

Giving Something
Back: Examining
the Intersection of
Human Burials
and Environmental
Conservation

Pennsylvania State University

GEOG 596A, Capstone
Proposal Peer Review –
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Emily Moore

Dr. Lorraine Dowler

“

In their last, final act, the deceased... **have taken care in death to give back to the earth some very small measure of the vast resources they drew from it in life** and, in the process, perpetuate the cycles of nature, of growth and decay, of death and rebirth, that sustain all of us.

”

-- Mark Harris, *Grave Matters: A Journey Through the Modern Funeral Industry to a Natural Way of Burial* (2007)

Overview

Project Background and Concepts

Research Question(s)

Proposed Methodology

Challenges

Anticipated Outcomes

Project Timeline



(Arlington Cemetery, from the Military Officers Association of America (MOAA), Caitlin Hamon, 2019)



(Foxfield Conservation Burial Ground, Wilmot, OH, from the Green Burial Council, 2020)

What is a traditional burial?

- ◇ Interment marked by physical, permanent markers, monuments, vaults, tombs, etc.
- ◇ Cemeteries led the way in the urban green space movement
- ◇ Have alternative uses:
 - ◇ Recreation and leisure
 - ◇ Historical documentation
 - ◇ Biodiversity studies



(Caldwell Cemetery, Lake George, NY, Find a Grave, 2020)

What are natural burials?

- ◇ Green Burial Council defines three forms:
 - ◇ Hybrid cemeteries
 - ◇ Natural burial grounds
 - ◇ Conservation burials
- ◇ Environmentally-friendly
 - ◇ Promote biodegradable caskets, shrouds, urns
 - ◇ Do not allow embalming fluids, concrete vaults, herbicides or pesticides
 - ◇ Protect and restore wildlife habitat
 - ◇ Integrate sustainable native plant communities
- ◇ “Natural burials” are prevalent in the Western world, but elements of sustainability are geographically and culturally shared
- ◇ Known users of GIS, using GPS to locate and record burials in constructed databases



(Prairie Creek Conservation Cemetery, Gainesville, FL,
Green Burial Council, 2020)

Current challenges to natural burials

Systemic

- American “way” of burial
- Commodification of mortuary science, funeral services
- Gap in state and federal legislation
- Expansion, growth, gentrification
- Land ownership: who owns the land?
- Industrial interests
 - Walls, pipelines
 - Mining and blasting

Individual

- Lack of education on natural burial options
- Marketing is lackluster
- Idea of human body as “unclean”
- Idea of preservation and permanence

Research Background

Human burials

- *Sustainable deathstyles? The geography of green burials in Britain* by Yarwood, Sidaway, Kelly & Stillwell
- *Green death: Sustainability and the administration of the dead* by Shiloh R. Krupar

Environmental conservation

- *Natural Burial as a Land Conservation Tool in the US* by Christopher Coutts, Carlton Basmajian, Joseph Sehee, Sarah Kelty, and Patrice C. Williams
- *Conservation from the Grave: Human Burials to Fund the Conservation of Threatened Species* by Matthew H. Holden and Eve McDonald-Madden

Research Questions

Could the movement towards natural burials assist environmental conservation efforts?

