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Publishing Archaeological Excavations at the Digital Turn

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“Like the folk tale or the three-act play, the excavation report has become a literary genre, a conventional kind of writing to which most authors conform.” (Bradley 2006)

ABSTRACT

This paper engages with repeated calls within archaeology for a re-envisioning of the excavation report, contextualized by the transformation of scholarly communication taking place across the humanities and social sciences. This widespread transformation is rooted in a growing interest in showing data together with synthesis and argument, the importance afforded to public engagement, and the proliferation of digital platforms that enable creative presentations of scholarly work. In this context, we discuss our experience producing an excavation report that attempts to integrate several forms of scholarly and public-facing communication on a digital platform, and aims to engage audiences at multiple levels, while simultaneously facilitating data reuse and laying out the authors' current interpretations. We consider the benefits and challenges of producing work in this way through the example of producing the Gabii Project's first volume, *A Mid-Republican House from Gabii*, developed through a collaboration between the Gabii Project team and the University of Michigan Press. This experience is contextualized within the broader discourse surrounding changing expectations about open access, authorship and credit, and sustainability of digital scholarship in academic publishing.

KEYWORDS

Publication; Multimedia;
Digital Humanities;
Methodology; 3D

Introduction: Digital Publication, Humanities Scholarship and Writing Archaeological Excavations

This paper reflects on the experience of producing an excavation report, *A Mid-Republican House from Gabii* (Opitz et al. 2016), that attempts to take advantage of the flexibility of current digital platforms to write and create content for audiences from the interested member of the public to the academic disciplinary specialist, and integrates the publication and presentation of basic data with that of synthesis and argument within a single work. This volume, the first report in the Gabii Project's planned core publication series, was developed through a collaboration between the Gabii Project team and the University of Michigan Press. Through the process of developing, publishing, and revising this volume, we have engaged with aspects of the extended and multifaceted discourse in archaeology surrounding how we communicate the excavation and research process and its outcomes. Our effort follows in the footsteps of experiments in archaeological excavation publication, many of which were carried out in the early 2000s. Key examples include works on the excavations at Çatalhöyük (discussed in Tringham 2004 and Tringham and Stevanović 2012), numerous projects linking articles and digital archives as exemplified by those carried out in relation to the LEAP Project (Richards et al. 2011), e.g. Clarke and colleagues' (2007) publications of the Silchester excavations, and the growing number of excavation project teams making their data and reflections available on the web through interactive sites and databases. Examples of the latter range from development-led

work at Heathrow Terminal 5 (<http://www.framearch.co.uk/t5/>) to the long-term research excavations at the Athenian Agora (<http://www.agathe.gr>). Our project also draws on the active efforts across the humanities and social sciences to reconsider strategies for the presentation and publication of data. Archaeological excavation reports exemplify the data-rich humanities publication, and provide a useful lens for considering the ways in which the digital format can present humanities scholarship, which is increasingly cognizant of complex data, with that data in whatever form it takes. In this context, we face questions germane to debates on open access, authorship and credit, the sustainability of digital scholarship, and connecting diverse audiences with scholarly work, all subjects of debate in both the domain of archaeology and in scholarship at large (e.g. Seidemann 2006; Heath et al. 2008; Lake 2012; Kansa 2012; Kansa et al. 2013; Pratt 2013; Kratz and Strasser 2015; Moore and Richards 2015; Richards and Hardman 2017).

This article reflects on some of the choices made in creating *A Mid-Republican House from Gabii* and their implications, specifically for the archaeological excavation report as a genre and broadly for scholarly humanities publications, as we look to continue to improve the approach taken in our own work. In this light, we present some of the challenges and broader impacts of creating a multi-layered publication to which interactive media is integral, which aims to be credible with specialists, and which attempts to engage non-specialists. At a time when bringing the humanities into the public square and demonstrating its value is a pressing concern (Ang 2006; Jay 2010; Pearce et al. 2012; Scanlon 2014),

many scholars are focused on engaging non-specialists in their research. This mode of publication and effort to address multiple audiences requires attention to how text, media, and data are presented and involves close collaboration between authors, editors, technologists, and designers.

By focusing on the form and style of the excavation report as central to appealing to a spectrum of contemporary audiences and as essential to addressing long-standing concerns about the mismatch between the desires of archaeological readers and the reality of the (primarily) print report or monograph, this paper takes up points raised by the Frere Report (1975) and commentary by Hodder (1989) on the evolving, problematic style of archaeological site reports. It further engages with the discourse on the relationship between the intended audience, increasing professionalization and institutionalization, and writing style as expressed in the PUNS Report (Jones et al. 2001, 2003), and in work by Joyce (2008) and Fagan (2016) on the impact of language and the modalities of archaeological storytelling. Hodder (1989) writes, “At best the [impersonal style] reports are dull, excessively long, detailed and expensive and read by no one except the delirious specialist” and Boivin (1997) describes them as “boring, boring, boring...,” surely a characterization to be avoided. The arguments and reflections presented here are based on the specific experience of producing the Gabii Project’s first excavation report in an experimental format, and address issues still faced, after twenty-odd years of efforts by numerous projects, by teams working to produce innovative publications that present their data, ideas, and reasoning in new ways.

Looking Inward: Remaking the Academic Excavation Monograph

Since 2007 the Gabii Project has conducted survey and excavation at the ancient city of Gabii, situated approximately 20 kilometers east of Rome, Italy. The project has maintained a commitment to techniques of digital field documentation, resulting in the accumulation of an extensive body of digital data ranging from a database of written field observations to photorealistic 3D models of architecture and stratigraphy. In 2012 the project began to plan the publications of the results of the excavation. The team aimed to develop effective and innovative ways of publishing and sharing the project’s rich digital dataset, resulting in the “Gabii Goes Digital Project” (GGDP), which ran from 2013–2015, thanks to an initial grant of approximately \$50,000 from the National Endowment for the Humanities Office of Digital Humanities. The GGDP provided an opportunity to develop innovative modes of publication for our own data, and to address broader issues in the communication and publication of born digital, non-traditional data sources in the humanities and social sciences. The GGDP resulted in the prototype for the design of *A Mid-Republican House from Gabii* (Opitz et al. 2016). This volume presents the archaeological story of a single mid-Republican house at various levels of detail and sophistication intended for different audiences, within a single digital product through a multi-layered textual narrative, a fully searchable database, and an interactive 3D representation of the archaeological remains and reconstructions.

