Balancing Situated and Objective Representations in Archaeological Fieldwork

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Abstract

Archaeology comprises both systematic and improvised attitudes and processes concerned with the collection and maintenance of data. This reflects the need to obtain formally-defined data, while also grappling with the fuzzy and uncertain nature of archaeological encounters, especially in fieldwork environments. This produces an epistemic tension, whereby archaeologists struggle to reconcile their desire to produce concrete outcomes based on objective facts, and their intuitive understanding that data are in fact products of situated decisions and actions. Through observations of archaeological practices, interviews with archaeologists at work, and analysis of the documents they produced while recording objects of archaeological concern, this paper articulates how archaeologists cope with this tension and integrate it into their work experiences.

Introduction

The series of challenges pertaining to the organization, sharing and reuse of archaeological data, which are often collectively referred to as the discipline's "curation crisis" or "data deluge", have highlighted the wide array of practices that underlie data's construction, management, dissemination and reuse (Bevan 2012; Huggett 2022b, 2022a). Numerous studies have complicated the common imagination of data – which considers them as concise, corpuscular, discrete and inherently truthful records – by demonstrating how, in practice, they are actually messy, incomplete and non-reductive (cf. Batist 2024; Dallas 2015; Huggett 2022a; Voss 2012). In fact, archaeologists create data while anticipating their utility as records that inform certain kinds of analysis, while those who apply data in analytical contexts simultaneously reconcile their own use-cases with the conditions under which the data were originally created (Dallas 2015, 190–191).

This is reflected in the ways in which archaeologists reuse data. Faniel et al. (2013) and Atici et al. (2013) documented how those who reuse data seek out additional contextual information about the circumstances of a dataset's creation by communicating directly with the dataset's originators, thereby establishing a discursive collaborative tie. Alternatively, many data analysts who operate at a distance from the contexts in which data originate prefer to trust in the models that give the data concrete structure, thereby offloading the acts of reconciliation to those who produced the data (Huggett 2022b). In other words, reusing data involves establishing trust, which can be garnered through mutual understanding of the challenges that had to be overcome to get observations to fit within discrete data structures, or through reliance on mechanisms of control to ensure that data are collected and maintained in a consistent manner.

This paper demonstrates some of the strategies employed to establish trust in data. Through analysis of one illustrative example of archaeological documentation in fieldwork, I show how data-capture is not merely a sensory experience whereby nature is recorded on a 1:1 basis, but is in fact structured by models and power relations that legitimize data and make them useful.

Background

This work builds upon prior studies of archaeological documentation in fieldwork settings, particularly Edgeworth's (1991, 28) dissertation that documented "the transaction between the subject and the object, as it takes place in the act of discovery," which represented an attempt to ground theoretical discourse concerning the objectivity of the archaeological record in the practical "intersubjective work or labour upon material objects". This extremely polyvalent work touched on various aspects of archaeological practice, highlighting the collective and discursive process of archaeological knowledge production in various settings. Edgeworth closely examined the physical acts of excavation, the mindsets of the people doing this work, the sensory and conceptual apparatus through which objects are uncovered and made meaningful, and the social transactions that surround and permeate life on the project. His work drew attention to the social and professional interactions taking place at an archaeological excavation, and which occur as archaeologists articulate an object as a meaningful or discrete entity and make it official. Crucially, Edgeworth highlighted how archaeological records are produced through improvised, semi-structured and discursive action, afforded by practical concern and limited by the prior experiences held by those doing the work.

Similarly, Goodwin (1994, 2010) observed how the formation of concrete records in fieldwork settings relates to the establishment of professional frameworks, which lend authoritative legitimacy to the meanings that archaeologists eventually settled upon. This touched on similar observations made by Gero (1996), who noted how certain ways of delimiting features — which corresponded with gendered experiences — were deemed more legitimate than others. Mickel (2021) and Yarrow (2008) also documented that archaeological labourers (including local labourers and undergraduate students) are less able to contribute as interpretive agents in the production of lasting records about the things they recover.

Thorpe (2012) also argued that the broader social and political circumstances — neoliberal austerity, in particular — in which archaeological fieldwork tends to operate significantly effects how interpretations are made and arguments are extended, by effectively curtailing fieldworkers' creative agency. Huggett (2022b), Caraher (2019), Batist et al. (2021) and Batist (In review) similarly draw attention to how digital workflows effectively segregate acts of recording from acts of analysis and interpretation, by putting significant epistemic distance between those who hold creative agency in analytical and interpretive domains and those who occupy the domain of fieldwork; they further demonstrate how the latter is leveraged by the former to produce a

clear and concise basis upon which formal analytical methods rest. Moreover, Batist (2024) and Hacıgüzeller, Taylor, and Perry (2021) point out that the formal and transactional paradigm that dominates discourse on what data are and how they should be handled poses problems for communicating what was actually encountered while excavating a feature, including tentative thoughts, desires and apprehensions that are left out of official records.

In what follows, I will extend this critique by showcasing the improvised nature of data construction in fieldwork settings and by demonstrating how rough encounters with archaeological remains are stabilized and made more legitimate through documentation practices.

Methods and Materials

This paper draws from observations of and interviews with archaeologists at work, as well as the documents that they produced. Specifically, I articulate how archaeologists enacted various activities and how their actions were situated as part of broader systems of knowledge production. My involvement with this project constituted a longitudinal investigation of archaeological practice that contributed to my doctoral dissertation (see Batist 2023).

