

Dual View: Multivariate Visualization Using Linked Layouts of Objects and Dimensions

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Introduction

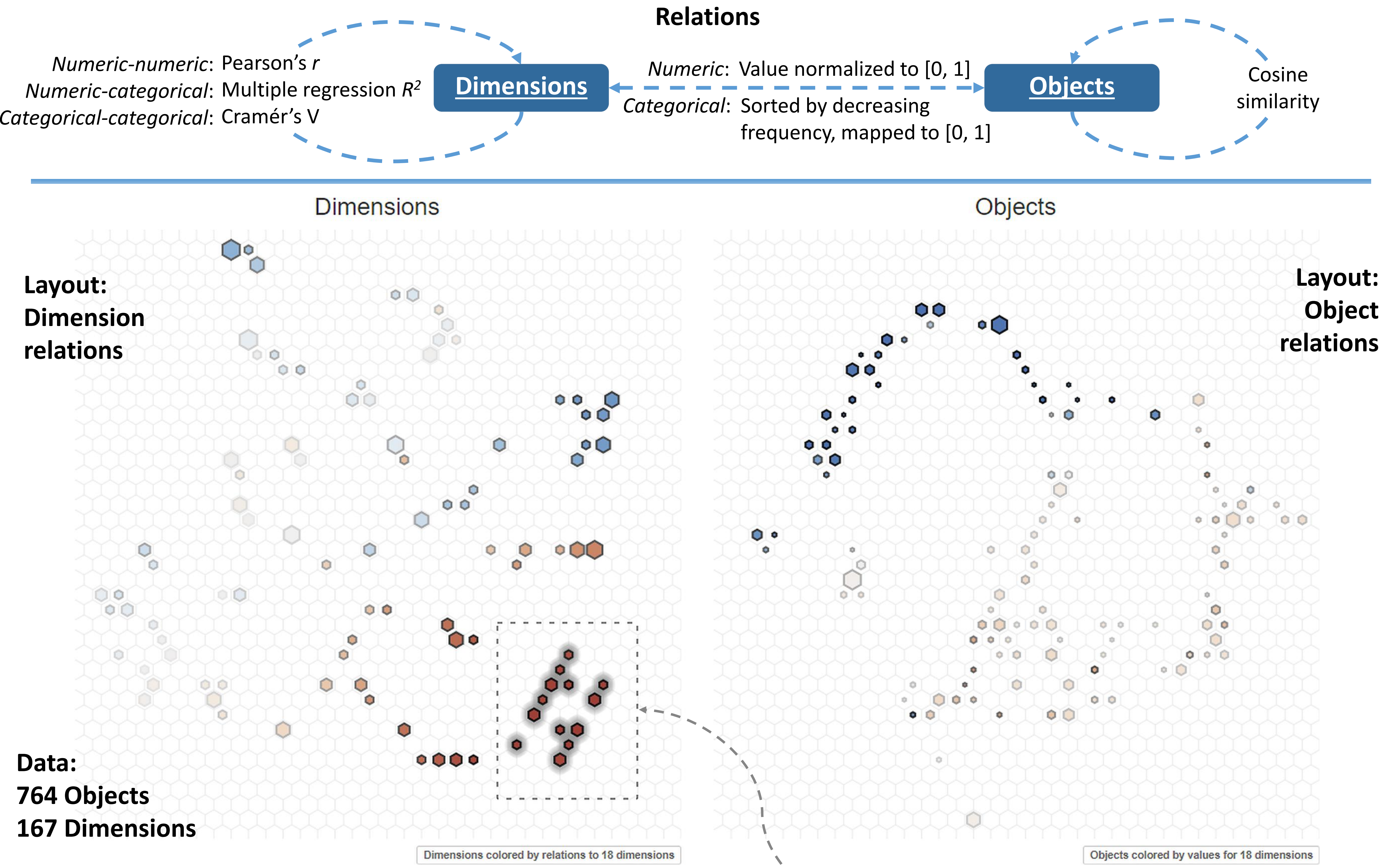
- **Multivariate visualization**
 - *Direct representation: parallel coordinates, glyphs, etc.*
 - *Dimension reduction: PCA, MDS, t-SNE, etc.*
- **Increased collection, analysis, and visualization of large datasets**
 - *Data **volume***
 - *Data **complexity***

Challenges

- **Volume**
 - *Many data objects can lead to overplotting*
- **Complexity**
 - *Many dimensions of different types*
 - *Many relations between/among objects and dimensions*

Approach

- **Separate layouts of data objects and dimensions**
 - *Dimension reduction (t-SNE)*
 - *Spatial aggregation*
 - *Iterative layout refinement*
 - *Linked highlighting of **relations***



Glyph appearance: Relation to current selection