In looking to design a contemporary excavation monograph, we have started from the principle that reader experience is central, while attempting to adhere to the norms of the genre closely enough that the product is still recognizable as scholarship

and as an excavation report. While traditionally composed as long-form linear prose, providing a narrative of excavation strategy, stratigraphic sequence, key material finds, and various categories of supporting and complementary evidence, along with parallels to evidence from other projects, excavation reports are rarely read as a narrative. Rather, they are skimmed and mined for the information required by each reader. Specialists in ceramics target pottery quantifications and typologies and someone excavating a house nearby flips straight to the descriptions of domestic architecture (McCarthy et al. 1992; Richards and Hardman 2008). This style of reading suggests that search functions and linking will be essential, and both are well supported by an interactive digital format.

The choice of a digital-only format for the Gabii Project’s excavation reports series was further encouraged by the project’s substantial investment in digital recording and media, particularly image collections and 3D photorealistic models. The presence of a resource in itself can serve as a pressure to take advantage of that resource, compelling us to incorporate our digital archive, including the visual and 3D components, into publications. The digital publication of excavation archives is not new, and many fine examples may be found in repositories including The Digital Archaeological Record (tDAR), OpenContext, and the Archaeological Data Service (ADS), in addition to individual University archives (Kansa 2016; Marwick 2017). However, most of these archives remain relatively separate from the monographs and reports that present those same excavations, and are provided or linked as a supplement or appendix (see discussion in the context of the LEAP Project [Richards et al. 2011]; for a recent and rich example of linking reports and archives see Milner et al. 2018a and 2018b). The publication of excavation archives should, we argue and have done in this volume, be an integral part of the ‘main’ publication. One expression of this is the presence of the 3D interactive model, by default occupying half the screen when reading, containing the spatial data archive in the form of 3D models and surveyed limits of stratigraphic units. The presentation of the 3D interactive archive side-by-side with the text, and relative scarcity of descriptions of spatial relations in the text, is an attempt to push readers to engage with the archive and its data together with the text. The inclusion of fairly dense links between the text and the 3D interactive model serving as a gateway to the archive is another device through which we attempt to more closely integrate the data archive and the written narrative. If the published archive can perform the heavy lifting of presenting primary evidence, and provide added benefits of improved searchability, space is opened within the written excavation volume itself for more synthesis, interpretation, and storytelling. This reformulation requires that the archive be closely and coherently linked to the published written work, and that the structure and relative roles of the prose, data, and visual media be rethought (FIGURE 1).

The restructuring of the publication to closely integrate the archive with the synthesis and narrative relies, as noted above, on linking between different components. There have now been numerous experiments with the use of hypertext and multimedia presentations to support non-linear narratives, multivocality, and different forms of writing in both scholarly and lay contexts, and further discussions of these experiments (Clarke 2016; Early-Spadoni 2017; Franze et al. 2014; Webb 2013; Rettberg 2012; Schreibman 2014). Starting from the principle of linking the excavation archive and the



Figure 1. A, B): Early drafts of the interface, including the interactive 3D interface and 'infoboxes' that summarize data. C, D): The revised interface, with additions including a minimap and compacted 'infobox' layout to facilitate seeing summaries of information and the 3D model space simultaneously. The text is placed beside, rather than below, the model in the revised interface, to better support parallel reading and viewing.

monograph, the detailed evidence with the argumentation built on top of that evidence, we decided to pursue the use of linked text to present narratives targeting different audiences, allowing a reader to move between different streams and levels of detail, an approach discussed in more detail below. The motivation is to support both productive skimming and deep dives into specific areas of interest, taking advantage of the digital format to support the kind of reading and searching we see as prevalent within our readership, while simultaneously providing a new means of engaging with archaeological evidence to a broader readership.

This aim of reaching an expanded readership reflects the growing importance of public archaeology, and that a broad communication of the process and results of archaeological excavation and interpretation has become a priority for many scholars and professionals. How can we present primary evidence, which requires background knowledge and context to be well interpreted, to a general audience without becoming tedious and sunk in minutiae? How can we simplify complex argumentation to require less background knowledge? At this point, this is not a problem specific to archaeological excavation monographs, but one relevant to humanities and social science disciplines at large. How do we present difficult data, which is in reality open to multiple interpretations, in a responsible way, in formulations appropriate to engaging with diverse audiences?

Specialists in science communication will no doubt find this challenge all too familiar (Logan 2001; Besley and Tanner 2011; Fischhoff and Scheufele 2014; Krause 2017), but we would argue, as have others (Jay 2010; Coble et al. 2014; Green 2016) that the advent of digital publication has pushed us all to become better communicators of our research, and what has previously been a specialist concern is now the business of all scholars and researchers. The first volume of the Gabii Project Reports is the result of an initial experiment in writing linked and layered text addressing different audiences, directly connected to primary data and media, in a restructuring of the excavation monograph.

The format of the volume

The text of the first Gabii volume is written in three layers, ‘story,’ ‘more’ and ‘details’ which link to one another, to the site’s database and to an interactive 3D model of the physical remains excavated in one area of the former town of Gabii (FIGURE 2). In addition there is an introduction to the volume,

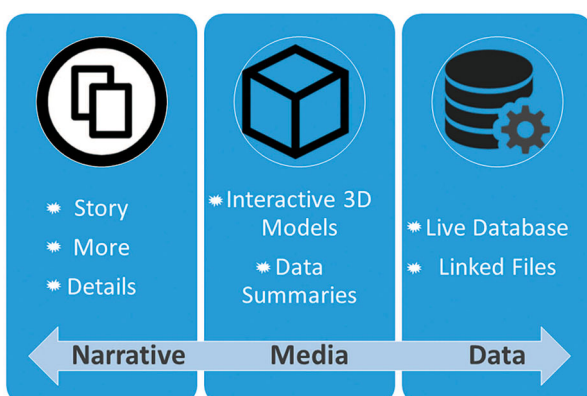


Figure 2. The main component parts of *A Mid-Republican House*, which comprise layers of narrative text, interactive media, and data. Links allow the reader to move between different components.

which explains the format and provides a ‘guide to reading,’ and an ‘apologia’ which explains the project’s methodology. Each layer of text addresses a different audience and, while linked to the others, is a self-contained unit telling the whole story of the archaeology in question.