Case

This paper draws from observations of and interviews with members of an archaeological project, focusing specifically on the pragmatic and multifaceted ways in which participants engage with the project's information system. This involved recording and interviewing archaeologists as they worked during the summer field seasons from 2017 to 2019 and holding additional interviews between fieldwork sessions. The project's director also provided access to all documents and records for the purpose of this research.

The project upon which this case is based is a research project comprising excavation of a prehistoric site in Southern Europe. It is directed by a foreign professor affiliated with a North American university, but who has extensive experience working in the region. The director coordinates various specialists whom he recruited for their expertise in the interpretation of finds, a number of trench supervisors who lead excavation and data collection activities, and excavators who operate under the guidance of their assigned trench supervisors.

It is a research project involving archaeologists with varying degrees of experience and coming from diverse professional backgrounds, including those with extensive experience in the commercial sector (see the supplementary materials for brief summaries of individuals' background). It is not a field school, but it does rely to a large extent on labour provided by undergraduate and graduate students, and as such engages in on-the-job training. The informal and situated learning experiences I was able to observe represent instances of legitimate peripheral participation, whereby newcomers are introduced to the norms and expectations that govern the archaeological community of practice. These scenarios provide especially clear opportunities to ascertain the value ascribed to observed practices and information outcomes conveyed by teachers and adopted by learners through active and productive tutelage. There is a strong precedent for this approach to the study of archaeological practice (cf. Everill 2007; Goodwin 1994, 2010; Morgan and Wright 2018), including in contexts of continual, life-long learning among experienced archaeologists (cf. Edgeworth 1991; Gero 1994; Graham 2019).

This project served as one of three cases I investigated for my doctoral dissertation, which documents how archaeological information systems scaffold the collaborative and epistemic commitments that govern professional research practices (Batist 2023). The observations and elicitations I present in this paper illustrate a specific phenomenon with a more refined scope than what is accounted for in that more comprehensive work and in other research outcomes deriving from it (cf. Batist et al. 2021; Batist 2024, In review). As such, this paper draws from a relatively small portion of the entire set of observations and interviews, which largely pertain to fieldwork recording practices, processing and analysis of finds, records management, interdisciplinary collaboration, decisions regarding writing and publication of findings, and discussions of how data and findings are presented, evaluated and revised among broader research communities.

I actively contributed to the project for several years, primarily serving as a database manager. This afforded me with greater awareness of its organizational and institutional history, including a deeper familiarity with all the people involved, and provided me with a privileged outlook on how team members

structure information, how they typically use data, and what circumstantial events or motivating factors frame such concerns. My continual and participatory engagement with this project allowed me to develop an understanding of the intricate social relations as they developed over time, and enabled me to examine certain methods that are drawn out over the course of several field seasons.

I must emphasize that in case-study research, cases represent discrete instances of a phenomenon relating to a researcher's interest (Ragin 1992). Cases are therefore not the subjects of inquiry, but the vehicles through which phenomena of interest are manifested in an observable way. I recognize that all archaeological projects are informed by their own histories, memberships, sets of tools, methods, and social or political circumstances, which inform distinct traditions of practice, and that it is not possible to generalize across the whole discipline through a single case study. In other words, my findings are informed by the informants whose actions and attitudes I sought to articulate, and by my own perspective as a scholar of the culture and practice of archaeology and of the media and infrastructures that support it. The implication is that commercial archaeology, which comprises the vast majority of archaeological work in North America and Europe, is out of the study's scope, owing to the fact that the case represents a research project and that I have very limited experience with and knowledge about commercial archaeology. However, see Chadwick (1998), Thorpe (2012), and Zorzin (2015) for similar research pertaining to commercial archaeology which produced complementary findings as those presented here.

That being said, this single case study does articulate some significant factors that contribute to decisions and behaviours that archaeologists commonly make and enact, makes certain underappreciated social and collaborative commitments that underlie common tools and practices more visible, and draws attention to certain patterns of practice that relate to contemporary discourse on the nature of archaeological data and ongoing development of information infrastructures.

Data

My dataset comprises recorded observations, embedded interviews, retrospective interviews, archaeological documentation, and ethnographic and reflexive fieldnotes.

Observational data comprised records of participants' behaviours as they performed various archaeological activities and take the form of video, audio and textual files. They enable me to document *how* practices are performed, in addition to the fact *that* they are performed. Moreover, observational data allow me to document what participants actually do as opposed to what they think or say they do. For instance, I situated activities in relation to broader systems, even when participants are unaware that they are contributing to these systems, in order to consider how activities occurring at various times or in various contexts indirectly relate to, compare with or inform each other. I observed roughly 66 hours of work from this case, which were typically recorded using three different cameras — including cameras placed on participants' foreheads — to obtain different perspectives on the recorded activities. Some of the primary foci that guided my observations were the processes that result in archaeological records; people's use of information objects or interfaces, which sometimes differ from expected behaviour established through their design; how subjects implemented unconventional solutions or "hacks" to work around problems; how the context of an activity affects its implementation; and how local or idiosyncratic terms, concepts and gestures become established in a research community.

