110. Reconstructing the History of Koch Cemetery

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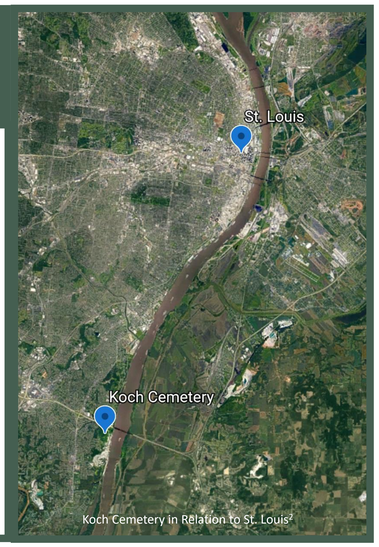
SITE HISTORY AND PROJECT BACKGROUND

- **1865**: Quarantine Station
  - Typhoid fever, yellow fever, cholera, smallpox, etc.
  - 18,000 individuals buried with no records
- **1910 - 1983**: Koch Hospital
  - To fight tuberculosis, the "White Plague"
- **Late 1960s**: excavation of skeletal remains from a sinkhole
- **1984:** National Historical Register Nomination[1]



Koch Cemetery in Relation to St. Louis[2]

GOALS

- **Decommingle and estimate the number of individuals present in the collection**
- **Use archival records to reconstruct site history and understand patient demographics**
  - Treatments and conditions
  - Racial/ethnic and socioeconomic disparities in healthcare

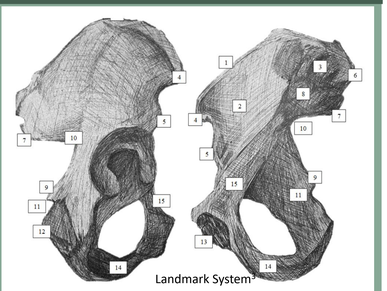
MATERIALS AND METHODS

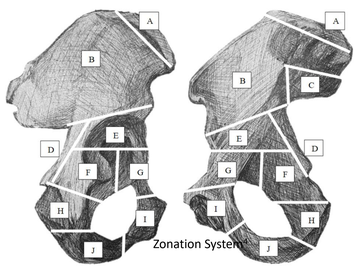
Osteological

- 6 boxes containing 832 fragments – Inventoried and sorted
- Zonation and Landmark Inventory
- Visual and Osteometric Pair-Matching
- Estimating MNI, LI, and MLNI
- Joint and Element Reassociations

Archival

- Ancestry LE
  - Name, Date of Birth, Date of Death, Country of Birth, Ancestry
- *St. Louis Post-Dispatch, St. Louis Globe-Democrat,* and *St. Louis Star and Times*


Landmark System[3]


Zonation System[3]

RESULTS

Osteological

- MNI: 17 individuals
- LI: 45.3 individuals
- **MLNI: 40 ± 18 individuals (95% confidence interval)**
- Osteometric pair-matching, joint articulations, and element reassociations were severely limited by fragmentation

Archival

- The conditions at Koch were terrible – understaffed, undersupplied, and overcrowded
  - Horse blood-serum, carbolic acid, and occupational therapy[5,6,7]
- 550 individuals from Ancestry LE and newspapers
  - **Sex:** 71.5% male, 21.6% female, 6.9% unknown
  - **Ancestry:** 59% white, 29% unknown, 12% black
  - **Country/Region of Origin Known for 291 individuals:** 22% Northern European, 15% North American, 15% Western European, 1% Southern European
- **Age at Time of Death Analyses:**
  - **By sex:** Females died 7.4 years younger than males ($p = 0.05$)
  - **By racial/ethnic group:** Black individuals died 10.9 years younger than whites ($p = 0.0005$)
- **Newspapers reported higher death rates from tuberculosis amongst black individuals and in low socioeconomic status neighborhoods**[6,8,9,10f]

Koch Cemetery Sinkhole[12]

St. Louis neighborhood death densities[9]

Illustration of tuberculosis in St. Louis' poorest neighborhoods[11]

DISCUSSION AND CONCLUSIONS

Koch Cemetery demonstrates the disproportionate affects of infectious disease on St. Louis' most vulnerable populations and the consequences of unequal access to quality healthcare.

- When populations are confronted with high death rates, their burial practices change to accommodate the number of the dead – such as burials in sink holes
- **Even today, minorities are less likely to have access to high quality healthcare and more likely to have negative health outcomes**
  - **Women are also more likely to have negative health outcomes, and are not taken as seriously by healthcare providers**
  - **White males are prioritized during the allocation of healthcare related resources**
    - **At Koch, this included hospital beds, facilities, treatments, etc.**
- **Infectious disease outbreaks are often blamed on minority groups**

References

[1]Bass VJ and Eberle J. 1984. Robert Koch Hospital National Register of Historic Places Inventory – Nomination Form. United States Department of the Interior. National Parks Service. Form 10-900. // [2]Koch Cemetery and St. Louis. Google Earth. https://earth.google.com/web/@38.55089287,-90.23449643,148.90389451a,72705.3389794ad,35y,0h,0r/data=MicKQoJCiEvUG1sSdIMWMycTlPc1ZGTkpFRHdFeFB0SFVEODhTbTc// // [3]Modified from: Mack JE, Waterman AJ, Racila AM, Artz JA, Lillios KT. 2016. Applying Zooarchaeology Methods to Interpret Mortuary Behavior and Taphonomy in Commingled Burials: The Case Study of the Late Neolithic Site of Bolores, Portugal. International Journal of Osteoarchaeology 26: 534-536. // [4]Modified from: Knusel CJ and Outram AK. 2004. Fragmentation: The Zonation Method Applied to Fragmented Human Remains from Archaeological and Forensic Contexts. The Journal of Human Paleoecology 9(1): 85-98. // [5]He Has Discovered Consumption's Cure. 1895, January 27. The St. Louis Post-Dispatch, 18. // [6]Quarantine. 1878, September 9. *The St. Louis Globe-Democrat,* 4. // [7]Medical and Social Science Team Up Against TB at Koch Hospital. 1955, August 11. The St. Louis Globe-Democrat, 31. // [8]More Hospitals Urged for Tubercular Cases. 1930, March 19. *The St. Louis Post-Dispatch,* 19. // [9]City Health Division Active in Efforts to Curb Tuberculosis. 1930, December 7. *The St. Louis Globe-Democrat,* 4. // [10]Cunliff N. 1921, August 22. How St. Louis is Waging Fight on Tuberculosis by Treatment and Education. *The St. Louis Post-Dispatch,* 12. // [11]"King of the Ghetto." 1910, January 12. Editorial Cartoon. The St. Louis Post-Dispatch. // [12]At Quarantine. 1894, May 8. The St. Louis Post-Dispatch, 31.

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