STORY—TALKING ABOUT WHAT HAPPENED

The first layer of text seeks to tell, in the simplest terms possible, our current understanding of what happened in this part of the ancient town of Gabii. This highly simplified narrative, which attempts to avoid jargon or the assumption of specialist knowledge, was the result of an extended exercise in distillation from the minutiae of individual stratigraphic units and ceramic sherds down to the story that starts with ‘once upon a time there was a house.’ The attempt at extreme simplification, which when assessed using common measures of readability achieved a 10.1 on the Gunning Fog scale or Grade level: 13–15 years old (Eighth and Ninth graders) on the Automated Readability Index (see Brewer 2018), forces us, as authors, to drill down to the essentials to address a broad and general audience. Inevitably there are details that don’t quite fit, irreconcilable differences between parts of the record, much like the differences between what is seen by two witnesses to a crime. It’s all too easy as experts to feel it impossible to reconstruct a narrative of events without attempting to include or explain the details, yet this exercise is necessary for effective communication. Also needed to engage a broader audience is a shift in tone and vocabulary. In the *Mid-Republican House* the first level of text, that is the ‘story,’ is intended to use the tools of fiction writing to engage readers and communicate complex ideas through simple language. In short, as authors, we have chosen to be engaging in narrative style rather than exacting in the details. While these shifts in detail, vocabulary, and style are expected for a presentation of scholarly work in a public communication venue, their use in a scholarly venue is unconventional. The disjuncture between the storytelling mode of ‘humanities in the public square’ or science communications and the scholarly venue is, it can be argued (Culler and Lamb 2003), one caused by the perceived necessity of a serious and impartial tone in academic writing.

The perceived need for scholarly prose to be serious in tone has been discussed frequently in academic literature, coming not infrequently under critique. Hyland (2001: 208) summarizes the situation, stating, “The convention of impersonal reporting remains a hallowed concept for many, a cornerstone of the positivist assumption that academic research is purely empirical and objective, and therefore best presented as if human agency was not part of the process.” This is, he notes, a learned behavior, as reflected in manuals for academic writing which include statements like, “In general, academic writing aims at being ‘objective’ in its expression of ideas, and thus tries to avoid specific reference to personal opinions. Your academic writing should imitate this style by eliminating first person pronouns ... as far as possible” (Arnaudet and Barrett 1984: 73). We see the same intellectual history and links with positivism implicated in discussions of archaeological writing. Expectations for a serious and impersonal tone in archaeological excavation reports emerged, as noted by Hodder (1989) out of the professionalization of archaeology and has strong roots in the processual school.

Given the body of critiques of the writing of academic prose as impenetrable or dry in the name of seriousness or

scientific impartiality, the publication of writing guides in book and article form that urge more creativity, and the current emphasis by funding agencies such as the US National Endowment for the Humanities and the UK Arts and Humanities Research Council on public engagement, one might expect a significant shift toward academic writing in experimental and creative forms as part of the production of core scholarship. Archaeological scholarship has produced some important examples of creativity in writing and Mickel (2013: 110) argues that, “by capitalizing on the tropes of fictive narrative, archaeologists will be better able to discuss more vividly, complexly—and therefore accurately—the procedure and outcome of an excavation. Moreover, a more fictive writing style enables greater transparency, as well as active engagement with more diverse audiences, enlisting invested communities in discursive participation with the epistemological processes of archaeological research.” While in agreement with Mickel’s perspective and her arguments that fictive narratives have great potential for communicating archaeology (Mickel 2012, 2013), compared to the number of conventionally composed articles, creative works remain in the minority. Further, the preponderance of experimental writing seems to take place outside the confines of formal peer-reviewed publication, primarily through personal websites, social media, and blogs. If we accept that these alternative venues for publication, though increasingly respected, remain for the moment outside core scholarship, then we must admit a sea change toward more diverse forms of writing and publication has not truly taken place, and the potential of the form remains untapped. We might blame a perceived increase in risk (of rejection by publishers, of career consequences, of negative perception by peers) if one experiments with new forms rather than undertaking boilerplate scholarly writing. Further, most of us are not trained as creative writers or storytellers. In academic circles, we are well habituated to critiquing our peers’ writing for content, prior to and through peer review, but less effort has been made to dissect one another’s prose not for content but for style and narrative arc. In archaeology, a discipline with a humanistic past and its guts tied up over scientific legitimacy, we hesitate to draw attention to the difficulties of good storytelling and the relative scarcity of professional preparation for this task.

MORE—THE IMPORTANCE OF TRUE STORIES

The first layer of text in *A Mid-Republican House* experiments with style by telling a story grounded in our understanding of the archaeological evidence. This grounding is what makes it a real story and, we argue, a scholarly text. The grounding in the evidence, providing the reasoning and first line of evidence-based argument behind the story, is created through links to the second layer of text. This second level of text was originally simply labeled ‘more’ and aims to reach a broad audience of archaeologists and students of archaeology who would be interested in the specific case of the site of Gabii and how it fits in with broad pictures about Roman urbanism, the Roman countryside, emerging regional economies, and a variety of other topics of academic interest. The material here essentially represents what would go in an academic journal intended for a broad audience, e.g. *Antiquity* or *World Archaeology* or the *Journal of Archaeological Research*. For any of these venues we would expect the audience to have a solid background in archaeological method

and theory broadly writ, and an interest in the big picture questions about the development of society and the unrolling of history, seen through a material culture lens. However, we would not expect deep foreknowledge of the details of the evolution of Roman Republican architecture and the organization of domestic space, nor of the ceramic sequences that ground chronologies. This level of writing, achieving a Gunning Fog index score of 16.5 or an Automated Readability Index score of Grade level: 21–22 years old (college level), adheres the most closely to the experience of academic authors, at least as reflected by our group. It is the synthetic and analytical prose composed after careful study, giving enough, but not overwhelming, detail, in the spirit of Cunliffe’s “cake baked by an expert” (Wills 2017).

While this synthetic style of reporting the findings of an excavation is more readable than a set of catalogs, publications of excavations which provide only the ‘analysis and interpretation’ without clear links to the full dataset have come under increasing critique, in particular from scholars advocating for scientific reproducibility and open knowledge, precisely because they synthesize and leave out detail, making it difficult to interrogate the interpretations put forward. The solution taken up by some projects (e.g., Athenian Agora: <http://www.ascsa.edu.gr/index.php/excavationagora/publications-and-resources/>; Villa Magna: <http://archaeologydata.brown.edu/villamagna/>) is to produce parallel monographs or reports in print form and ‘data publications’ which are usually digital and placed with a repository. More recently the ‘data paper’ has emerged (e.g. Framework Archaeology 2014, appearing in *Internet Archaeology*, who together with the *Journal of Open Archaeological Data* have been at the front of the development and promotion of the ‘data paper’) to provide a bridge between the paper monograph and the data deposited with, in their case, the ADS repository. These parallel data publications attempt to bridge the divide between synthesis and conclusions and the data in which they are grounded. However, as the two publications are often housed in separate institutional contexts and in different media, there are challenges in linking between them to facilitate the kind of re-investigation of the analysis and conclusions proposed, as discussed below.

