Week 9 - [9.2] Task 9: Network Assignment Using Golden Record Curation Quiz Data (Mandatory task)

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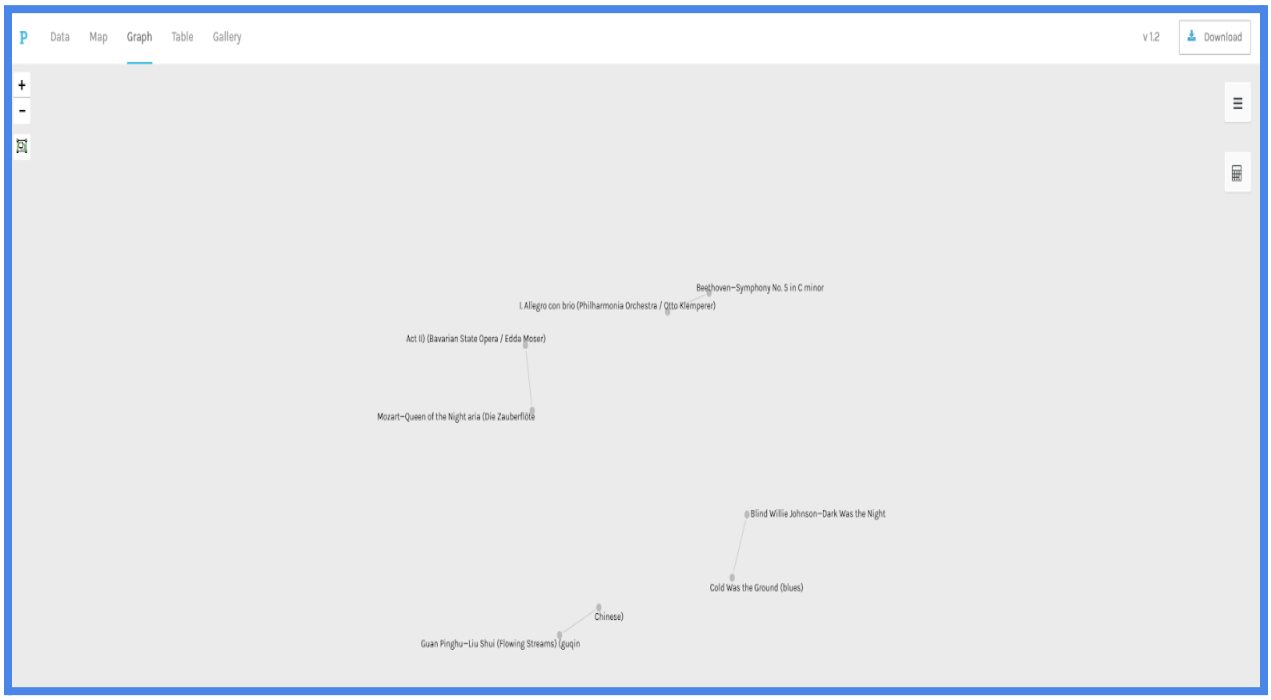
Palladio Database Visualization



Analysis and Reflection: Understanding Music Networks, What Data Shows & What It Misses

The visualization displays the following global metrics: Visualization shows:

- Number of Nodes: 8
- Number of Edges: 4
- Average Degree: 1.0
- Density: 0.14285714
- Average Clustering Coefficient: 0.0
- Transitivity: 0.0

These numbers indicate that the network is sparse and poorly connected. An average degree of 1 means that, on average, each participant (node) is only connected to one other participant through a shared music preference. The low density (0.14) and clustering coefficient (0.0) show that most people have different tastes and that there aren't any close-knit groups in the network. In short, the music choices of the participants create a web of separate pairs instead of groups that work together. This suggests that they have little influence on each other or share cultural knowledge.

What the Visualization Shows and What It Doesn't Show

The visualization effectively displays discernible clusters indicating shared musical preferences among participants. However, as Systems Innovation (2015) states in its Graph Theory Overview, connections in networks reveal relationships, not the reasons behind them. The graph can show that two people picked the same song, but it can't show why they did.

For example, the data does not include some musical pieces, such as Guan Pinghu's "Liu Shui (Flowing Streams)" and the Javanese gamelan "Puspåwarnå," because no one chose them. This absence is significant, as it indicates not only a deficiency in representation but also cultural and political biases arising from familiarity and exposure to a specific subject. Participants may be unfamiliar with these pieces because music education in the West focuses on Western music, global media is limited, or Western tonal systems are the most popular listening habits. Therefore, their "non-selection" doesn't mean they are unreasonable or unnecessary; it just means they aren't readily apparent, which is a type of structural exclusion.

Political Implications of Missing Data

Code.org's (2017) "How Search Works" discusses how algorithms rank some results higher than others, allowing us to observe similar phenomena occurring with cultural exposure. Search engines often show popular or "relevant" content, and so do educational and media systems that favor Western or English-language music. As a result, the visualization reveals not only individual preferences but also the effects of algorithmic and cultural filtering that is, the selection, teaching, and valuation of certain individuals and objects.

Hammel and Yurshansky's (2016) A Journey to the Bottom of the Internet reminds us that all kinds of networks, whether digital or social, are built on systems of power. The absence of non-Western music in the data can be interpreted politically, indicating which cultures are connected and which are marginalized. These "null choices" (the options that weren't chosen) are meaningful absences that reveal how exclusion operates within the system. They show how limited visualizations can be when they only use quantitative connection data and not qualitative context.

Broader Context: Thoughts on Society, Culture, and Education

In a classroom setting, this type of network visualization can help students think critically about how data structures can be analogous to social structures. Classrooms can exhibit similar patterns, with students often connecting only with peers who share similar cultural references or backgrounds. This approach is similar to how the sparse network shows isolated choices. Therefore, teachers' job is to create learning spaces that boost "network density" by encouraging curiosity and intercultural conversation.

From a constructivist learning perspective, the visualization illustrates that learners acquire knowledge and preferences through interaction and previous exposure. The lack of specific connections, such as those to Guan Pinghu or Javanese gamelan, highlights where educational programs could help people learn more about other cultures. Bringing in different types of music could "rewire" the classroom network, making new connections and understanding between people from different cultures. This potential for growth and understanding is inspiring.

Conclusion

The network visualization accurately depicts the observable connections among participants' musical selections; however, it fails to encapsulate the underlying factors such as familiarity, exposure, or systemic bias that influence these decisions. As Systems Innovation (2015) points out, to really understand networks, you need to look at both their structure and the meaning of the links and absences. This point underscores the importance of critical thinking in interpreting the visualization.

This analysis highlights a key point: data visualizations, like societies and classrooms, only present part of the picture. They show some relationships while hiding others. Reading them

critically requires examining both the connecting lines and the unexplored spaces. You can find new music, marginalized voices, and unexplored cultural possibilities in these places.

References

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