Embedded interviews comprised conversational inquiries with participants in the context of their work, and were meant to account for participants' perspectives regarding how and why they act as they do, given the immediate constraints of the situation at hand. Embedded interviews provided insight into the practicalities of work in the moment, from the perspective of practitioners themselves (Flick 1997, 2000; Witzel 2000). They are also useful for comparing participants' responses with observational records to interrogate how and why participants' observed actions may differ from the rationales elucidated from embedded interviews. It is difficult to quantify how much data were collected based on embedded interviews since they occurred while observing work they are therefore difficult to distinguish from the remainder of the interaction. Embedded interviews focused on how participants identify problems or challenges in their work, and to determine ways to resolve them; how certain people gain recognition as domain experts or authorities with specialized knowledge; how specialists relate their contributions to the contributions of others; and how specialists relate their situated perspectives to centralized knowledge repositories.

Retrospective interviews comprised longer sem-structured interviews outside of work settings with se-

lect participants to contextualize data collected by other means and to determine participants' views on more general or relatively unobservable aspects of archaeological research (such as planning, publishing, collaboration, etc). Participants were selected for interviews based on the potential to triangulate different perspectives on objects, themes or situations whose significance was emerging throughout the research (Morse and Clark 2019). I conducted 13 interviews during this case; some included more than one participant, and some participants sat for more than one interview. Retrospective interviews helped me gain insight into how participants situate themselves as members of and in relation to research communities, which may be characterized by different regimes of value and by different methodological protocols or argumentation strategies. They were meant to highlight participants' perspectives on the value of various kinds of research outputs, what they value in their work and the work of others, the major constraints and challenges that they and their communities face, and how they might resolve them.

I examined documents and media (such as forms, photographs, labels, databases, datasets, reports, instructional media and field manuals) to gain insight into institutional norms or expectations. See Batist (2024, In review) for more in-depth analysis of how people interacted with and valued these documents. This involved examining documents and media as means for encapsulating and communicating meanings among users across space and over time. This helped me to understand the vectors through which participants either tacitly form collective experiences or directly collaborate among themselves (Huvila 2011, 2016; Yarrow 2008). Document analysis emphasized understanding how document design and media capture protocols anticipate certain methods; how various activities refer to recorded information; the reasons why team members ignore certain equipment and forms of documentation despite their availability; how record-keeping is controlled through explicit or implicit imposition of limitations or constraints; why certain records play more a more central role than others; and how different archaeologists record the same objects in different ways.

Finally, my field notes comprised reflexive journal entries that I wrote between observational sessions or interviews. They also include moments from observational sessions or interviews that I deemed particularly important, as well as descriptive accounts of unrecorded activities or conversations that I have since deemed useful data in their own right.

I obtained informed consent from all individuals included in this study in compliance with the University of Toronto's Social Sciences, Humanities, and Education Research Ethics Board, Protocol 34526. In order to ensure that participants could speak freely about their personal and professional relationships while minimizing risk to their personal and professional reputations, I committed to refrain from publishing any personally identifying information. I refer to all participants, affiliated organizations, and mentioned individuals or organizations using pseudonyms. I also edited visual media to obscure participants' faces and other information that might reveal their identities, and took care to edit or avoid using direct quotations that were cited in other published work that follows a more permissive protocol regarding the dissemination of participants' identifying information.

Analysis

I analyzed recorded observations and interviews, and interrogated the roles and affordances of various tools and documents, using qualitative data analysis methods. More specifically, I draw from the "constellation of methods" that Charmaz (2014, 14–15) associated with grounded theory, namely coding and memoing. Coding involves defining what data are about in terms (or codes) that are relevant to the theoretical frameworks that inform my research, and identifying instances of these concepts (codings) as they appear throughout the text (Charmaz 2014, 43). Memoing entails more open-ended exploration and reflection upon latent ideas in order to crystallize them into new avenues to pursue, and constitutes a relatively flexible way of engaging with data and serves as fertile ground for honing new ideas (Charmaz 2014, 72). By creating memos that relate and elaborate series of encoded observations and that situate observed experiences in relation to broader theoretical frameworks, I was able to form more robust and thematic arguments about the phenomena of interest while remaining firmly grounded in the empirical data. See Batist (2024, 9–10) for a more comprehensive overview of the analytical methods employed for the project from which this paper emerges.

Codes were generated through iterative analysis of recorded observations, transcribed interviews and scans of documents and field notes. An initial "open" coding phase involved generating codes in a rather open-ended manner to identify common themes and sensitizing concepts (Bowen 2006; Charmaz 2014, 30–31). Subsequent coding was scaffolded by a provisional taxonomic code system, which was informed by a loose

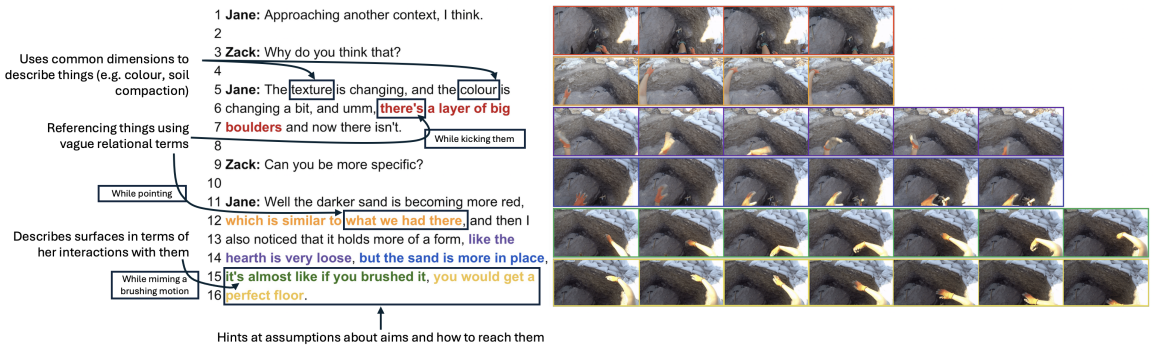

Figure 1: Discussion of a potential context change using gestures and speech.

conceptual model, which broadly encompasses codes about specific activities, participants' figurations, and theoretical concepts concerning the collective constitution of scientific knowledge (see Batist 2023, Appendix B for an overview of the code system). The study is therefore aligned with Charmaz's (2000) constructivist approach to grounded theory, in that it orients the work by the analyst's prior understandings, rather than have the codes emerge organically.

