# Documenting the collaborative commitments that support data sharing within archaeological project collectives

github.com/zackbatist/DAB23

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Digital Archaeology Bern: Advancing open research into the next decade

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# Objectives

1. Articulate the collaborative commitments and technological systems that mediate data sharing within archaeological projects

2. Relate these norms and expectations to the sociotechnical arrangements that frame open data infrastructures

**I examine archaeological research as social and cultural practice**

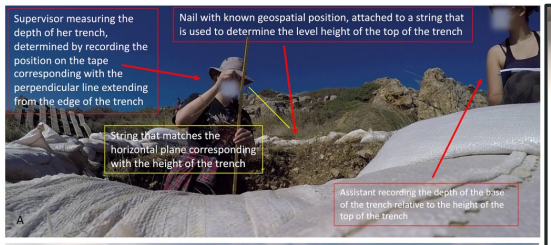
1. How do objects gain meaning through collective action?

2. How do social and technological systems mediate and encourage cooperative and productive behaviour?

3. What tensions emerge through social and technological re-arrangements as we transition to open?

# Data Collection and Analysis

- Data collected over four years, from 2017 – 2020
- Three cases
- 90+ hours of work observed
- 30+ interviews
- In field, museum, dig house, and office settings
- Both on and off season
- Abductive qualitative data analysis methods roughly based on grounded theory



MAXQDA
The Art of Data Analysis

# Archaeological project collectives…

**comprise teams of people,**

**working in different settings,**

**in sequence and in tandem,**

**at different time scales,**

**using a variety of tools,**

**applying a diverse range of methods,**

**bringing their own unique outlooks and experiences,**

**and responding to local circumstances and challenges**

# Territoriality in the field

. . . **we are really close with our trenches,** especially Theo and I, so **we can talk about what's happening in our trenches, correlate it, and ask each other for opinions** . . . Usually it's like, umm, Theo sticking his out of his trench and is like, Lauren, do you have a moment? Or me saying, Theo, can you have a look at this? And then umm, we compare, usually we compare, like, our stratigraphy or we look at material, **like getting each other's opinion**

Lauren, Trench Supervisor, Case A

And I think the more that I like, the more that I've learned about it, and the more that I've identified with it, I guess, **because I'm the supervisor of the trench, and the material is from my trench, the more that it has become like an extension of me**, sort of.

Ben, Trench Supervisor, Case A

# Territoriality among specialists

And then there are those more sort of umm conflict management I guess, which is where you have, and usually **this tends to correlate with relatively junior scholars, who don't have the security of a job or act more insecure in terms of like their progress**, their knowledge and whatever … I'm also very aware of the fact that while people are inputting to the project, **they kind of need their own datasets, there needs to be a bit of a boundary marking** in terms of this is ultimately mine, and I will be publishing this. Or at the very least, I will be publishing this as the first author, with this person. … **So I've learned to be more clear up front in terms of this is my expectation of you, what's your expectation, this is yours, this is common, you know** …

**Jolene's been here from the get-go [so] she has sort of first dibs on what sort of material she wants to work on**

Basil, Project Director, Case A

# Territoriality and sovereignty over projects

**Because on a project director side, this is a 365 day a year deal** where you're always writing grants or writing publications, thinking about the project, game planning for next season, getting resources together. And there's a tremendous investment in that. Versus, say, **a trench supervisor that's rolling in for three weeks writing the report and then handing it in**. That level of contribution wouldn't necessarily equate to an authorship on a peer reviewed publication. And granted, I was that person …

well the **project directors, they devote their lives to these things**. And in a way sure, I guess . . . **they kinda get first dibs**

Rufus, Project Director, Case B

# Agency in contexts of fieldwork

**Like if I did something that Lauren didn't like it's different than when I did something [a different supervisor] didn't like.**

I sort of questioned why we have to keep the sections, like in our trench, so like uniform. Like we can't pick rocks out. Like if it's sticking out we gotta keep it in there if it's not– the section is gonna have a rock sticking into the trench, **but they don't want a rock removed from the trench** if it's gonna create a hole in the section. So it's just sticking into the trench, and that could be an important lithic, right? So **I never understood that, but that's how it's done.**

I just find it more comfortable, for me, and I would hope the assistant, if, like there's not as distinct a separation as possible, you know? … **but there has been some, like, things that are different, obviously. I have to make all the decisions in the trench, I have to talk to [the director], umm...**

Ben, Case A

# Agency in contexts of writing reports

. . . our department of antiquities publications or whatever, **as a trench supervisor student, I was never put on reports**. I was never put on those publications. **Once I became field director, which is obviously under co-director, I was**. And I was given opportunities to take, to be a lead on these things. I understood that from their perspective that **they are bringing over people like trench supervisors, bringing them over, paying their way, room and board, all that stuff, and they had a specific task to do. When they did that task, that information is then absorbed into the project.** If they went above and beyond or wanted to take an active role in something, there was opportunities to do that.

