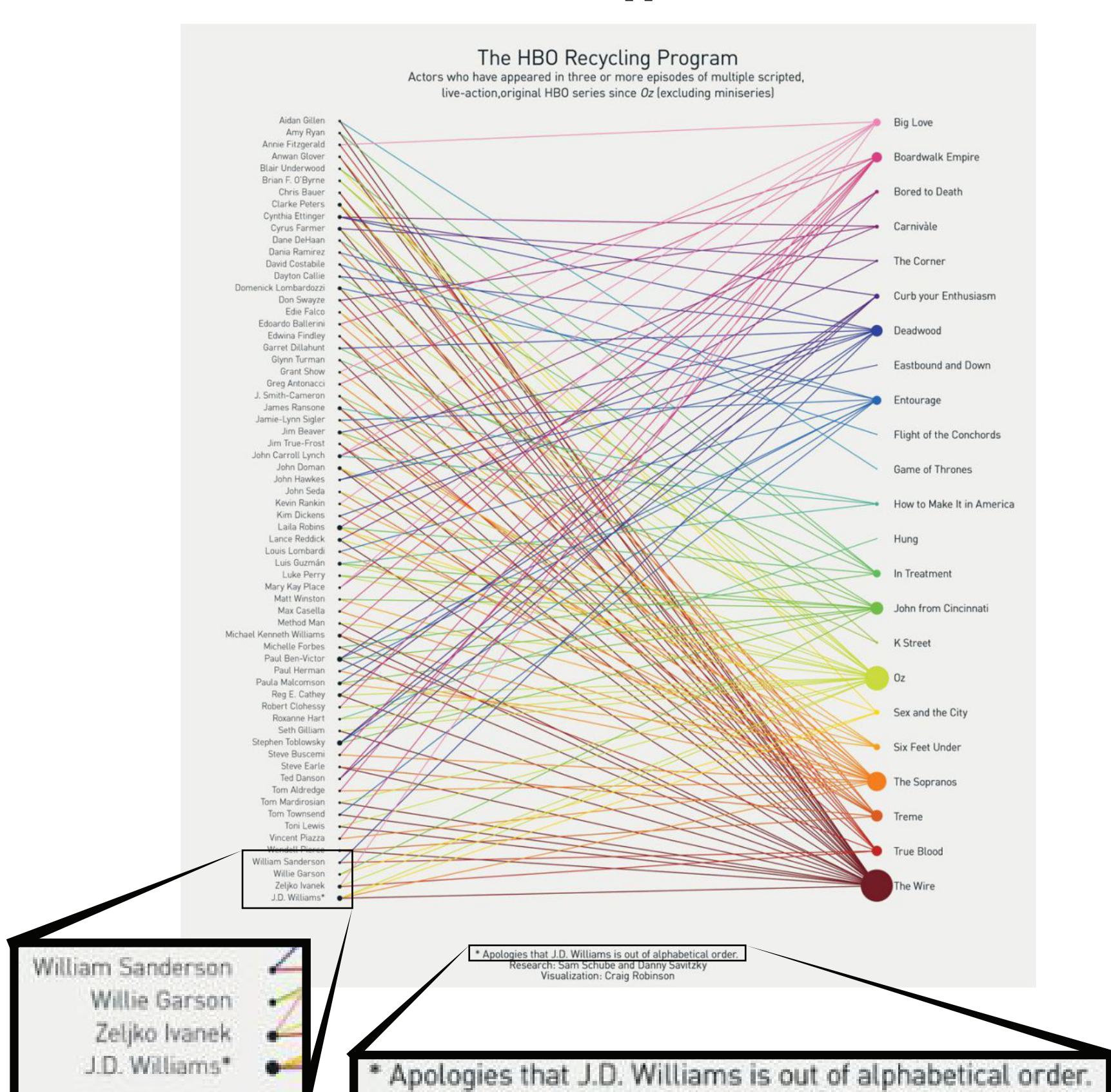


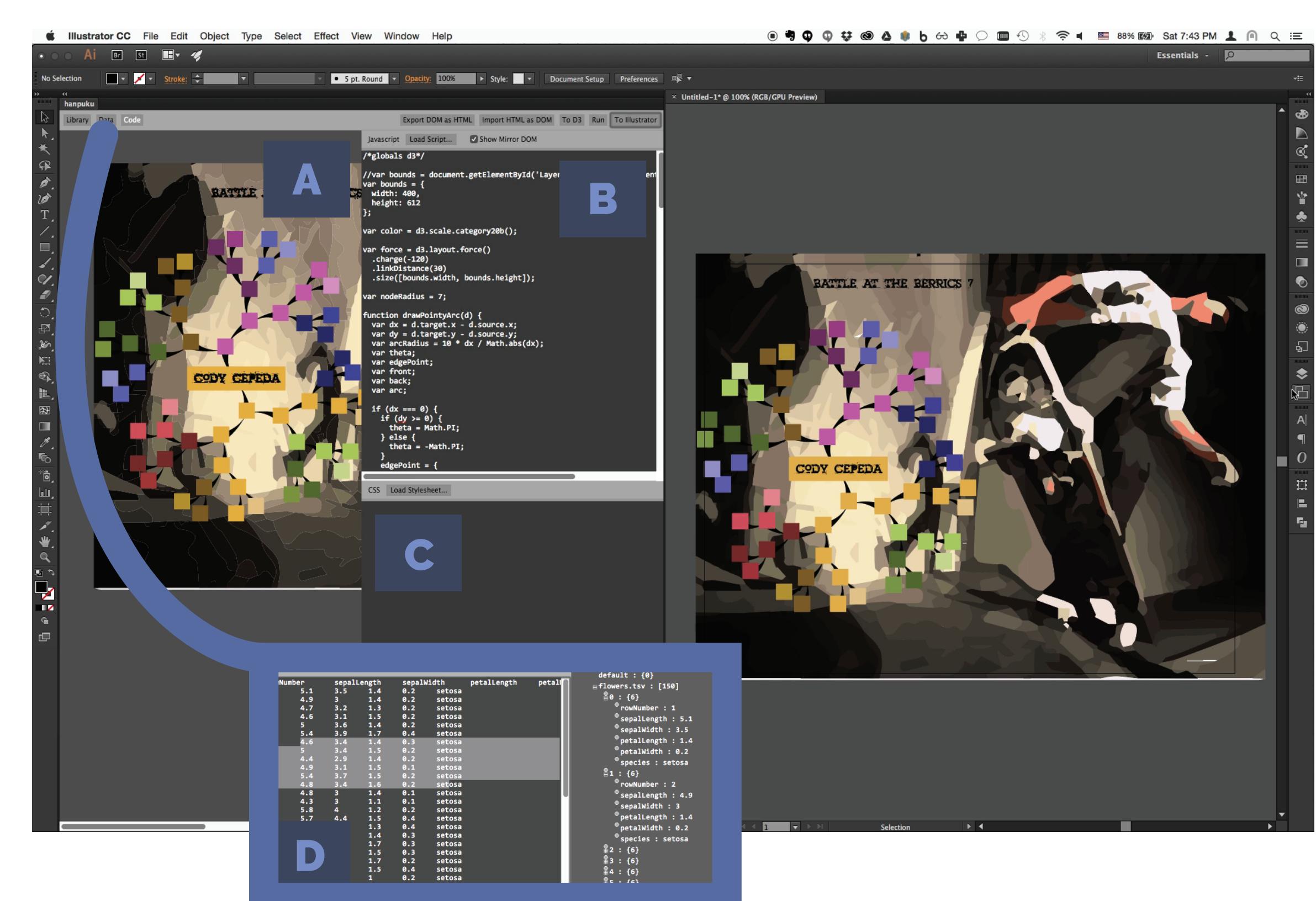
# Iterating Between Tools to Create and Edit Visualizations