DETAILS—HOW DO WE TALK ABOUT DATA?

Archaeological excavation monographs have traditionally dealt with the publication of data in several ways: through the publication of catalogs of specific classes of material (e.g. the lamps from Cosa), through the publication of table-heavy appendices, through long descriptive sections where specifics about features and finds are detailed, and through the publication of plans and measurements. Two important criticisms have been raised against the approach of publishing catalogs and appendices: first, that this data, in its print form, is difficult to reuse, and second, that close links between the conclusions and the data are often lacking (See Connah 2010: 137–141 for a discussion of the problems of paper publication of excavation data). For larger projects, particularly those taking place in an academic context, the publication of volumes on materials often came years after the publication of the synthetic volumes, further reducing the legibility of the data.

The publication of annotated plans, widely viewed as another basic form of data, is generally carried out within the main volume and seen as critical to the presentation of the site, but this aspect of the traditional excavation report

faces many of the same criticisms. These plans are, as map-makers and surveyors have regularly pointed out, synthetic and interpretive documents in their own right (Dinsmoor 1977: 26–27). They leave some things out and add other things in, projecting straight lines and completing corners. This makes them equally difficult to reuse as supports for alternative or revised interpretations. Further, the most common criticism on this subject is simply that there never seem to be enough detailed plans, that we lack access to basic spatial data (FIGURE 3).

With these dissatisfactions in mind, and the complaints of graduate students, fellow researchers, and ourselves about the difficulties of working with ‘other people’s data’ echoing in our ears (Allison 2008; Atici et al. 2013; Baird and McFayden 2014; Huggett 2015), we must consider what we want from our own published data. Further, we must consider the implications of the form in which we are publishing our data. As Huggett asks (2015: 6), “How does our relationship with archaeological data change as the observations, measurements, uncertainties, ambiguities, interpretations and values encapsulated within our datasets are increasingly subject to scrutiny, comparison, and re-use? What are the implications of increasing access to

increasing quantities of data drawn from different sources which are more or less open, more or less standardized, and increasingly reliant on search tools with greater degrees of automation and linkage?” One proposed solution, with origins primarily in science communities, suggests the use of well described vocabularies of common terms, structured meta-data explaining how the data was collected, and ontologies showing how different data categories and elements relate, in order to allow us to engage with data in its digital form. These suggestions for a formal knowledge and data modeling approach have been translated from the sciences into the digital humanities community, with an emphasis on ontologies to describe systems of knowledge (Kintigh 2006; Faniel et al. 2013; Dallas 2015; Meghini et al. 2017). Another proposed solution to bridging between data and synthesis is that of the ‘data narrative’ or ‘data publication,’ and this is the route *A Mid-Republican House* has pursued.

The ‘details’ level of our text, sitting two levels below the basic story, is essentially a data narrative or data paper. Like the ‘more’ level, it is intended for an academic audience, and has a similar readability score, achieving 16.1 on the Gunning Fog index. It finds historical parallels in the

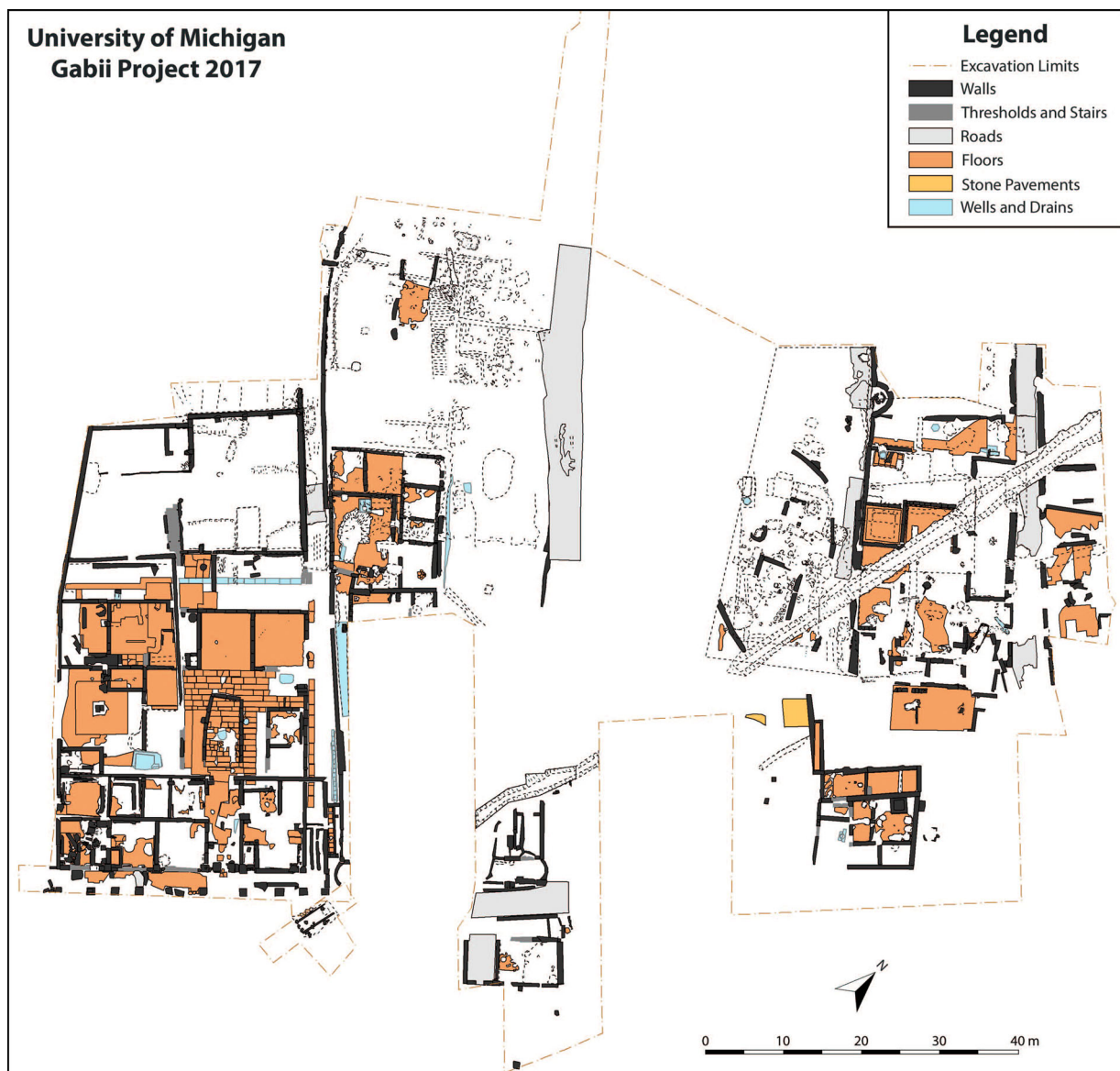


Figure 3. An overview plan from *A Mid-Republican House* which, while useful in that it provides an overview of the excavated area, does not readily allow for interrogation or reuse of the project’s spatial data.

