A Kaleidoscopic View of Artist Co-Exhibition Networks

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Problem & Motivation

- Core topic in art history: identify influential artists or key figures [1]
- Dynamic network visualizations underexplored in Art History [1]
- Centralities are helpful to show, e.g., key actors [2] or influential nodes [3]
- Aesthetics are important in Digital Humanities [4]
- Kaleidoscope: optical instrument showing colorful patterns [5]

Idea

- Dynamic Kaleidoscope-like visualization of co-exhibition network of modern artists
- Centralities as node sizes
- Nationalities as colors
- Showing patterns in concentric circles

Contributions

- Observe changes in centralities and evolution over time
- Compare artists' centralities and patterns across different nationalities
- Weigh centralities by artists' yearly contribution

Future Work

- Additional detailed network view of artist connections
- Dynamic centrality measures to analyze and visualize network changes over time


1908   1910
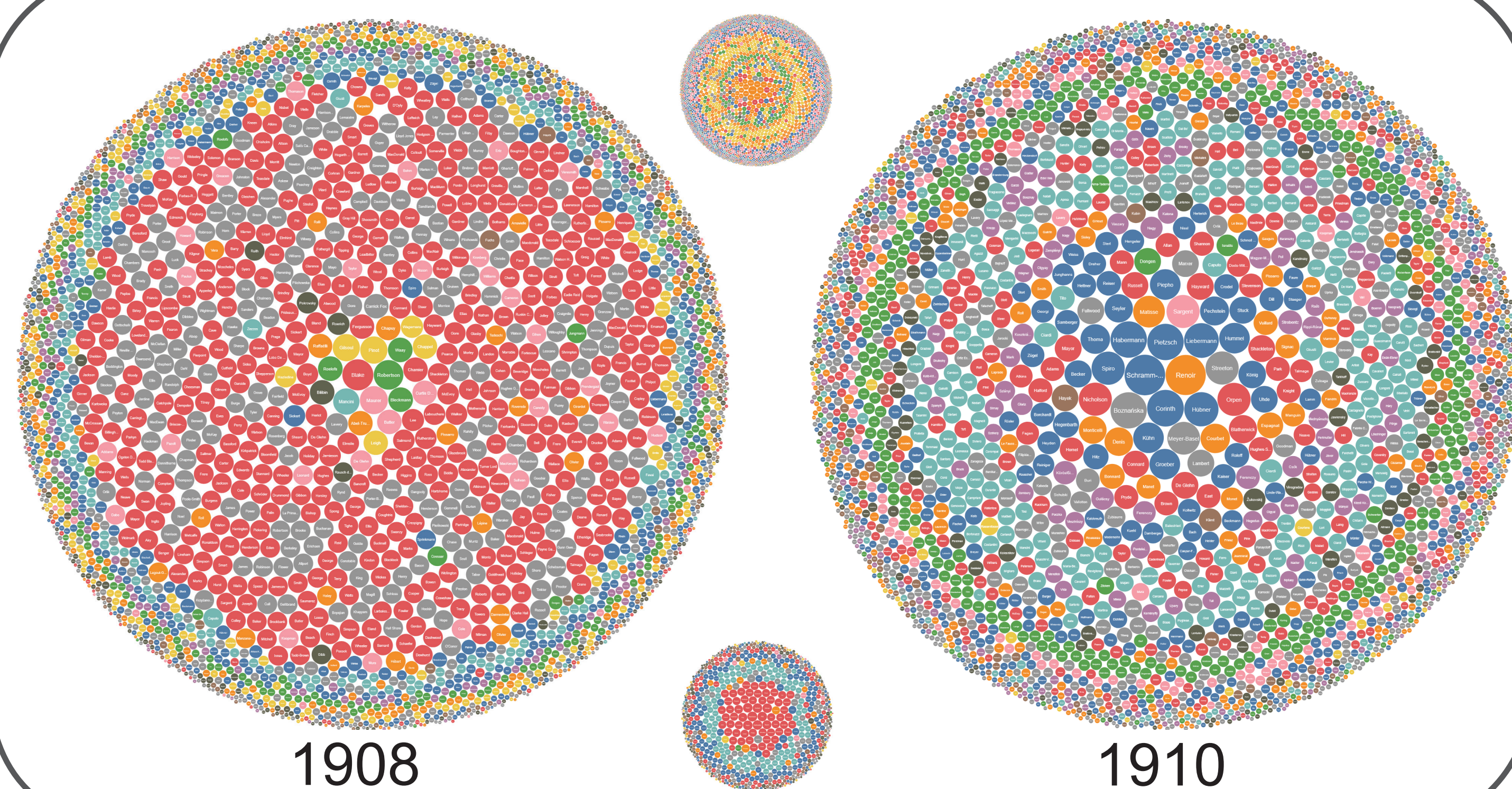
Degree Centrality

Shows which artists **co-exhibited a lot** with other artists. In 1908 especially artists from **Great Britain** had many connections, while in 1910 different nationalities, especially **Germans** co-exhibited a lot with others.

