Chronicles of Artist Exhibitions: Exploring Temporal Patterns in Artists' Co-Exhibition Activity Using Visual Analytics

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Digital Art History

Highly inter- & trans-disciplinary field
Lots of data, databases
Data is intricate and multifaceted
Increasingly using visualization tools:
Maps, timelines, bar/pie charts
Sometimes networks
ArtVis

Transdisciplinary project in collaboration with CReALab @ Uni Wien

https://www.cvast.tuwien.ac.at/projects/artvis

Analyze complex relationships between:
  People (artists, critics, collectors);
  Objects (artworks, techniques, forms);
  Places (galleries, auction houses, cities/countries);
  Institutions (academies, museums, artist associations)

Their development and change over time is important
ArtVis - Data

🔗 Database of Modern Exhibitions (DoME) http://exhibitions.univie.ac.at/

Relational database (1905-1915):

- Exhibitions ~ 1.4k
- Artists ~ 14k
- Catalogue Entries ~ 208k
- Venues ~ 300
- Organizing Bodies ~ 200
- Exhibiting Cities ~ 100
Research Question

“How can VA support art historians in gaining insights about artists’ co-exhibition behavior and comparing activity patterns between them?”
“[...] analyze a specific real-world problem faced by domain experts, design a visualization system that supports solving this problem, validate the design, and reflect about lessons learned [...]”

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ArtVis positioned “roughly” here
Contributions

[C1]: Problem characterization and task abstraction

   From domain to VA - task/data decomposition and abstraction

[C2]: Proposed visualization design is well justified

   Combination of established and proven techniques extended to support domain

[C3]: Validated visualization design

   Evidence - an effective solution for the domain and is useful for experts

[C4]: Reflection

   Lessons learned, reflection, proposed guidelines
Proposed Approach
Demo ✌️

🔗https://artvis.cvast.tuwien.ac.at/artists/5

🔗https://artvis.cvast.tuwien.ac.at/artists/5

to follow along

Vassily Kandinsky
Evaluation Methodology

ICE-T Wall et al.

🔗 A Heuristic Approach to Value-Driven Evaluation of Visualizations

Determine the ‘value’ of a visualization along 4 components:

**Insight**: The ability to spur and discover insights and/or insightful questions about the data

**Confidence**: The ability to generate confidence, knowledge, and trust about the data, its domain and context

**Essence**: The ability to convey an overall essence or takeaway sense of the data

**Time**: The ability to minimize the total time needed to answer a wide variety of questions about the data
Evaluation Plan

ICE-T Wall et al.

🔗 A Heuristic Approach to Value-Driven Evaluation of Visualizations

Exploratory / Confirmatory analysis scenario ~ 1 hour

Filling out questionnaire

5 Domain Experts (Art History)
5 Visualization Experts

Compare and discuss results
Thank you!

Q&A

Suggestions? (shorter title maybe 😊)

Feedback?

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https://paris-art-market.huma-num.fr/
ArtVis - Data

Relational → Graph database

Why?

   It’s a network with highly connected data

   Impact on data retrieval times

   Continuous need to update structure

   Exploring and visualizing complex data sets

   Intuitive graph query languages
ArtVis - Setup
Proposed Approach

Timeline of artist(s) exhibition activity
Proposed Approach

Dynamic Ego-network of Artist
Proposed Approach

Table of exhibitions

<table>
<thead>
<tr>
<th>Type</th>
<th>Date</th>
<th>Title</th>
<th>Catalogue Entries</th>
<th>Base %Entries</th>
<th>Compare %Entries</th>
</tr>
</thead>
<tbody>
<tr>
<td>solo</td>
<td>1912</td>
<td>Der Sturm, Kandinsky Kollektiv-Ausstellung, 1902-1912. [Siebente Ausstellung]</td>
<td>80</td>
<td>100%</td>
<td>0%</td>
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<tr>
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<td>Kandinsky Kollektiv-Ausstellung, 1902-1912</td>
<td>73</td>
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<td>0%</td>
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<tr>
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<td>1914</td>
<td>Kreis für Kunst Köln - Veranstaltung: Kandinsky-Ausstellung im Foyer.</td>
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<td>0%</td>
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<td>Kunstausstellung Wertheim</td>
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<td>1912</td>
<td>Neue Kunst. Erste Gesamt-Ausstellung</td>
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<td>1.18%</td>
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<td>1911</td>
<td>Салон 2, Международная Художественная Выставка</td>
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<td>1.42%</td>
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<tr>
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<td>1909</td>
<td>Neue Künstlervereinigung München E.V., 1909-1910</td>
<td>137</td>
<td>10%</td>
<td>11%</td>
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