descriptive sections of a traditional excavation monograph, and serves some of the same purposes. This level, with references to specific sets of stratigraphic units or classes of ceramics, is where we want to achieve productive skimming. Here, along with the ‘more’ layer of text, is also where we should be achieving the ‘careful and detailed argument’ that is at the heart of a successful monograph or report. The target audience is the specialist, who wishes to know what supports the arguments made at the synthetic level. Most of this text will never be read by most readers, but each bit of text will be closely scrutinized by a small number of expert readers. By separating out the detailed description into its own layer, and linking it to the synthetic layer, we hope to achieve a good balance between the need for detailed explanation and not obscuring the key findings contained in the ‘More’ layer.

The inclusion of a data narrative may seem unnecessary given the incorporation of the database into the publication. One might argue that long written lists of individual stratigraphic units assigned to each phase are redundant when that information can be called up by searching the published data. However, the relationship between the structure of the data and its interpretation, as discussed by Llobera (2011) and Huggett (2015), is complex. The data narrative serves as another transitional layer, providing context by revealing the way in which data was selected and aggregated, showing which data were most important to us when making the interpretations presented in the ‘more’ level, and highlighting connections made between individual bits of data. This is close to what Huggett (2015: 18–19) describes as ‘tacit knowledge,’ necessary to connecting data and interpretation.

There is a persistent myth that data can speak for itself. If it does, it speaks rather incoherently. The body of published data includes much information that was collected but never or only lightly used. Documentation of soil color is practiced by many archaeologists, boxes for describing or categorizing soil color are regularly found on recording forms, and Munsell charts in excavation kits. While under some circumstances these data may be central to the interpretations made, in the case of the publication of a mid-Republican house later incorporated into a public complex, this data element was not central to our interpretive process. Including lists of stratigraphic units per phase and details on their stratification, but not details on their color, suggests which data elements were most used when analyzing and interpreting the mass of data collected. The data narrative should draw some order out of the sea of data. The data narrative’s primary role then, is insight into our reading of the data and reasoning about the patterns we can see. This level

of text is, unsurprisingly, most densely linked to the data itself (FIGURE 4). It is also the level of text with the most visualizations and charts, reflecting its role in summarizing and highlighting patterns identified in the data.

This approach differs from efforts to use metadata, ontologies and vocabularies together to fulfil the role of supporting the arguments made in synthetic articles, reports or monographs, and make chains of data selection and reasoning clear. Dallas (2015: 317–318) discusses attempts by Roux and Courty (2013) along these lines, and draws out the work of Gardin to lay a theoretical foundation for this new mode of publication. In this model:

Publications of archaeological research are framed not as passive diagrammatic summaries, but as performative, interactive mechanisms (cf. Roux and Courty 2013), allowing active access to descriptions and interpretations of the archaeological record, conceived as a schematized sequence of inferences between propositions organically connected with supporting archaeological data. Readers (“consultants”) of a digitally enabled logicist archaeological publication would be able to navigate interactively through its argumentation structure, traversing the inference tree of the authors’ arguments and filtering, juxtaposing and analyzing data, both qualitatively and quantitatively (Gardin and Roux 2004: 32–25 cited in Dallas 2015: 318).

A key point here is that the reader can navigate. Gardin’s “vision for a radically different model of archaeological publication, based on the schematization of archaeological syllogisms and their reliance on the construction of the archaeological record through recording and documentation, and served by semantic, interactive technologies of presentation, linking and reasoning” to achieve, “semantically enriched information integration that does justice to the complexity and human agency underlying knowledge construction in archaeology” (Dallas 2015: 324) will require that we develop extensive semantic and data literacy as a community to be good readers of these works. We would argue that at this stage most of us are not habituated to reading the data-metadata-ontology triad directly, and the data narrative remains a useful tool for linking written interpretation and data. This points us to a fundamental question: how densely should we link between our different layers of text and the data in our current structure?

Linking and Navigating text, data and media

In laying out the body of evidence and argumentation for our interpretation of the archaeological record at Gabii, everything is connected and we could easily produce a dense mesh of linkages, to the point that every word links out to

Phase B-3

New walls and the division of space



In Phase B-3, the construction of walls SUs [1058](#), [1135](#), and [1163](#) reflects a change in the focus of the activity within the structure, with activity oriented toward the western road and activities to the north. North-south polygonal tufo wall SU [1058](#) was constructed slightly west of SU [1245](#); it continues north, as SU [363](#), on top of the fill of a possible quarry in Area A, for most of its length and only slightly past east-west wall SU

[1187](#), which had divided the courtyard. This wall (SU [1058](#)) was faced nicely on its western side facing the road but was not faced on the eastern side, leaving the rubble packing exposed. This reflects a focus on the activity associated with the road and not the structure itself. The construction of SU [1058](#) (and its continuation SU [5146](#) to the south) clearly cut the structure’s western wall SU [1245](#). Construction cuts SUs [1175](#) and [1407](#) also cut the re-pavement of Road 4 (SU [1400](#)) of the previous phase, indicating a general raising of both the road and the courtyard. Construction fills included SUs [1406](#) and [1174](#). SU [1162](#) and a single block, SU [1263](#), are associated with further patching of SU [5018](#) and further obliteration of SU [1245](#).