I refer to specific observations or interview segments throughout the rest of this text using endnotes, which are indexed in the supplementary materials.

Findings

I focus on a string of episodes where Jane, a promising trench assistant working at an archaeological project, learned to identify, differentiate, and document parts of a stratigraphic sequence. I illustrate how the constitution of the archaeological record, and the internalization of archaeological knowledge, occurred as part of project frameworks and collaborative relations that were structured by projects' divisions of labour.

Learning to see like an archaeologist

As illustrated in Figure 1, Jane explained to me how she identified and differentiated a new context that she was beginning to expose in her trench, using a series of gestures paired with speech to help convey what she meant to say.[A1] Jane kicked the boulders as she referred to them, literally pointed out relations to previous experiences that she deemed relevant, and described certain aspects of the soil by miming the ways that she would interact with them. She referred to common nomenclature outlined in the project's standard recording schema and referenced by more experienced personnel, and drew from her experiences working in other trenches that others may have shared. More generally, she described the context change only in terms of her interactions with it, and as framed by her particular role in the project.

Afterward, and as illustrated in Figure 2, Jane consulted with Basil, who supervised work in this trench, and who is also the project director, regarding her interpretation of the soil in it.[A2] Jane explained what she saw, in terms of her encounters with the entities she identified, while punctuating her observations with physical gestures that underscored certainty that the entities she was observing actually exist. Basil came to take a closer look and translated Jane's situated experiences into more nominal and normalized terms, that distance the observer from the observed entities. Basil then identified a series of actions that Jane must implement, and summarized the situation by joining what was observed with what was to be done about it, in effect rendering a conclusive and well-reasoned decision. All the while, Jane confirmed her understanding of Basil's corrections and of his specific instructions.

When Jane explained her interpretation of the soil to her supervisor, he then responded with tentative agreement, paired with his own gestures and intonations that subtly communicated his agreement or disagreement. The conversation between Jane and Basil therefore served as a means of calibrating their experiences, using an independent framework as a common reference point. In effect, Basil attempted to align Jane's emerging perspective with a professional outlook on the sediment's character.

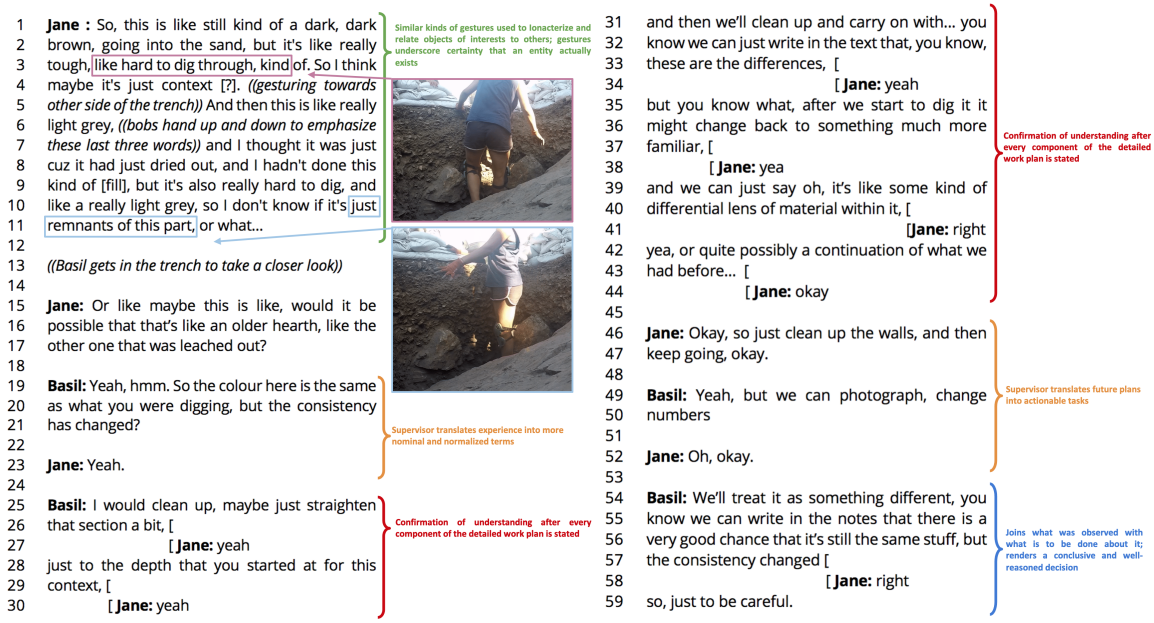

Figure 2: Explanation of a potential context change using gestures and speech.