Betweenness Centrality

Shows artists that **connected different groups**. In 1914, artists from different countries were important bridge nodes. When weighted by contribution, Natalia Goncharova, a **Russian** artist who founded different artist groups and exhibited a lot in 1914 becomes visible in the center.

1914, unweighted   1914, weighted by contribution


1905   1906
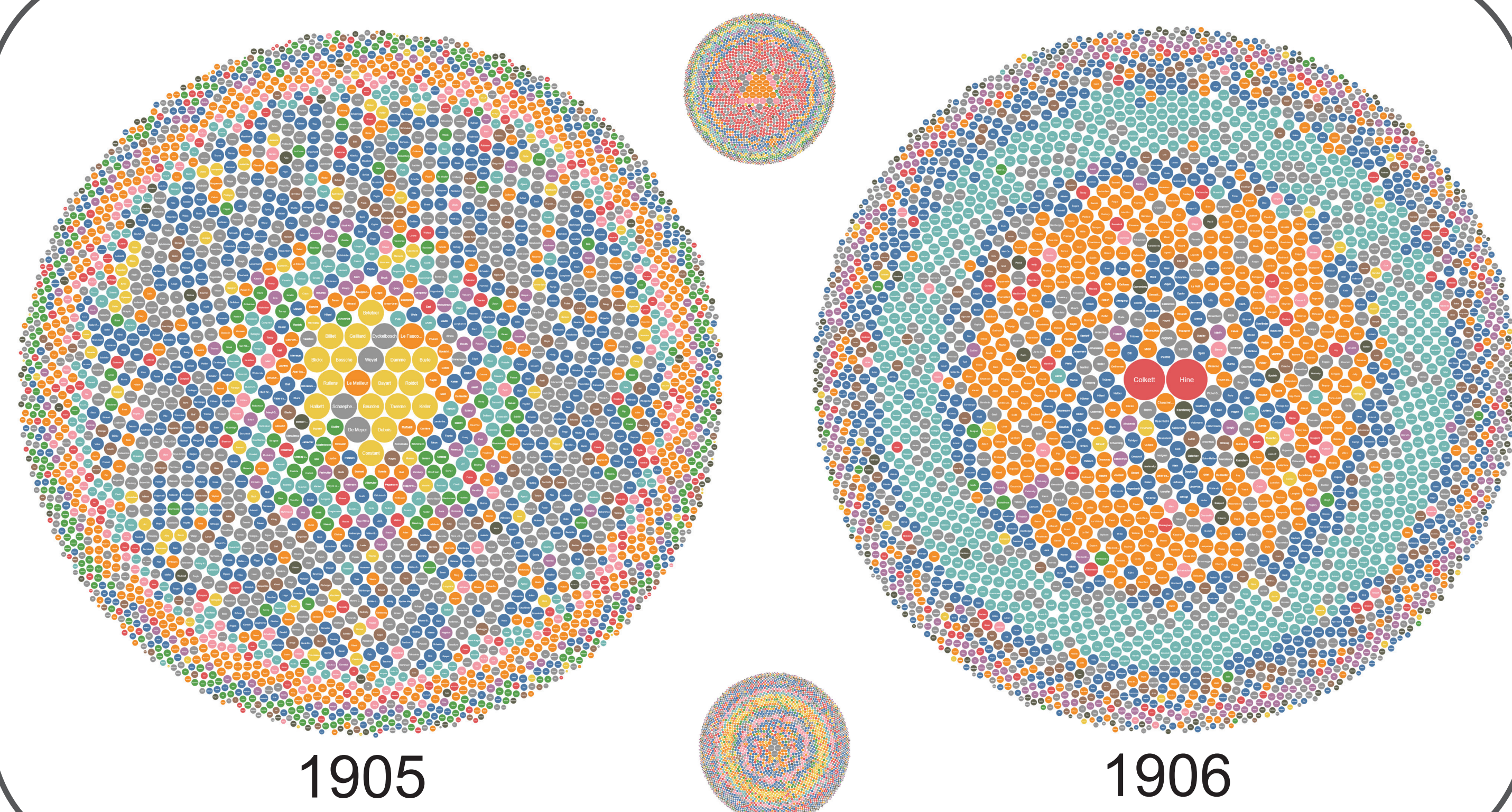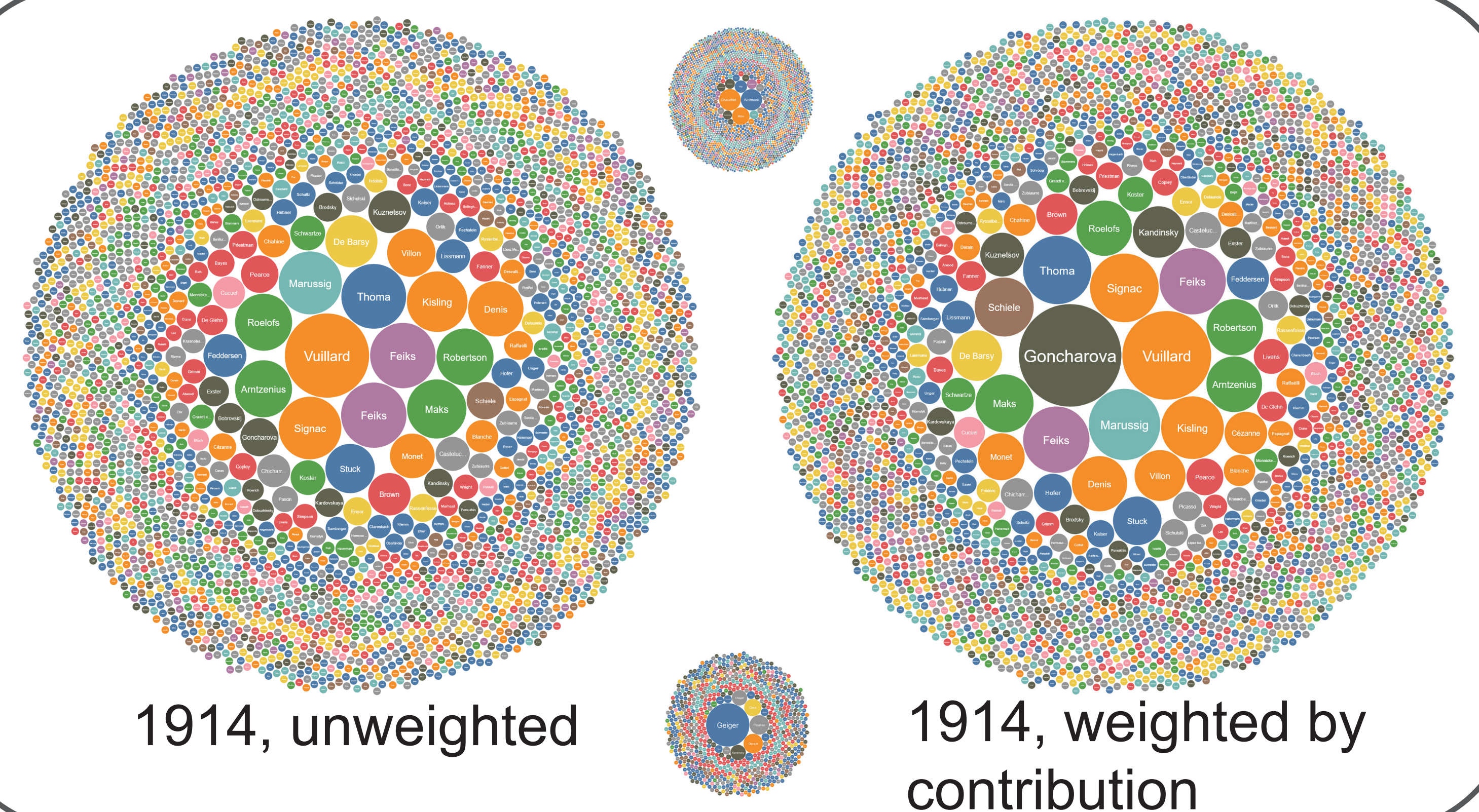
Closeness Centrality

Shows artists that are in **close proximity** to others and who might therefore be **important for collaborations**. In 1905 the center is clearly dominated by **Belgians**, but only one year later, it is dominated by two **Britains** with other nationalities aligned in concentric circles like, e.g., **French** or **Italian**.