Rufus, Project Director, Case B

# Agency in contexts of data integration and reuse

. . . **if you write a paper and you cite somebody and you, you know, you have it in parentheses in the text and in a bibliographic reference at the end, that doesn't make them a collaborator**, just because you cited them . . . But in the case of where you are constantly aggregating more and more and more data, I think it does become difficult … there's some doubt in my mind that we're accurately and adequately tracking all of those sources.

Like one of the things that was very intentional ..., by restricting it only to projects in the [region], was in part not only to **try and create a kind of shared collaborative community that had shared research interests and scholarly agendas** or whatever. But it was also because **we mostly knew each other, and so we could build a kind of informal network that where we trusted each other** because we knew each other and collaborated in various ways over the decades.

George, Project Director, Case C

# Agency and activity systems

- In any given activity, certain individuals hold creative agency, or the power to assemble people and tools in a manner that suits their goals
- Creative agents retain recognition, others become genericized
- only activities where upper management wields creative agency hold the potential to garner some legitimately valuable outcome

# Formal records and situated representations

So as I'm getting the data that we're given by them **I'm thinking, how can I format this and store this in a way that will be useful to me later when I want it?**

Jamie, Database Manager Director, Case A

So umm, I think that's where the power of technology comes in, especially with archaeology, is umm, **giving the data to the decision makers, getting this data easily accessible to Rufus so he can go in, find patterns**, umm find, you know, why do all these items have a length of this. Or why is this Munsell in this area. And I think **that's where the power lies**.

Greg, Database Manager, Case B

Can be leveraged

# Formal Records

Recording sheets

Specialist findings

Documented photos and illustrations

Requires seniority to access and exploit!