Alex Bigelow, Steven Drucker, Danyel Fisher, Miriah Meyer

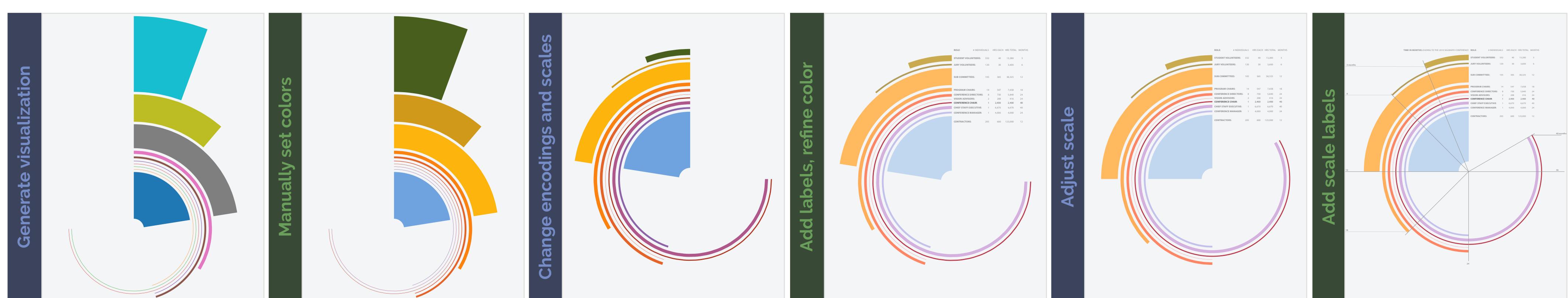
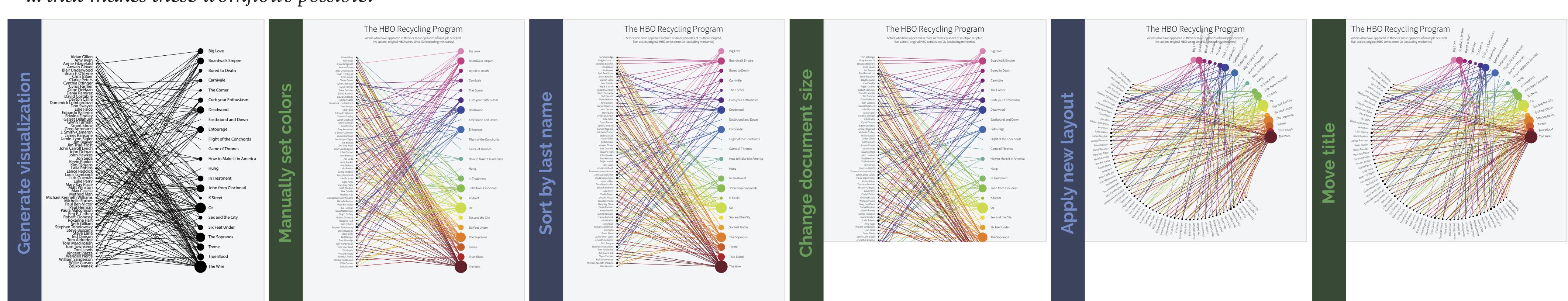
**1** a visualization in the wild... what happened here?



**2** we developed hanpuku, an illustrator extension...



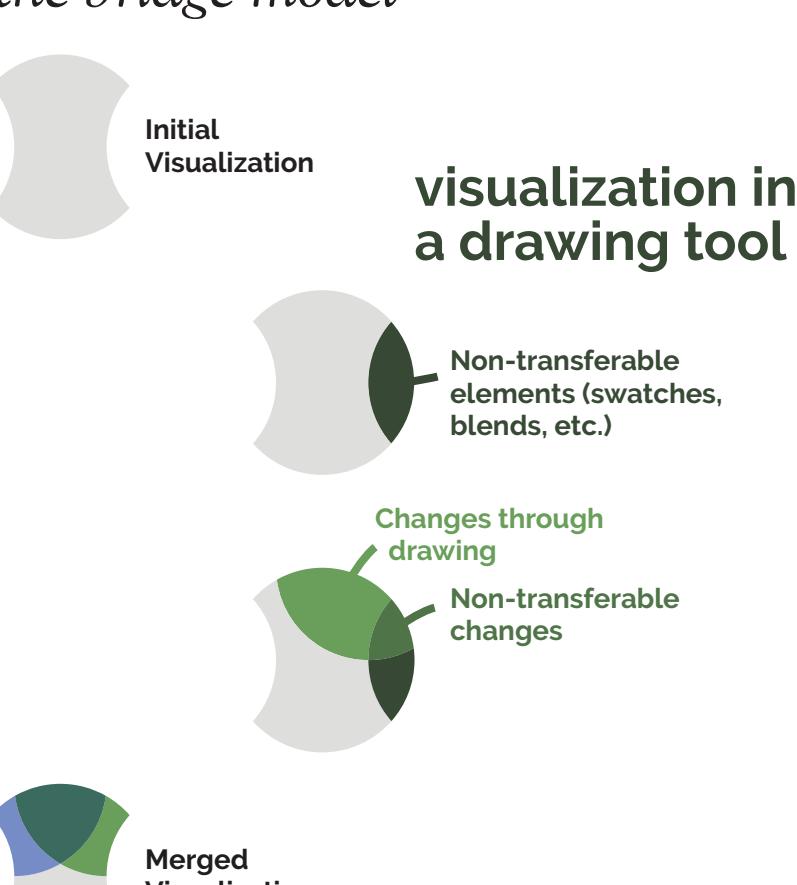
**3** ...that makes these workflows possible:



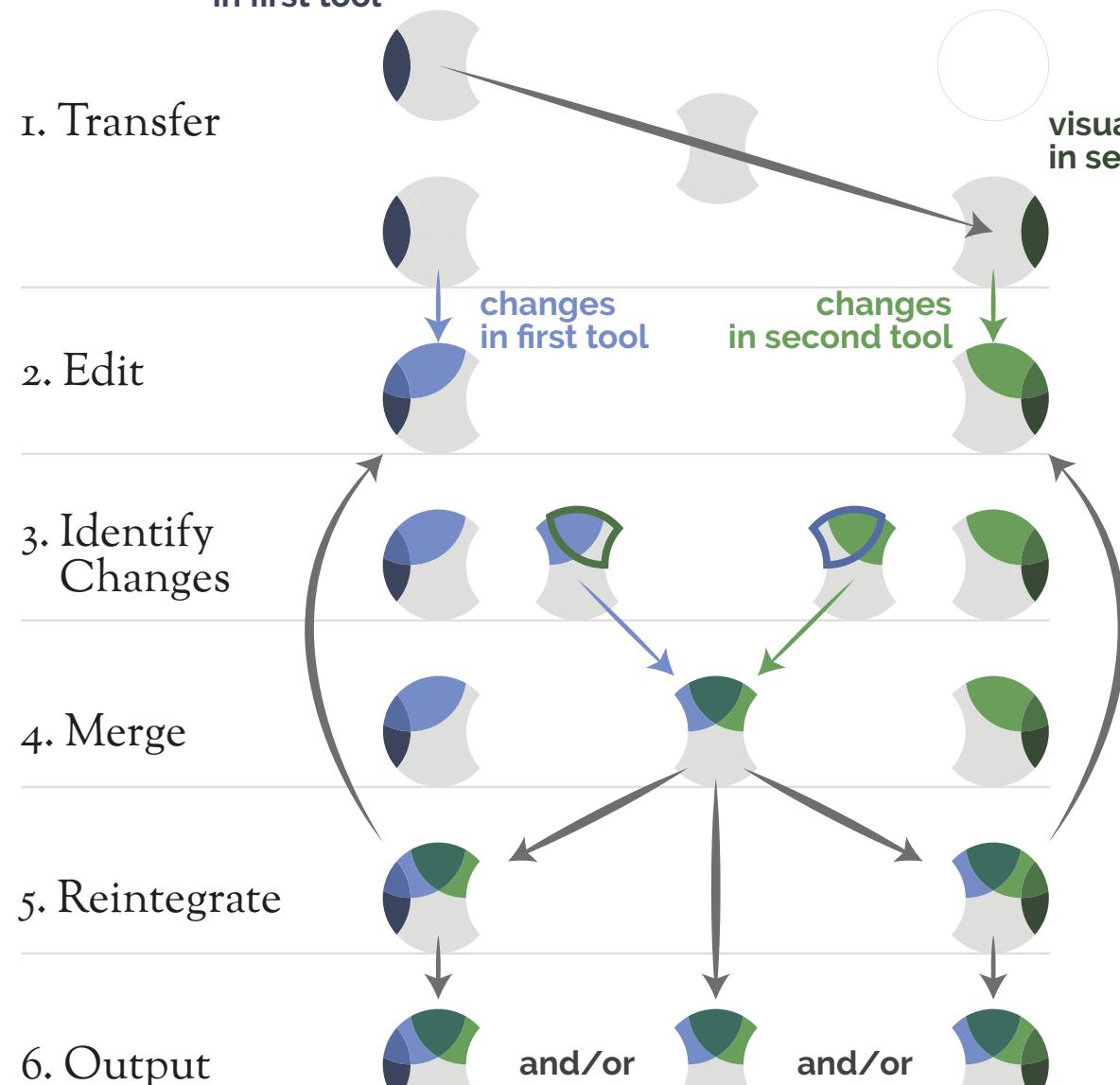
Blue steps are performed in a generative visualization toolkit (d3.js). Green steps are performed with a drawing program (Illustrator).