Figure 4. Densely linked text from the ‘Details’ section of *A Mid-Republican House*, providing access to the interactive 3D model on a per stratigraphic unit basis to support the data narrative.

another part of the text or to the data. This is not what we have done; we have linked selectively, even sparsely. The primary purpose of the links is to encourage a reader to go deeper into the text and to see connections between data, argumentation, and interpretation. By placing a link from a specific piece of text, we are saying at the most basic level “there’s more here.” The links act as highlighters, pointing out places where the argument might be contested or where there is a particularly dense summarization that deserves further consideration. In our volume, the links within the text are one-directional, allowing a reader to drill down. Each word in the text, in our current approach to linking, has only one target. This is an obvious limitation, as a single piece of argumentation in the ‘More’ layer may draw on multiple points in the ‘Details’ layer. An alternative linking scheme might provide a way to navigate back up from deeper layers, something many readers may desire, but presents several design challenges. First, a single piece of data in the details section might support several points made in the more section, the inverse of the limitation mentioned above. Second, from a design perspective there would need to be a visual difference between links that let you drill down from more general discussion to the more detailed layers and links that let you move up from the data and details into the ‘story’ and ‘more’ levels of text, in addition to the existing visual distinction between links within the text, shown with solid underline, and links from text to 3D model, shown with dashed underline. We might design a system of links that allows for multiple connections flowing arbitrarily between layers of text, as well as those connecting to the data and the interactive 3D environment. Navigating through such a densely and intricately linked text presents its own challenges. This approach is reminiscent of the Wikipedia style of reading, where one link leads to another and hours later you’ve somehow moved from reading about the geology of volcanic tuffs to the punk music scene in 1980s Manchester. On the one hand, dense multi-linking may, rather than clarifying relationships, lead to a reader feeling overwhelmed by the number of connections to explore from any given point. On the other hand, our current approach of using curated links flowing in a single direction is problematic in that it likely simplifies too much, leaving out many possible connections. We suggest that the best

balance between these factors will be specific to each publication, and that the design of appropriate linking systems for excavation reports is an area for further experimentation and research.

Similar challenges in design exist for the system of links between text and the interactive 3D environment that provide access to the spatial data collected by the project. The design of the interface embedded in the publication, discussed in Opitz and Johnson (2016), is intended to provide any reader with an intuitive physical sense of the physical remains of the house, which is fundamental to our interpretation and the narrative constructed through the data and the text (FIGURE 5). This environment has effectively been designed to operate at the ‘story’ and ‘more’ levels of the publication, in that it does not supply tools that would allow for detailed investigation, e.g. taking measurements or cutting sections. Those activities are supported through the database, which provides access to individual 3D models of stratigraphic units which may be downloaded, measured, sectioned, annotated, etc. Effectively, the ‘details’ level interaction with the spatial data is accessed through a separate interface, another design choice.

We face similar issues when considering designing an interface that would allow for exploration from entries in the database up through various layers in the text. We might append links to database entry pages that connect them to their mentions in various parts of the text, adding new links as new publications appear. Doing so would benefit a reader who began by exploring the data, or ‘drilled down’ to data from a given text, explored laterally, and then wished to see the contextualized discussion of a given piece of data. A system like this would also support a multivocal approach, desirable to many (e.g. Joyce and Tringham 2007; Habu et al. 2008; Beale and Reilly 2017; Shillito 2017), where discrete texts representing different perspectives and interpretations are clearly linked to the same data. However, a system like this would require ongoing updates of the data layer as new text referring to the same data emerged. Further, as noted above, this approach would likewise lead to a dense mesh of links, as each data element refers back to multiple points in various texts, and dense linking may introduce confusion or prove overwhelming for some readers. As above, while not arguing against data-to-text linking, we emphasize that design choices about the level of

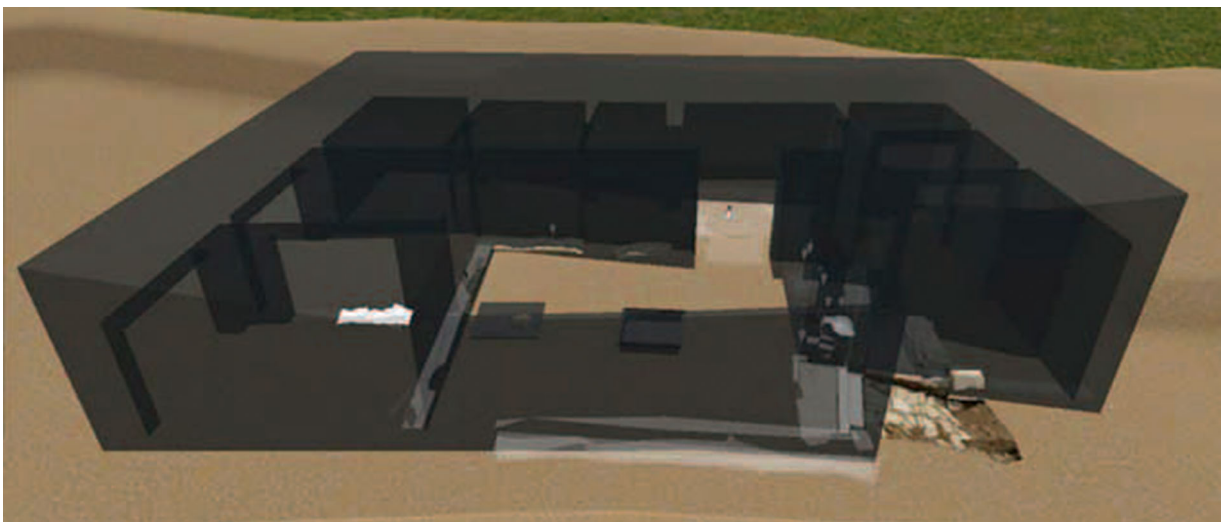


Figure 5. The combination of photorealistic models of stratigraphic units and reconstructions of the house presented in the 3D interactive environment is intended to provide an intuitive sense of the physical remains and the structures interpreted based on them.

granularity and flexibility provided by linking must be made in the context of each project's larger goals.

As illustrated by the discussion above, the design of the publication's structure and interface, allowing for exploration and interrogation of primary data and media at several levels, and the design of the text to address multiple audiences, raise issues of broad interest in archaeology and in the humanities, beyond the particular problem of the excavation monograph. There have been numerous discussions on the future of the academic monograph (Hill 2016; Crossick 2016; Lyons and Rayner 2016; Deegan 2017; Jubb 2017; O'Sullivan 2017). The production of *A Mid-Republican House* and its design, carried out in collaboration with the University of Michigan Press, reflect these discussions, and through them the impacts of current thinking on digital media and writing for the web, the prioritization of public engagement and demonstrating the value of humanities scholarship, and the growing influence of open access policies. Below, we briefly discuss the production context with the aim of situating *A Mid-Republican House* in this broader landscape and highlighting potential future directions for the reformulated excavation report.