As Jane stated in a subsequent interview Figure 3, she initially found it difficult to "train her eye to see what they're seeing", and "they" seems to refer to more senior and specialized archaeologists, including her supervisor the director, and Alfred, one of the field directors.[A3] By talking through their observations in an explicit manner and in the presence of the entities of mutual concern, while also referencing concrete characteristics of the soil, Basil trained Jane to see things in a way that corresponds to a formal model of how to differentiate soil, and contexts as an natural extension of that ability. This made him more confident in Jane's ability to recognize and report her experiences, upon which Basil depends; as he recalled in a separate interview, Basil came to trust Jane "to either make her own decisions or be responsible enough to ask other people to help her make decisions for those moments when I'm not there."[A4] This was because Jane became capable of deciding for herself when and how to distinguish between sediments, having internalized a conceptual framework that affords professional legitimacy to her observational techniques.

Jane's internalization of the broader conceptual framework accomplished a few important things: (a) it aligned her own vision as part of a collectively-held way of perceiving the world, which is led by authoritative actors who exhibit greater creative control; (b) it rendered her own unique experiences as generic contributions to the project's information commons, which has the effect of reducing her individual agency while also drawing her into a class of related agents serving similar data collection functions, e.g. student labourers; and (c) it re-framed her embodied and sensory experience as a matter of information modelling, which occurs outside material space and circumstantial moments in time. By clarifying relatively ambiguous perceptions through a carefully calibrated prism, the project may obtain sharper and more well-defined outlines of the things they target for observation, while correcting for and making it easier to dismiss the particular embodied experiences that are collectively focused through the aggregative lens.

Shedding the body

I should note that Jane did not actually object to the reduction of her situated experience in favour of more generic forms of representing the stratigraphy. In fact, this conformed with a pattern of behaviour — which was enacted by all the fieldworkers I spoke with — whereby they tried not to think too much while excavating, opting instead to operate in the moment, face the task at hand, and deal with what is immediately in front of them, literally and figuratively.[A5,A6] This conformed with the expectation that the things an excavator uncovers will gradually reveal themselves, and that she should passively follow what is occurring in the earth before her.

Jane: ... it's always hard to like train your eyes to see certain things. Like sometimes Alfred [the field director] would like take out a handful of sand and go like do you see the red flakes? and I would be like no. Or even like, pointing out stratigraphy, like see how this changes to this level, and it just kind of, training your eye to see what they're seeing is, sounds like an easy thing but it's actually hard to like, kind of, pick out things that they want you to pick out. And I think like now it's easier to like, oh, see how that's transitioning, or like, umm, even just like comparing peoples' trenches and like the contexts they're in, it's easier now but at the start it was like, it looks the same to me, or like I don't spot what you're spotting, you know? And it's just a way of looking at things that I think that's the hardest part for me.

Zack: Do you know how that developed?

Jane: I think just like repetitive, like every day, looking at stuff, I think is like, just a good way of learning. I don't know if there's something specific but... and just hearing from like, hearing Alfred pointing it out, hearing Basil pointing it out, hearing different supervisors pointing it out, it was just different ways of explaining it or showing it to you that it starts to kind of, like, produce a form of knowledge.

Figure 3: Jane describes how she learned to recognize differences in the soil. Underlined text refer to especially significant elicitations elucidated above.

To help accomplish this, fieldworkers modified the environments in which they worked. For instance, some fieldworkers focused better while listening to music or while blocking out social distractions.[A7,A8] Ben, who worked as an assistant in a separate trench, said that listening to music helped him avoid being too self-aware[A7] while Jane concurred by expressing that she listened to music to help her "get lost in digging."[A8] Even when music was not used, or when it is forbidden on site, there remains a warrant for fieldworkers to remain focused as they work.[A9] For instance, Basil recalled what he characterized as "old fashioned" archaeological fieldwork practices, which dictate that "the only sound you should hear is trowel on stone."[A8]

Having all the necessary tools at hand was another way to facilitate uninterrupted focus during fieldwork.[A10] This helped eliminate peripheral sensory distractions when getting up or reaching for tools placed further away. In effect, fieldworkers were made to become disembodied sensing devices attuned to one thing and one thing only: the soil immediately in front of them. This notion was further underscored by my unrecorded but common observations of supervisors having to force assistants to take breaks, drink water, apply sunscreen, and remind them that they have bodies worth cherishing and protecting.

In some cases, fieldworkers found certain kinds of information useful as they excavated. For instance, knowing about similar stratigraphy in nearby trenches enabled excavators to work at a quicker pace, since it this provided a general understanding of the order and depth of the stratigraphy under them.[A11,A12] Moreover, when finds specialists reported back to fieldworkers about the contents of their ongoing trenches, their preliminary findings sometimes influenced the care with which they excavated and recorded the trench.[A13,A14] While Theo (a trench supervisor who eventually became a field director) indicated that knowing about the properties of lithic artifacts that lithics specialists deemed important helped him undertake his work in a manner that better suited the project's overall aims, he presented this notion in very broad terms, and refrained from indicating specific practical impacts when prompted. [A13] Moreover, Ben dismissed the input provided by palaeobotanical experts as useless to him because he was unable to "see" the archaeobotanical traces as he worked.[A15] This may merely reflect practical concerns, specifically regarding the microscopic nature of properties that render archaeobotanical remains significant, but it would not be absurd to find ways to help fieldworkers make sense of such insights in the field. For instance, if there was a warrant for such activity, fieldworkers may hypothetically carry a magnifying loupe and reference guide, and be trained to understand how to use them, similar to how Jane learned to characterize soil samples in the field. However, this would require a more comprehensive partnership between specialists and fieldworkers, and broadening the extreme focus that fieldworkers have honed for themselves.