**4** theory behind the scenes: the bridge model

visualization in a generative visualization toolkit

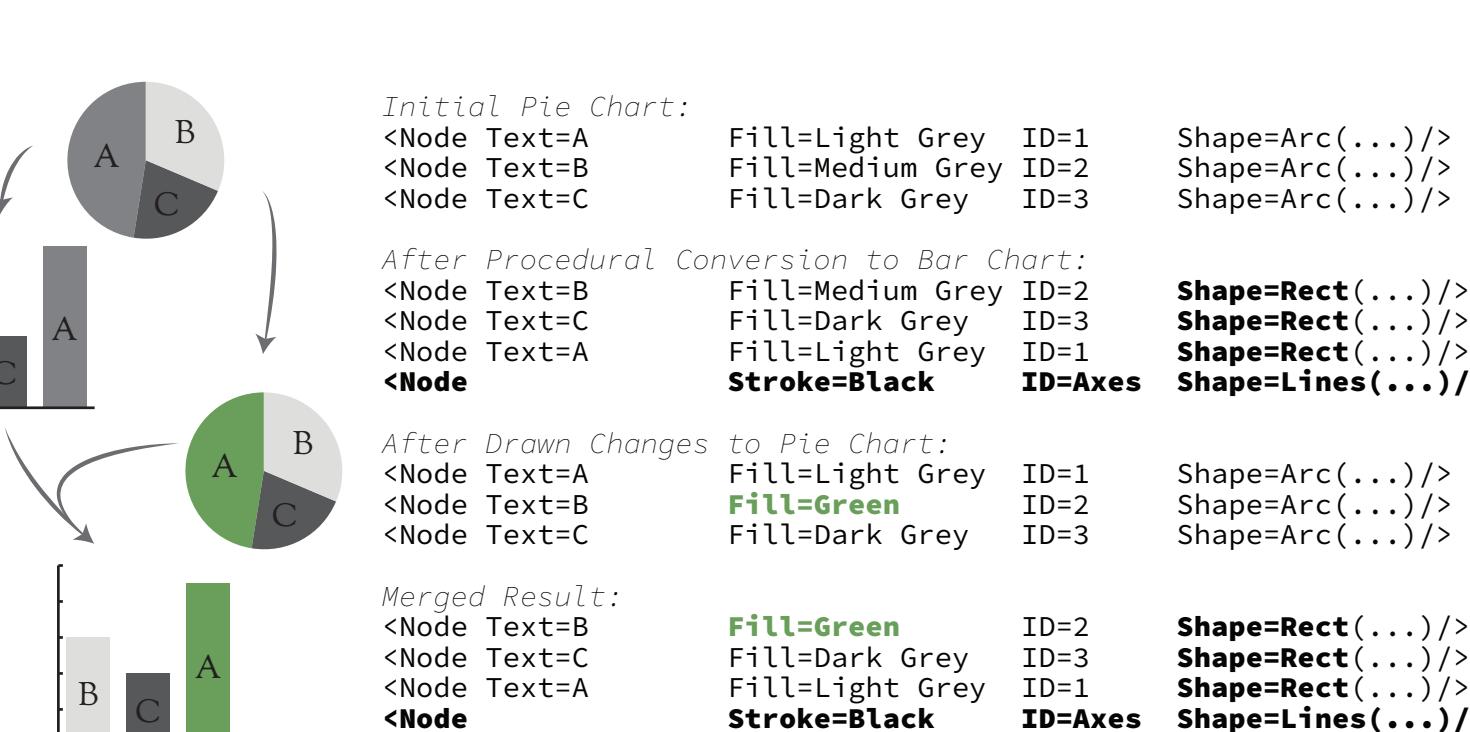


visualization in first tool

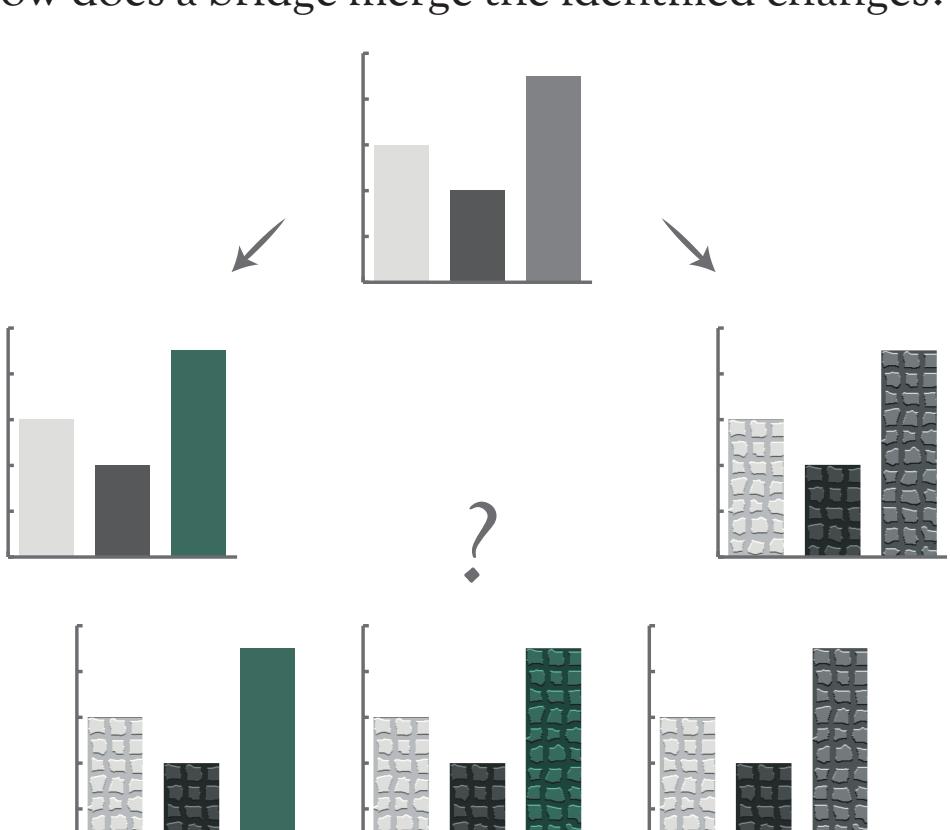


**5** design considerations that the bridge model exposes

1. How does a bridge identify what changed in each tool?