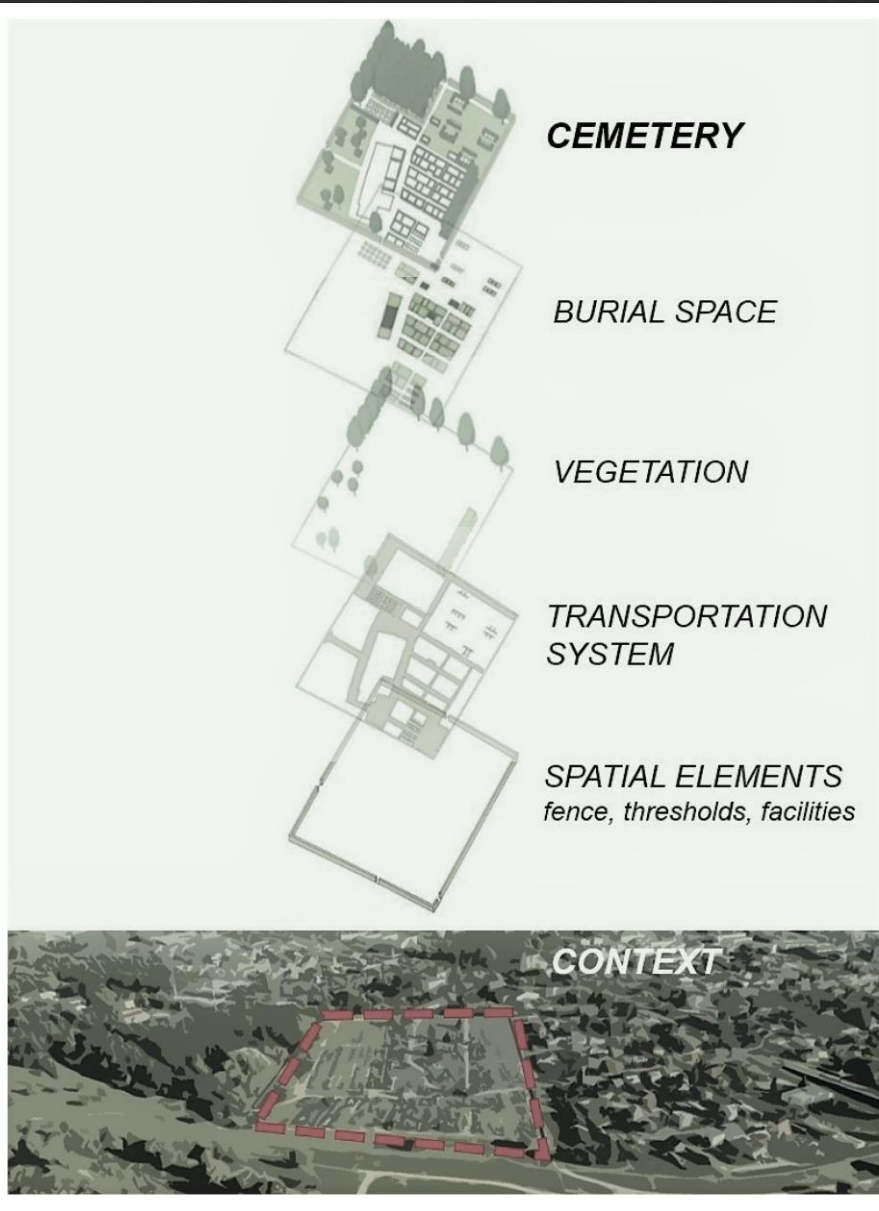


What are the shared beliefs towards human remains that designate what constitutes a burial ground?

Is that shared belief system able to support environmental conservation efforts?