In general then, I observed aspects of fieldwork practice that both complement and contradict efforts to enhance reflexivity in fieldwork. The professed desire not to overthink while excavating pushes back against

Why did you change contexts?
We think we are still within the hearth(?) feature but in the western half of the trench (i.e. that part not covered by a boulder) the sediment has changed somewhat. In NW quadrant the soil is still dark but is now more compact. In SW it is more compact and more grey.

Context description:
SW corner of trench where a grey (ashy?) compact soil. 100% soil for flotation. Fewer artefacts. After a couple of centimetres it turns back into the black soil (i.e. this is now another arbitrary stratum in the hearth feature).

Figure 4: Transcribed section of a recording sheet describing the context addressed in the observed episode.

impulses to provide more information to fieldworkers during the moment of excavation (cf. Berggren 2012; Berggren et al. 2015). According to Theo and Ben, fieldworkers operate in a strictly separate role than those who interpret and write about finds, and this boundary feels natural to them.[A16,A17,A18] Rather than ingest loads of additional information, which involves learning how to make sense of it all and find it meaningful in a practical sense,[A19] the fieldworkers I spoke with went in the opposite direction; they value their extremely focused experiences with the material, which presents them with a unique and proprietary way of knowing that dissipates as they are, as Edgeworth (2003, 109) put it, forced to "[detach themselves] from the task-in-hand to consider the material field from a distance". This means of engagement feels more natural to them, as if unmuddied by reflexive thought, and the fieldworkers I spoke with perceived this as a strength.

At the same time, the fieldworkers I spoke with were very aware that all observation is subjective and that all records carry biases imposed by the practical circumstances of their creation; they were deeply involved in navigating these practical circumstances and in devising ways to control their environments to foster the *illusion* of objectivity. All of what I described was in service of a broader systemic framework, which is informed by a (flawed) conception of the nature of archaeological data and of what constitutes proper or legitimate archaeological reasoning (Batist, In review).

In other words, fieldworkers' efforts to shed their embodied experiences was a strategy for coping with an "epistemic anxiety", whereby archaeologists must grapple with a tension between the drive to produce confident records and their intuitive understanding that their own observations are inherently situated (Huggett 2022a, 274–278; Lucas 2019, 55–57; Wylie 2017; Batist 2024). This is supported by systems that effectively re-assign creative agency from fieldworkers to data managers (Batist 2024, In review). For instance, I previously noted that database managers, who were tasked with translating messy observations into concrete data structures, generally lacked adequate understanding of the contexts in which data were initially recorded; to overcome this challenge, they attempted to enforce standards, workflows and rulesets among fieldworkers so that they could obtain greater control over the data (Batist 2024).

It should also be emphasized that this is a systemic issue, and does not reflect individual archaeologists' skills and abilities. This is evident by the remarkable consistency across responses by and observations of all the archaeologists I engaged with on this matter, regardless of their degree of experience; they were all both intuitively and explicitly aware of these concerns but were unable to grapple with them or enact change through their own individual actions. Nor are these observations intended to demonize or pass negative judgement on the projects' leaders and database managers, who are similarly constrained by systemic pressures to generate forms of knowledge that are valued by the scientific enterprise. This, in turn, involves balancing a tension between sharing concrete records about archaeological observations while accounting for the situated decisions and actions that contributed their creation.

Leaving traces in the subsequent record

Turning back to the specific observations of archaeological fieldwork, Basil's prediction that the context would not change came to fruition. However, the tentative decision to proceed as if a change in context was imminent left residual traces on recording sheets, in the database, and in the final trench report (see Figure 4 and Figure 5).

