views used?
 - are visualizations really perceived in the way we design them?
- understand individual differences:
 - different ways of going about tasks
 - different reasoning strategies
- from usability, to utility, to reliable statistical approaches (generalize)