GIS & human burials

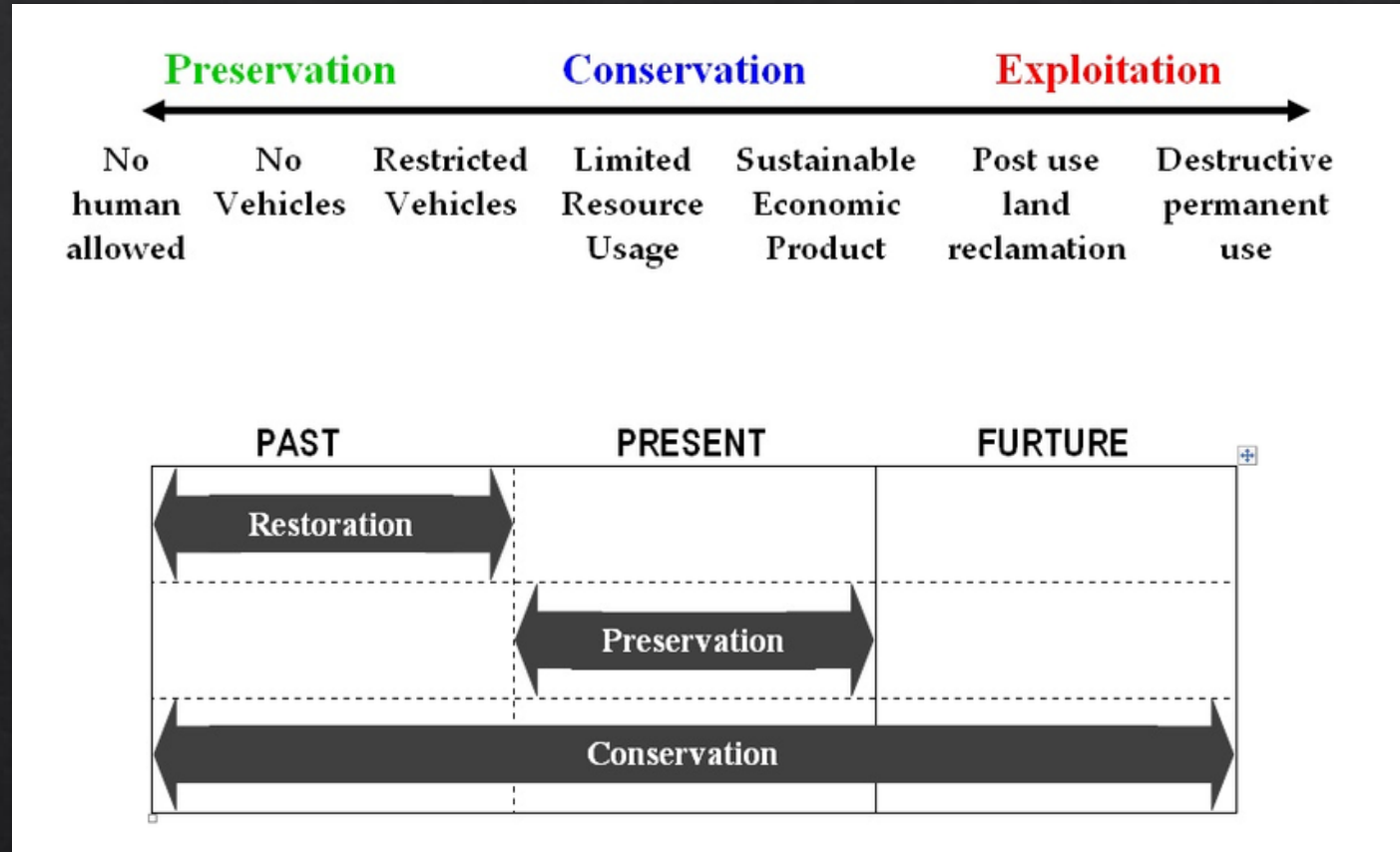
- ◇ Variety of applications
 - ◇ Documentation: know who is interred, where
 - ◇ Management, maintenance
 - ◇ Research, study
 - ◇ Investigate (e.g. missing persons)
- ◇ Combination of techniques
 - ◇ Geospatial techniques
 - ◇ Ground-based survey
 - ◇ Geophysical techniques (GPR, etc.)
 - ◇ Remote survey methods (Lidar, etc.)
 - ◇ Paper maps, hardcopy records, photographs
 - ◇ Community, institutional knowledge



(Multi-faceted design of cemeteries, Długożima Anna & Kosiacka-Beck Ewa, MDPI.com, 2020)

GIS & environmental conservation

- ◇ Effective monitoring of the environment? Use GIS techniques.
 - ◇ Modeling habitat changes
 - ◇ Spatial patterns (e.g. wildfire, flooding)
 - ◇ Land cover change
 - ◇ Public health
- ◇ What's most important? Quality data participates in the decision-making process!



(Model of Preservation, Conservation and Exploitation, Raof Mostafazadeh, ResearchGate, 2015)

Proposed Methodology



Identification of suitable site

Historic Vale Cemetery
Sleepy Hollow Cemetery



Planning and data collection

Data required for analysis
Software considerations



Spatial analysis of the data



Summarize results



Examine the results

What makes a suitable site?

- ◇ Location in NYS
 - ◇ Familiarity, looking to influence awareness and policy
- ◇ Social value
 - ◇ Ability to interact with people involved with or influenced by natural burials
 - ◇ Enhances quality of the data by giving it credibility and emphatic voice
- ◇ Study size
 - ◇ Demographic data must be manageable
 - ◇ Define study area spatial parameters (examination of one section, or comparative?)
- ◇ Records
 - ◇ Human data: census information, demographics, burial records at site
 - ◇ Environmental data: environment type, flora/fauna present
- ◇ Natural burials!
- ◇ Potential sites: Sleepy Hollow Cemetery & Historic Vale Cemetery