**Project Database / Online Repository**

**Formal analysis**

**Published article**

Cannot be leveraged

# Situated Representations

Emails, text messages, phone calls

Interstitial spreadsheets / to-do lists

Blurry photos

Sketches

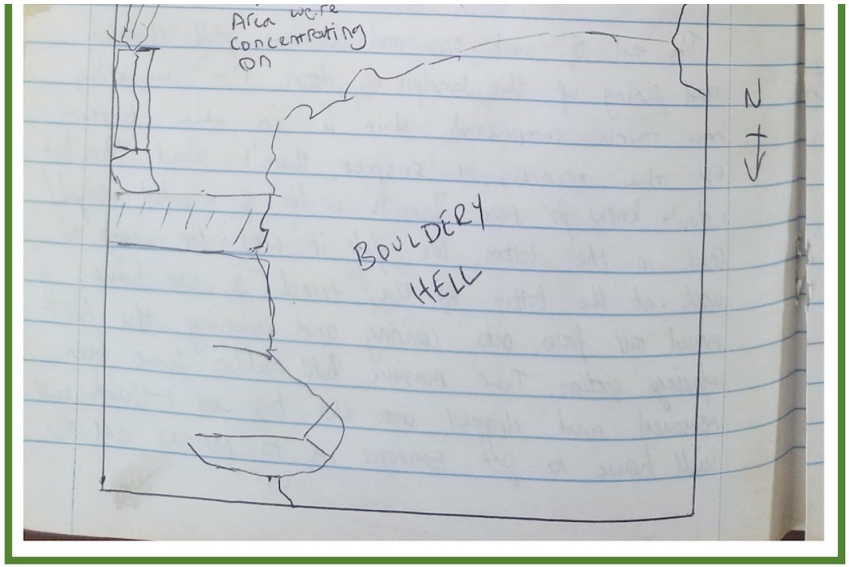
Stories

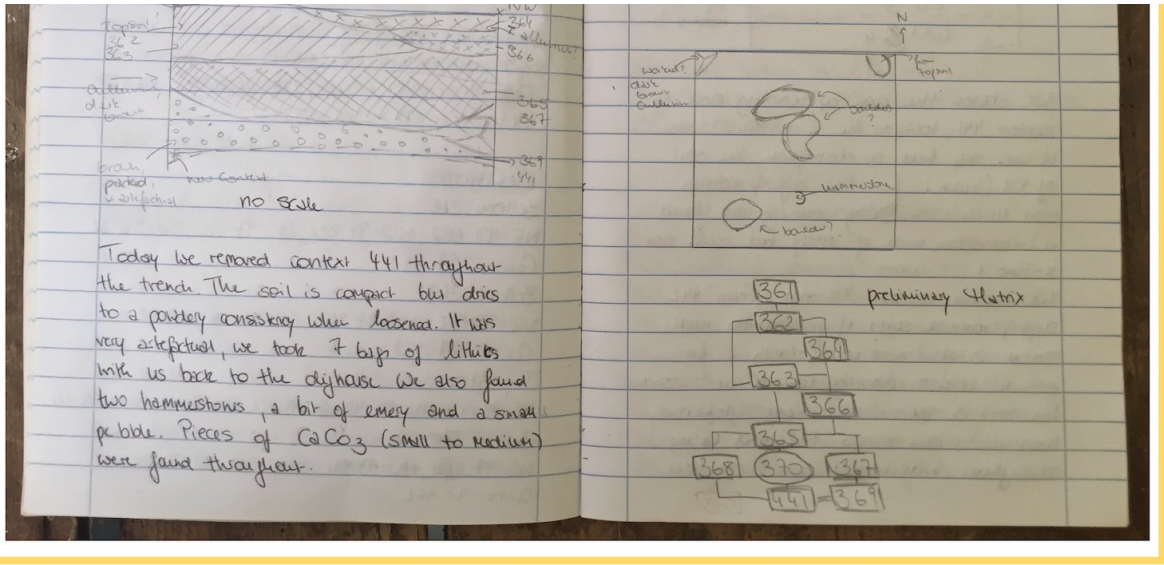
Field manuals

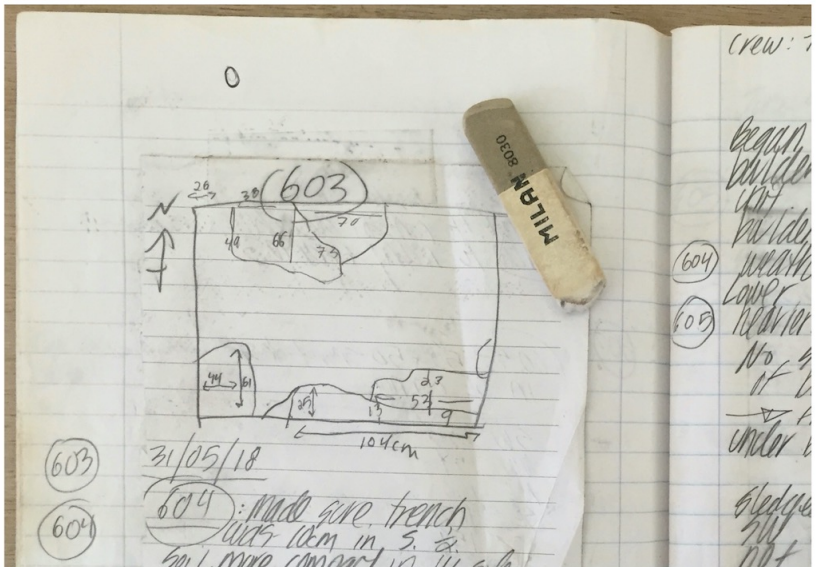
Draft records

**Dumped on a drive, Discarded and/or forgotten**

# Field Journals



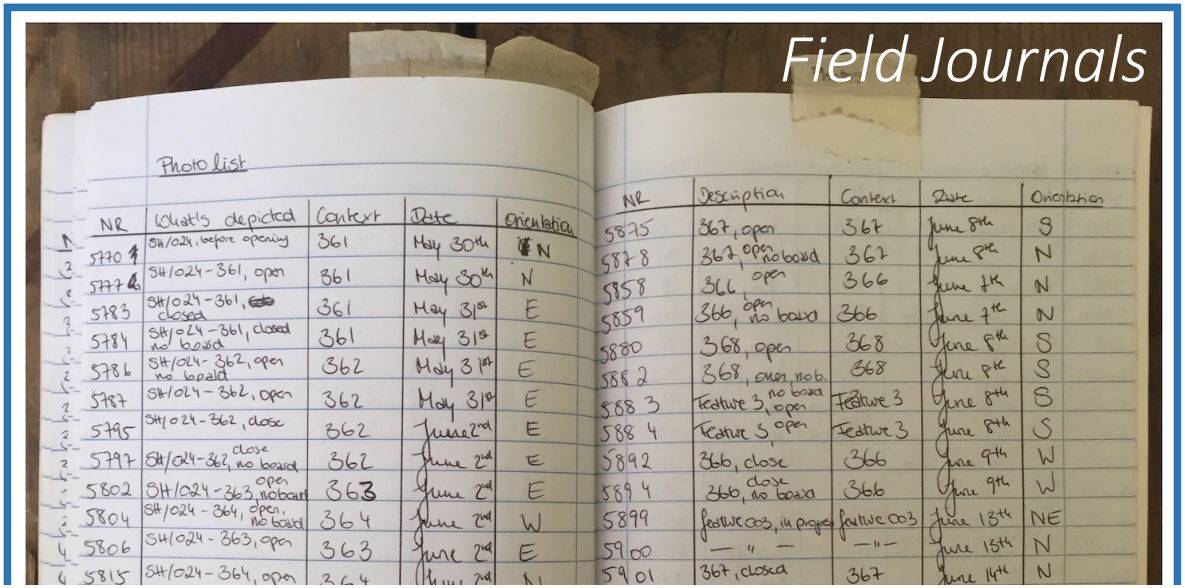



Photo list

| NR | What's depicted | Context | Date | orientation |
|---|---|---|---|---|
| 5770 | SH/024, before opening | 361 | May 30th | N |
| 5778 | SH/024-361, open | 361 | May 30th | N |
| 5783 | SH/024-361, closed | 361 | May 31st | E |
| 5784 | SH/024-361, closed no board | 361 | May 31st | E |
| 5786 | SH/024-362, open no board | 362 | May 31st | E |
| 5787 | SH/024-362, open | 362 | May 31st | E |
| 5795 | SH/024-362, close | 362 | June 2nd | E |
| 5797 | SH/024-362, close no board | 362 | June 2nd | E |
| 5802 | SH/024-363, open no board | 363 | June 2nd | E |
| 5804 | SH/024-364, open, no board | 364 | June 2nd | W |
| 5806 | SH/024-363, open | 363 | June 2nd | E |
| 5815 | SH/024-364, open | 364 | June 2nd | N |

| NR | Description | Context | Date | Orientation |
|---|---|---|---|---|
| 5875 | 367, open | 367 | June 8th | S |
| 5878 | 367, open no board | 367 | June 8th | N |
| 5858 | 366, open | 366 | June 7th | N |
| 5859 | 366, open no board | 366 | June 7th | N |
| 5880 | 368, open | 368 | June 8th | S |
| 5882 | 368, open, no b. | 368 | June 8th | S |
| 5883 | Feature 3, open no board | Feature 3 | June 8th | S |
| 5884 | Feature 3, open | Feature 3 | June 8th | S |
| 5892 | 366, close | 366 | June 9th | W |
| 5894 | 366, close, no board | 366 | June 9th | W |
| 5899 | feature 003, in progress | feature 003 | June 13th | NE |
| 5900 | — " — | —"— | June 13th | N |
| 5901 | 367, closed | 367 | June 14th | N |