Implications for Excavation Reports and Excavation Monographs as a Genre

In order to consider the current and potential impact of the digital format on the publication of an archaeological excavation monograph, it is useful to review the roots and traditions of the genre. Excavation monographs and reports have a somewhat troubled past. It is a common complaint that excavations take an excessively long time to publish after their completion and that many never come to publication at all.

The problem of non-publication is emphasized by the introduction to the new excavation report guides for the National Museum Service (NMS) in Ireland, which states, "It is apparent, however, that the pressure of work now associated with the profession has led to variable quality of reportage and these deficiencies must be rectified" (Duffy 2006), a clear reference to the widely acknowledged problem of poor or non-existent excavation reporting. The situation is widespread enough that several professional bodies have produced guidance on writing excavation reports, aimed both at improving the format and quality of the content and encouraging publication in the first place. These guides address many of the same fundamental challenges we discuss in the academic context.

The guide for professionals reporting in Ireland, for example, comments on content and style for the concise report, intended for a general readership, and the final report, which is more technical. Jigsaw, a community archaeology group based in Cambridgeshire, UK, provides both an introduction to report writing which contains suggestions about the aims of the report and likely readership and a structured template for a report, complete with section headings (Clarke 2014). BAJR (Connolly 2009) and UNESCO (Maarleveld 2011) provide similarly detailed guidance. The UNESCO guide attributes the format and style of the excavation reports to reports written by British scholars working in the 19th century. "The format of excavation reports dates back to the 19th century based on Pitt-Rivers' Cranborne Chase model. This generally comprises summary/ abstract, introduction/ background, description of features, structures and stratigraphy, discussion, catalogues/ specialist reports/ appendices. In

addition, the volumes on the Cranborne Chase excavation contain useful relic tables summarizing context details including features, stratigraphy, and finds. Now, in the 21st century excavation reports contain more data with more specialist reports, but follow the same format, without relic tables" (Structure of a report [Rule 31] Unesco Reporting Guidelines, in Maarleveld 2011).

The format of the publications that do appear, either as reports or monograph series, has likewise come under criticism variously as unnecessarily dense, characterized by unreadable prose, and fragmented with specialist reports pushed into appendices or separate volumes (Bradley 2006). The format for the presentation of primary data, a task which is heavily descriptive by nature, and is often executed in a strictly pro forma style encouraged by strong disciplinary norms or professional societies whose guidance leaves little scope for creativity, only increases the problems identified above. This discourse was picked up later by Perry and Morgan, who in the MAD Project undertook the excavation of a hard drive and in writing up the results comment on the current state of site reports but also their necessity, "These reports are usually articulated in coded language, primarily only comprehensible to experts and written in the passive tense. There is much to be critiqued about both the style and the legacy of such reporting, and we note with some despair the lack of progress over the years in rethinking its dimensions ..." (Perry and Morgan 2014).

Given that it benefits scholars and professionals to publish, and indeed it is mandated for excavators working in many Western countries, and given the existence of extensive guidance on both content and style, we must ask why accessible excavation reports and monographs seem to continue to be such a struggle to produce. We suggest, as have others, that the difficulty emerges at least in part from disjunctures between the character of contemporary archaeological data, the aims of the excavation report or monograph, and their expected format.

The UNESCO guide, in acknowledging the essentially 19th century format of excavation publications and at the same time noting that the amount of data needing publication has greatly increased, hits on the first disjuncture. The greatly increased amount of data and variety of types of data makes the exhaustive publication of a large excavation archive in a traditional format an overwhelming task for the authors (Thomas 1991; McCarthy et al. 1992; Hodder 1989). While relatively small catalogs and tables of data in print form are readable and digestible, in larger quantities, this information also becomes awkward for the reader to consume (Aitchison 2010). Summary charts and graphics are widely used by specialists to get around this problem, together with the selection of exemplar artifacts. While this is effective to an extent, the approach remains limited for larger projects. The aim of these publications is, first, to present primary archaeological data, and second, to provide a compelling interpretation of that data. The sheer quantity of data creates problems with the first aim, and the space taken up by the data presentation can easily obscure the useful interpretive sections or the links between the data and the interpretation, making achieving the second aim more difficult.

The challenges of balancing the desire for full publication with the expense and difficulty of publishing large archives were recognized in the 1970s, as noted in the Frere Report (1975). This report advocated four levels of recording,

appropriate to different situations, and a division between archive or database from publication, which was widely viewed as a pragmatic solution. This proposed solution, however, was not entirely satisfactory, and the Frere report was followed by the Cunliffe Report (1983), which drew attention to the subsequent problems of re-use of the divided archives and reports. Further criticisms were raised, e.g. by Hodder (1989), of the divide between description and interpretation, which he likewise saw as creating a barrier for re-interpretation and data re-use. The desire for greater integration of description and interpretation, and an emphasis on synthesis is likewise reflected in the PUNS Report (Jones et al. 2001; Jones et al. 2003) and in Bradley (2006), which also criticize the separation between reports on stratigraphy, specialist reports, and discussion as making the conclusions drawn difficult to critique. Many of these same issues were taken up by the CIfA/HE Workshop “Challenges for archaeological publication in a digital age” in 2017 (Wills 2017).

Following the thread of this discussion, spooled out over fifty years, the current tasks are to retain the benefits of the archive—interpretive-narrative divide, while providing enough connections to facilitate re-interpretation and re-use of archival data, and to produce more synthetic and clearly written narratives. Several publications starting from the early 2000s can be highlighted as efforts in this direction. These exceptions to the picture of traditionalist publications (e.g. Given and Knapp 2003; Mickel 2013; Tringham and Stvanović 2012) share some characteristics in their format, including an emphasis on visual design, some experimentation with the style of the narrative, inclusion of digital components, and a move away from the suggested pro forma structure and categories of information. In order to continue to pursue the reimagining of the excavation report or monograph in a digital context, we turn to the broader changes in scholarly humanities publications, which have accelerated since the 2000s under the Digital Humanities banner.

