



A Data Management Workflow for Cultural Geography Projects: Tips, Tricks, and Lessons Learned

Hannah Gunderman, Ph.D. Geography
Research Data Management Consultant
Carnegie Mellon University Libraries
PGS 2020 - 2020-11-06



What is data management?

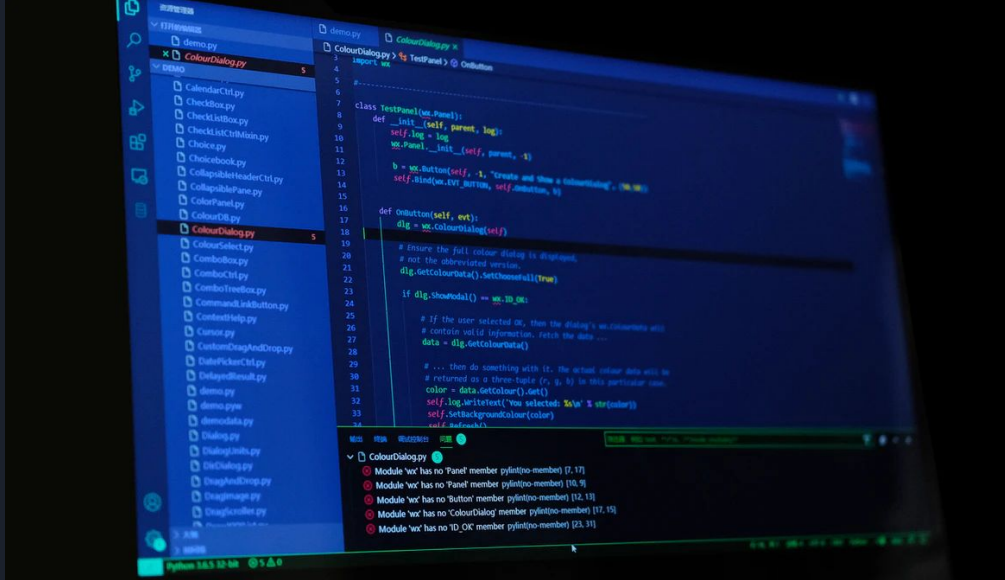
What is data? Collection of facts: numbers, words, measurements, observations, descriptions of things

ALL disciplines have data! Even in the humanities (in this case, cultural geography)

Photos, music, film, observations, interviews, etc.

Data management is managing these facts so we can get the most out of them and achieve a stronger impact of our work

Activities include: organizing, describing, documenting, tidying, naming, sharing





Why focus on cultural geography?

Our data is not always seen as real “data”

Classroom environments don’t always teach data management, as a result

More common in GIS & physical geography classroom and lab environments

We have to manage data just as much as any other researcher!

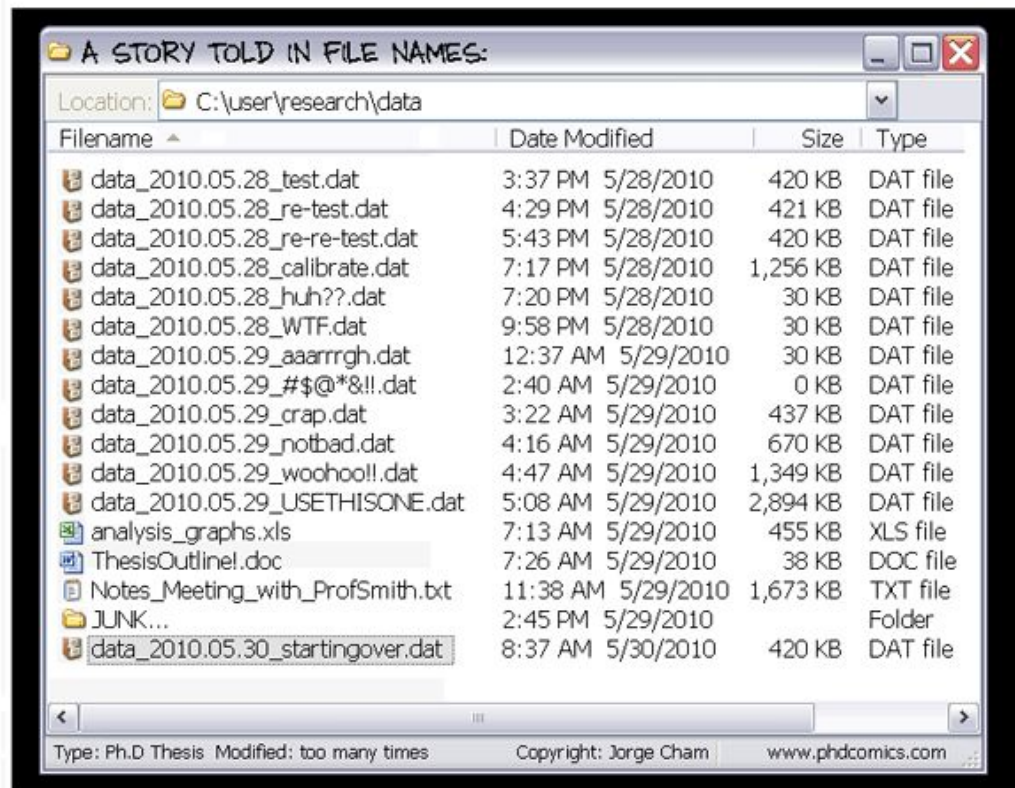
Managed data = better research and opens up more opportunities

Case Study: *Doctor Who* Fandom and Episode Focus Groups



5 lessons learned in the data management process for this project

First Lesson: Use good filenames!