Planning & Data Collection

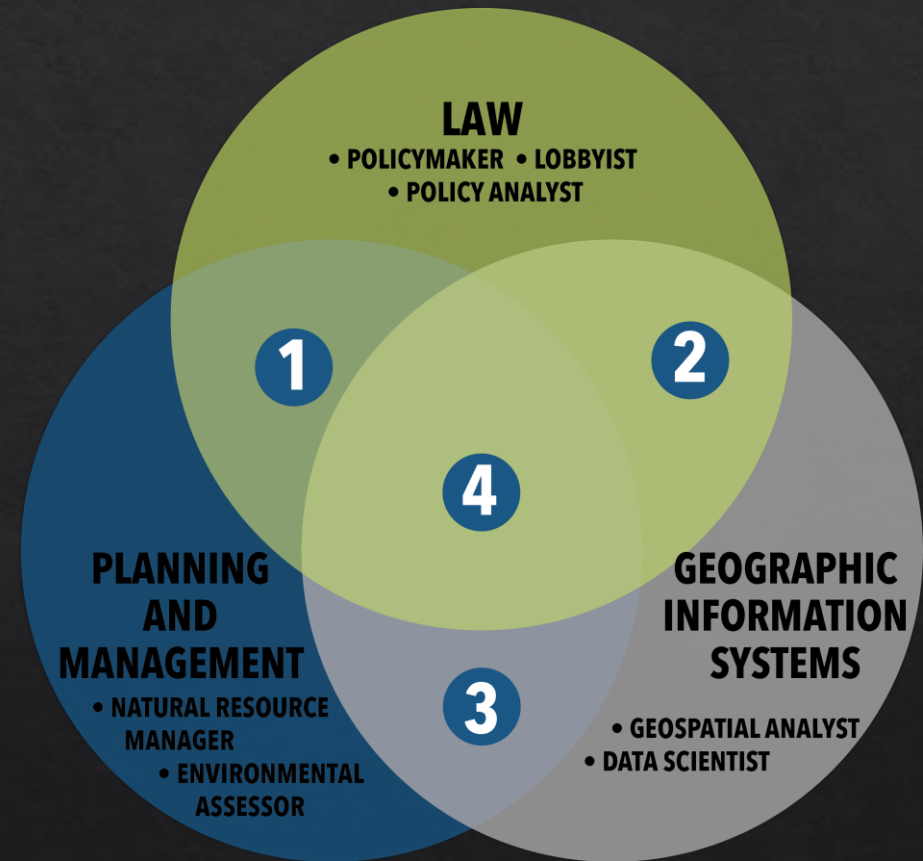
- ◆ Collect data
 - ◆ Demographic data at city level (age, sex, faith associations, travel distances to study site)
 - ◆ Point, attribute data of burial site
 - ◆ Distance to environmental types (river, forest ecosystem, etc.)
 - ◆ Survey and interview to account for gaps in data
- ◆ Data is to be collected on a local level to tell a local story; could be applied state-wide
- ◆ Perform spatial analysis
 - ◆ Spatial autocorrelation (Local Moran's I): where are the natural burials located in comparison to particular types of environment? what are people more attracted to in determining where they'll be buried?
 - ◆ Spatial autocorrelation (Global Moran's I): how far do people travel for natural burial services?

Challenges

- ◇ Is there enough data at this scale? Is there too much data?
 - ◇ Modified Areal Unit Problem (MAUP) – doesn't take NYS, as a whole, into account
- ◇ Access to subjects for interview
 - ◇ Advertisement in newspaper, or on Facebook
 - ◇ COVID-19
- ◇ Add'l Question: Why aren't natural burials taking place in upstate New York?

Anticipated Outcomes

- ◆ Presented to site of research partnership to assist with marketing of natural burial sites.
 - ◆ Used to educate local community about natural burial options and their benefits.
 - ◆ Used to inform local policymakers and stakeholders about natural burial options and their benefits.
- ◆ Presented to Adirondack Park Preserve to advocate for creation of natural burial areas in APP territory.



(Environmental Management Careers, University of Connecticut, 2020)

Timeline for Research

Weeks 1-2

Data collection and additional literature review.

Examine documentation, perform community survey, on-site observation.

Weeks 3-6

Data conversion and quality assurance checks.

Weeks 7-8

Analyze data and draw research conclusions.

Weeks 9-10

Final report draft and revision.

Weeks 11+

Present results at AAG conference, prior to the end of 2020.

Contact

Emily Moore | ejm5297@psu.edu | ejmpro @ twitter

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