**Theo:** A journal is a stream of consciousness telling you where you're at and what you're doing in the trench and during the day. …

**Zack:** What do you mean by streams of consciousness? Just like what you're, writing what you're doing?

**Theo:** Yeah. And what you're thinking. … It's because the idea of the journal is so that you can go back to it to understand what the excavator was thinking whilst they were excavating.

Theo, Trench Supervisor, Case A

**Zack:** I mean let's say you, let's say you got an approval from someone, they sent you their GIS data, their pottery data, the spatial data and as well as whatever other supportive documentation they give you. They give you a package of it, let's say. What do you do with it? First thing?

**Liz:** Mmm. So I, well the very first thing I do is read the notebooks, because that's where you get … their … thought process throughout the whole thing, which makes it so much easier to then dive into the actual meticulous data.

Liz, Trench Supervisor, Case B

# Tensions with Open Data Infrastructures

1. Projects remain the fundamental units of concern
2. Power is further concentrated in the directors' position, as the recognized owner of the totality of a project's data
3. Boundaries within a project are rendered invisible
4. Little mention of the mechanisms, decisions, or commitments that governed the selection and flow of data within projects
5. Do not adequately satisfy what can be more effectively obtained through interpersonal interaction

# Where do we go from here?

1. Registry rather than repository mentality
2. Work with existing norms and expectations, while also developing new and relevant collaborative commitments
3. Recognize the value behind various kinds of contributions, beyond those made by senior project managers
4. Reconsider the long-term commitments involved in creating data

# Questions?

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