Include the most important elements to you + collaborators


No spaces in the filename; use underscores to separate elements

Ex: "Gunderman_20200609_map1_v1.pdf", not "Gunderman map 1.pdf"

Dates written in YYYY-MM-DD format, ex: 2020-06-27

Less than 35 characters

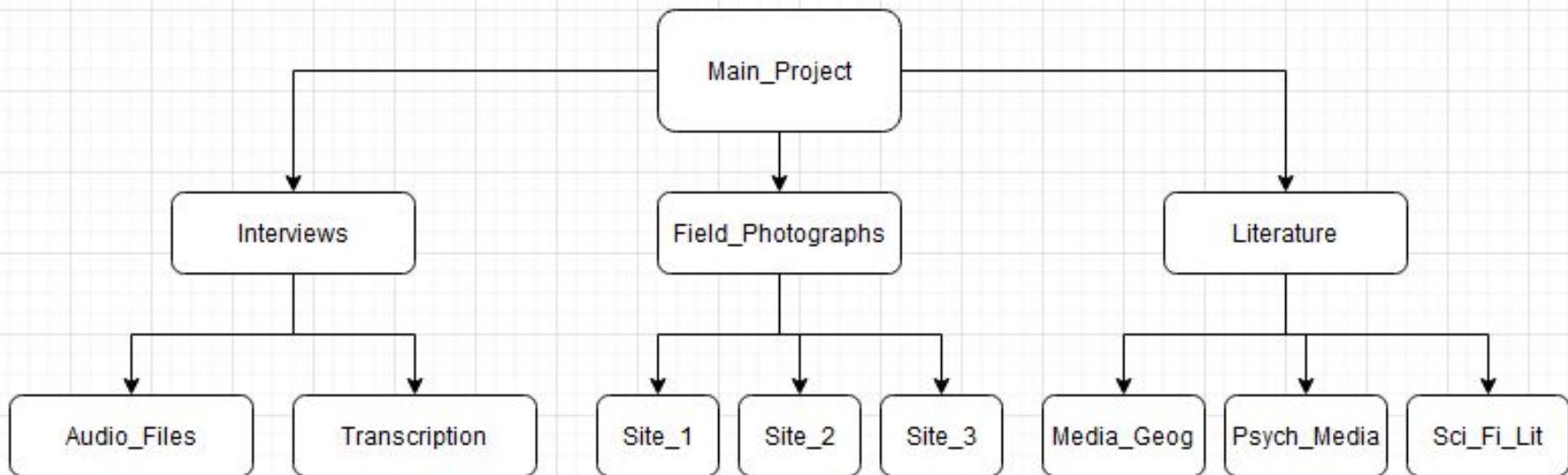
Any filenames scheme is better than nothing, so don't stress about "perfection"



Second Lesson: Figure out a data storage system!

It can be **incredibly easy** in the fun moments of research to focus more on the analyses + writing, instead of thinking about your file storage system.

Be sure you are consistent with where you are storing your files, and stick to folder structures and filenames conventions! The extra 2 minutes now will benefit you later.





Third Lesson: Documentation matters!

Cultural geographers have to talk about methods (in papers, presentations, etc.) just like all other subfields of geography!

Don't assume you'll remember exactly what you did, and why

Protocols/workflows/documentation - like a cookbook for your research!

Codebooks/data dictionaries are incredibly useful - make one early and stick with it



1	User	Question	Pre	Post
2	1	Q1	3	3
3	1	Q2	1	1
4	1	Q3	3	3
5	1	Q4	5	4
6	1	Q5	4	4
7	1	Q6	4	5
8	1	Q7	1	3
9	1	Q8	1	4
10	1	Q9	2	2

1	Variable	Variable Name	Measurement Unit	Allowed Values	Description
2	User Number	User	numeric	1-6	A numeric ID assigned to participants in sequential order
3	Question	Question	alphanumeric	Q1-Q11	An ID given to each question in the questionnaire in sequential order
4	Initial Answer	Pre	numeric	1-5	The score given based on the score chart given to participants, before watching the episode of Doctor Who
5	Final Answer	Post	numeric	1-5	The score given based on the score chart given to participants, after watching the episode of Doctor Who



Fourth Lesson: Leverage tools built for STEM

LabArchives: data storage, literature, supplementary documentation

Protocols.io: workflows and documentation



Fifth + Final Lesson: Start as early as you can

Each day that your research progresses, you may be gaining more and more data

Trying to organize and document this data gets more difficult the longer you are engaged in your research!

Even 5 minutes a week devoted to data management is helpful

My funder expects me to upload the data supporting my paper to the repository...



I'm employed to do research not manage data! This extra work is a waste of my valuable time!



Sharing research data increases reproducibility for others and visibility for you!





Conclusions and Opportunities for Further Engagement

Right now, there's not a formal space for cultural geographers to seek data management support.

New Slack Community: <https://tinyurl.com/slack-invite-PGS>

(Link expires on November 28 - after that, email hgunderm@andrew.cmu.edu for invitation to join)

Develop into formal manuscript for journal submission