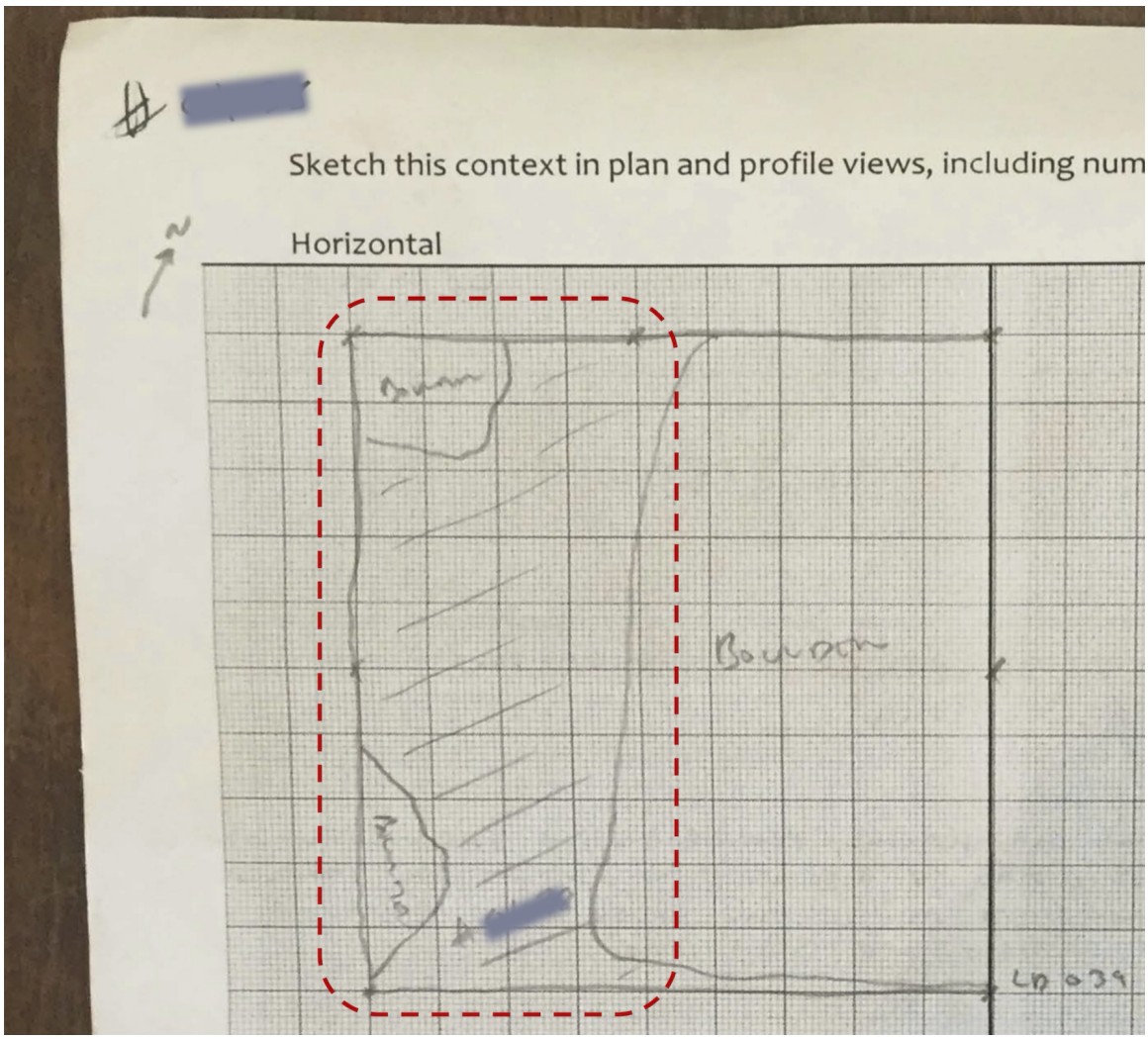

Figure 5: Sketch of the base of a trench, portraying the context addressed in the observed episode, boxed in red.

Context ( ); LU ( )

The sediment in this context had changed a bit but we assumed we were still within the hearth(s). In the northwest quadrant the soil was still dark but was now more compact and in the southwest it was also compact but more light grey in colour. It appeared more ashy so we described it as a new context. However, after a couple centimetres it turned back to the darker soil so it was then decided that this was indeed a continuation of the hearth. It was then considered an arbitrary change of context. Overall, it was grey ashy soil with angular and fairly compact stones, it was medium/fine sand, poorly sorted, and 10YR 4/1. 100% of this was also taken for flotation. The boulder begins to drop off here and does not take up any more of the trench. No sediment from beneath this large boulder was taken. However a new smaller boulder can be seen in the middle of the remaining open western side in figure 17 and more exposed in figure 18.

Figure 97; context ( ), opening, photo from the west, 1000747

Figure 6: Section of a trench report describing the context addressed in the observed episode, and situating it as part of a lithostratigraphic unit.

In particular, the tentativity and ambiguity that Jane and Basil experienced while excavating this trench was one of its notable properties, as elicited in the final trench report (see Figure 6). Additionally, the report described how the contexts were eventually lumped together into a more concretely defined "lithostratigraphic unit," which was formally delimited using nominal and standardized terminology. In this way, the report switched back and forth between ambiguous and concrete representations, which conveyed experiential and distant perspectives, respectively. This resembles the tone switching that occurred in the conversation between Jane and Basil, whereby Basil, as supervisor responsible for creating formal documentation, re-presented Jane's experiences using more formal terms. As such, this reflects an implicit recognition that there is immense value in being able to share more nuanced perspectives on the things that make up the archaeological record. At the same time, and in contrast with truly situated records like those maintained in field journals (cf. Batist 2024), since the language documenting such tentativity in the report remained largely impersonal and observations were de-situated and disembodied.

It is notable that situated experiences were recorded in the report-writing phase, and only by those acting in authoritative roles. This parallels how field journals — which are also records of situated experiences — are exclusively maintained by supervising personnel (Batist 2024). These observations reflect the different kinds of agency held by different actors in the project. Fieldworkers were encouraged to shape their behaviour so that the information they obtained was born as formal entities from the start, whereas those responsible for presenting the record as part of a broader scope of work were responsible for re-situating the data as products of data-collection processes that they designed and dictated. Recognizing the situatedness of data while they were being collected would have warranted recognition of their limitations, which fieldworkers believed would enable undisciplined data collection behaviour.[A20]

In other words, the constitution of archaeological records involved temporarily suspending disbelief regarding the stability of archaeological observations among fieldworkers, and then re-integration of storied accounts about the record's origins by supervisors who were granted greater creative agency. However, this was conditioned through the use of language that rendered prior work as generic and non-situated processes, thereby obscuring the agency of those whose work the report was based on. Although not specifically targeted for this study, similar tendencies may also be casually observed while re-contextualizing prior work as part of broader narratives at various scales — in summaries about a trench, an area, a site, and even an entire region.