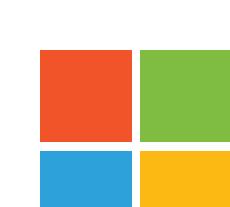
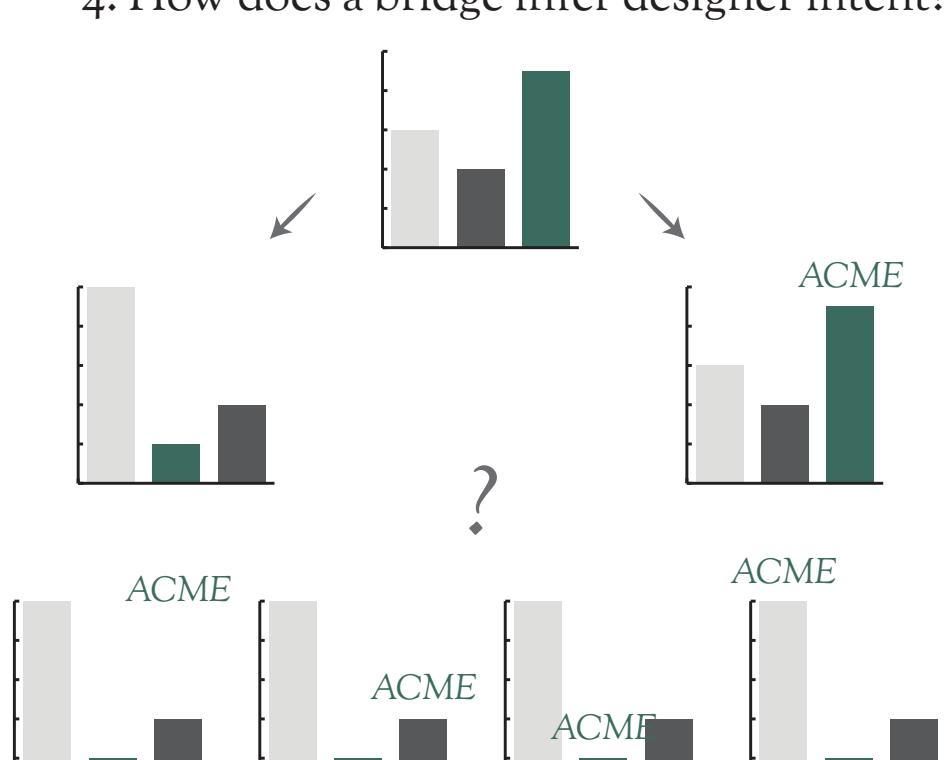
2. How does a bridge merge the identified changes?



3. How does a bridge reintegrate the merged results?

Can the visualization toolkit make use of existing graphics?

4. How does a bridge infer designer intent?



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