Eigenvector Centrality

Shows **influential** artists according to their connections and their importance. In 1907 the center is clearly dominated by **Dutch** artists. Two years later, **Hungarian** artists are more influential. However, in both years we also see some **Italians**.

1907   1909
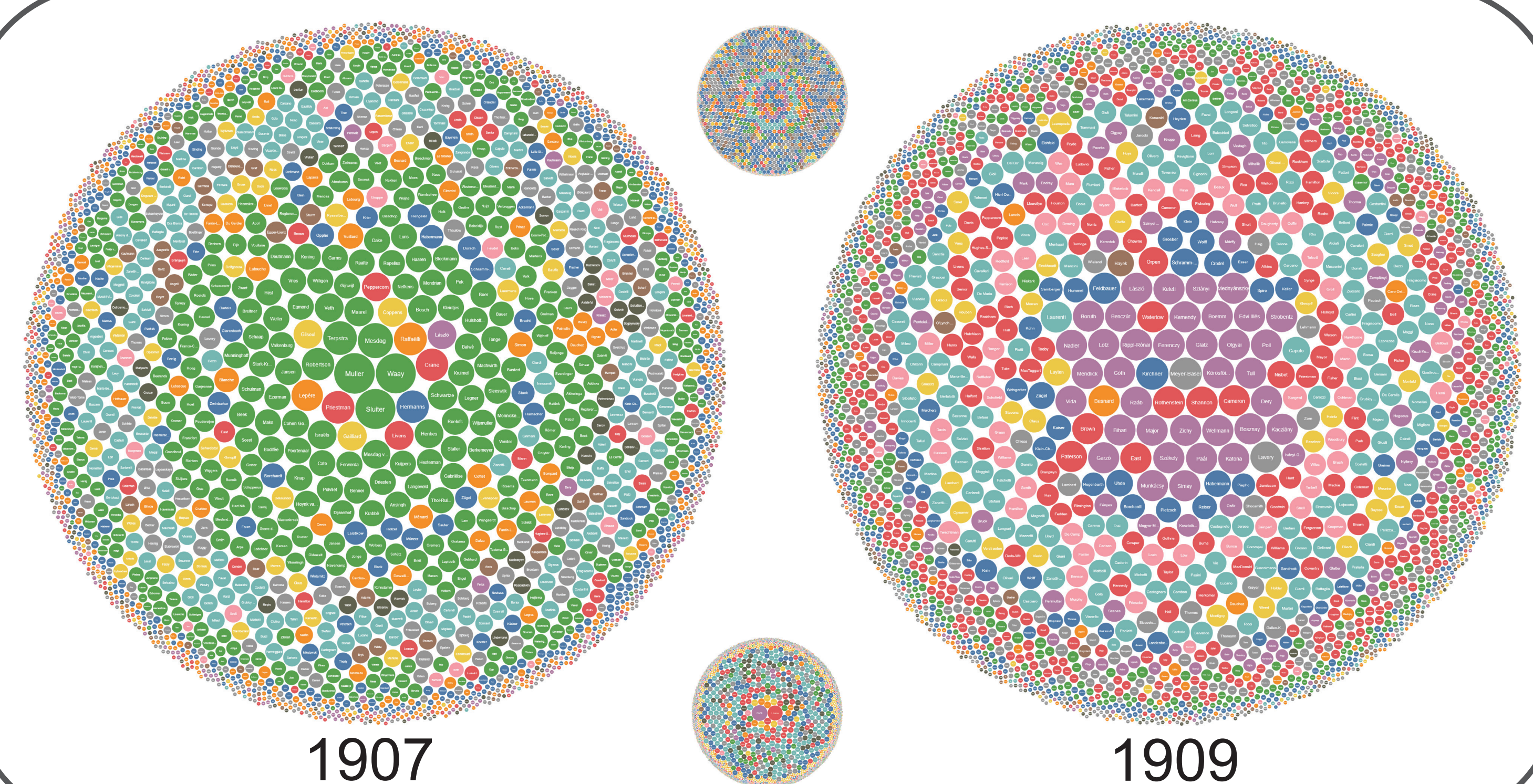
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