Discussion and Conclusion

This paper's findings demonstrate how the production of stable and concrete archaeological records involves characterizing the phenomena of interest in nominal terms, while downplaying the situated and embodied experiences that informed the records' creation. More specifically, it documents a tendency toward enforcing formally-defined records in support of analytical tasks down the line, which present fieldwork as a means to an end, and fieldworkers as instruments that can be wielded to support future analytic endeavours. It shows how these values are instilled through the social and material experiences in which fieldwork is embedded, which inform fieldworkers about how their labour, and the outcomes of their labour, contribute to collective efforts. In other words, it reveals how the management of archaeological data and of archaeological labour are inherently intertwined, and draws attention to some mechanisms through which certain voices are rendered more visible than others when constituting the archaeological record.

Moreover, the fieldworkers I observed and spoke with played into the roles they were assigned, even though this meant having less creative agency. In fact, they generally valued their contributions as sensory devices, which is linked to the notion that they were capable of seeing things as they really are — as material entities that have seemingly not yet been ascribed stable meaning. As such, fieldworkers actively contributed to honing the illusion of their objectivity, which enhanced their value as members of the project and as domain specialists with their own unique mental skills. At the same time, it was also clear that fieldworkers knew, on an intuitive level, that any claim of objectivity is overstated (as per complementary work published in Batist 2024, 12). However, their positions as responsive rather than creative actors ensured that they are not responsible for resolving this tension (cf. Batist, In review).

These findings complement other empirical research examining archaeological data management as collective interpretive action. For instance, Batist et al. (2021) and Batist (In review) note that rote fieldwork

practices tend to be assigned to relatively junior project personnel, who become ensnared in workflows which discipline their actions. Similarly, Morgan and Wright (2018), who compare analog and digital field drawing techniques, reveal how the act of transcribing archaeological deposits on a blank surface produces greater understanding in the minds of students than participating as a cog in a broader digital apparatus, owing to different degrees of creative interpretive agency that each method affords them. Moreover, Yarrow (2008), who examines the meaning, materiality and agency in archaeological recording practices, draws attention to expressions of resignation among fieldworkers who were more aware that the information they record does not hold special meaning, based on their prior understanding of how these records would actually be used down the line. Edgeworth (1991), Zorzin (2010), Thorpe (2012), and Watson (2019) highlight similar perspectives in their critical investigations of agentic relationships and knowledge production in commercial archaeology.

This paper has clear implications for thinking about data documentation and the potential for data to be re-used in secondary research contexts, at greater distance from their contexts of creation. Surveys and experiments by Faniel et al. (2013, 299–301), Atici et al. (2013, 676–677), Kansa and Whitcher Kansa (2013, 90–91), and Chapman and Wylie (2016, 213), which investigated the needs of data re-users, highlighted their desires to communicate directly with datasets' creators to ascertain the subtext hidden between the lines of their formal documentation. This aligns with investigations of attempts to enhance archaeological documentation by Huvila, Börjesson, and Sköld (2022), Austin et al. (2024) and Opitz et al. (2021), who suggest that such efforts should be directed by specific contexts of re-use. A common thread across these investigations on either end of the archive is that effective data-sharing must involve some discursive relationship between those who produce and re-use data, thereby bridging the epistemic distance imposed by layers of abstraction (Huggett 2022a). Strategies for enhancing data's re-use potential across the continuum of archaeological practice thereby embody Dallas' (2015) notion of curation as simultaneous acts of reconciliation and anticipation, whereby meanings are negotiated in relation to prior and future objectives and circumstances.

However, the systemic drive to produce certain kinds of information outcomes based on confident and stable data sources is not fully compatible with this need to acknowledge the complex and storied histories of data. This tension between distinct notions of data, as concrete and disembodied records in one sense, and as situated products of decisions, actions and circumstances in another, produces an epistemic anxiety that archaeologists must cope with. It is unclear how, or even if, this epistemic tension can be resolved, but the drive to achieve a state of objectivity in fieldwork, which is facilitated by systemic distributions of agency, persists — in spite of this outcome's impossibility — as one coping mechanism.

To be clear, the instrumentalisation of archaeological labour is often necessary in order to derive concrete and confident records that are suitable for analytical methods which comply with modern scientific quality standards. Moreover, information commons, such as the pool of knowledge accumulated throughout an archaeological project, do not necessarily have to be egalitarian, and are always governed by norms and expectations concerning who may contribute to and extract from communal resources, and in what ways these interactions should occur. But rather than lean in to the illusion of archaeological objectivity, which is a value built in to most contemporary data management systems, it may be prudent to try an alternative approach that fosters a commensal attitude toward data; namely, one which more fully recognizes data work occurring throughout the continuum of archaeological practice, including in domains that are not typically recognized for their capacity to work with data, such as fieldwork.

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Data Availability Statement

The data generated and analyzed during the current study are included in this published article's supplementary files.

Supplemental Material

For supplemental material accompanying this article, visit XXXX.

Competing Interests

The author states no conflicts of interest.

Notes

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Figure Captions

Figure 1: Explanation of a potential context change using gestures and speech.
Figure 2: Discussion of a potential context change using gestures and speech.
Figure 3: Jane describes how she learned to recognize differences in the soil.
Figure 4: Transcribed section of a recording sheet describing the context addressed in the observed episode.
Figure 5: Sketch of the base of a trench, portraying the context addressed in the observed episode, boxed in red.
Figure 6: Section of a trench report describing the context addressed in the observed episode, and situating it as part of a lithostratigraphic unit.