Looking Outward: Scholarly Publishing, Digital Humanities and New Media

There is a wide-ranging conversation within the Digital Humanities community about the impact of digital media and writing for the web on scholarly communication, and the scholarly monograph in particular (e.g. Earley-Spadoni 2017; Dougherty and Nawrotzki 2013). *Writing History in the Digital Age* (Dougherty and Nawrotzki 2013) discusses the impact of digital media on scholarly writing for historians. Scholars in media studies have emphasized the role of digital media in promoting multimodal publications. In *Writing with Sound: Composing Multimodal, Long-Form Scholarship* (Sayers 2012) the author discusses the creation of multimodal publications in SCALAR. The popularity of platforms like SCALAR and Omeka attest to the broad community of scholars working and experimenting in the format of digital publication. These communities are explicitly discussing the approach we (and some of them) have taken, merging the publication of narrative, database and archive. The Database | Narrative | Archive publication explicitly reflects on multiple attempts to stitch these components together. They rely on the concepts of transmedia storytelling and database narrative (conceptually linked to Gabii's data narrative) to explore new modes of presentation. The introduction, written in 2013, explains that the contributors to the volume are “investigating and addressing critical,

conceptual, and creative questions at the heart of contemporary nonlinear storytelling in this formative era of the Web, while underlining connectivity and historical resonances with earlier media forms and texts.” While we are working within the Fulcrum platform through our collaboration with the University of Michigan Press, the basic issues remain the same. These platforms provide the sandbox in which we can experiment with the form of publication, but they do not define the new structures or conventions for mixing and presenting text, media and data.

The new structures and conventions needed to bring the monograph into the ‘digital age’ are the subject of several long running projects. JSTOR's ‘Reimagining the Digital Monograph’ project (Humphreys et al. 2017) has been the impetus for much discussion in recent years. Their ‘topographic’ tool essentially supports the ‘productive skimming’ we describe as a primary mode of engagement for academic readers approaching an excavation monograph. This mode of reading is commented on by the 2012 JISC survey on the role of the monograph (OAPEN 2015) highlighting the need to support skimming as a reading mode, and to create bridges between skimming and deeper reading. In the UK context, the AHRC funded ‘The Academic Book of the Future’ Project (Lyons and Reyner 2016; Deegan 2017; Jubb 2017) plays a similar role in drawing together the current discourse and stimulating further discussion on the direction of academic publications, with a particular emphasis on the impact of digital media in a range of formats.

As asked in the context of the Mellon funded symposium on digital publication in the humanities, and Mellon's broad effort to reimagine scholarly communication in the humanities: “What features define the quality of scholarly argument? If the monograph is increasingly being challenged as a viable component of systems of scholarly communications, what other genres are needed to disseminate knowledge in the humanities?” Moreover, as John Maxwell of Simon Fraser University observed in response to a request to review Mellon's approach to this complicated system, “the inward-facing importance of the monograph as a credential has often overshadowed the outward-facing features of the monograph, which are intended to promulgate broad understanding of humanities research” (Waters 2016). If the emphasis for the new monograph is placed more heavily on promoting broad understandings, it is worth looking at parallel approaches to communication developed in contexts such as museums and explicitly ‘public humanities’ projects.

Looking Outward: Public Engagement and Academic Publishing

In the context of ‘public archaeology’ there are a growing number of high quality presentations of archaeological materials and reports from excavations that take advantage of digital media to present the site for a variety of audiences, emphasizing communication and promoting understanding over presenting an academic facade. As an example of the genre, we can point to a publication of the SERF Hillforts project (<http://www.seriousanimation.com/hillforts/>) which describes itself as a ‘digital engagement’ and a web app. The introduction to this project states,

Archaeological visualisation, or the act of picturing the past in the present, is a complex area of research which exists at the

convergence of evidence, interpretation, scientific data collection and artfully crafted storytelling. It is a process which at its core relies on a personal engagement between practitioner, practice and the archaeological record. Traditional modes of representation ask for visuals which embody a somewhat conclusive and didactic voice. How then might we use visualisation to better reflect the fluidity of the interpretive process and engage audiences more meaningfully with the ways in which the excavated evidence challenges archaeologists?

This work aims to develop creative methodologies and outputs which more accurately reflect the multi-layered, multi-vocal and ambiguous processes involved in archaeological interpretation. The interface demonstrates the possibilities for bringing together a range of visual digital media (photogrammetry, aerial photography, RCAHMS survey data, 3D reconstruction, film-making) to open up the processes behind the excavation and interpretation to a general audience and act as a dynamic archive now that the excavations have concluded. (SERF Hillforts Project 2018)

Clearly the authors are addressing the same issues at hand in our work, as discussed in this article. Is the difference merely a matter of what we choose to call the product? We have chosen to publish the Gabii Project Reports with an academic press, giving an ISBN to the digital volume and DOIs to individual data elements, to highlight our contention that this digital archaeology report is a scholarly work. Is this imprimatur of the ability to be cited an important differentiator between a work that is primarily scholarly and one primarily intended for public engagement? Is there an implied level of synthesis, inclusion of comparanda, and interpretation required to move from ‘digital engagement’ to ‘digital scholarship,’ or is it a matter of including certain elements or following specific conventions of form? We suggest that the main difference is one of stated intended audience, and that there is much overlap in the actual elements included and means of interaction provided in public facing and scholarly digital publications. We also highlight the importance of a reference that can be persistently cited, in this case the DOIs for data elements and an ISBN for the volume. Stable citations play a key role in the process of academic scholarship and publication, particularly over the long term, and the non-persistence or instability of many digital projects is often cited as a danger, leading to a push for replication of digital projects into print, PDF or other media deemed more likely to remain accessible.

The SERF Hillforts project publication provides a number of means of engagement with their materials. It uses a conventional form for the majority of the text, which appear as PDF site reports, both annual and specialist. The project focuses on visualizations as an alternative mode of engagement, with a carefully designed interactive 3D interface. The stated aim to “more accurately reflect the multi-layered, multi-vocal and ambiguous processes involved in archaeological interpretation” is one our project, and many scholarly publications, share. Given shared aims and common structural elements, continued cross-fertilization between digital public engagement projects and digital scholarship should provide the impetus for innovation in both domains.

Public engagement, open access and economics

Strengthening connections between writing for public and scholarly audiences is not without challenges, and questions of audience inevitably raise issues related to cost. At present the introduction to the text in *A Mid-Republican House* and the data itself are freely available, while the ‘scholarly’ layers

of text are available for purchase. If we are to truly encourage the public to engage across all the layers of the text, we must consider the price point of these products. We see the questions of open access and public engagement as closely linked to one another, and at the heart of an ongoing debate about the financial structure behind the publication of scholarly digital long form works.

The need for a new financial structure for digital scholarship and the often high barrier to entry created by the cost of scholarly books has been addressed in recent reports on the state of publication in the humanities. At one extreme, Elliot (2015) supports the view that a move to University funded open access publication is the way forward for the digital monograph.

We are endorsing a model of university-funded publication that results in an open access digital publication, as well as a print-on-demand physical product sold for an appropriate list price. We are aware that several university presses are currently developing an infrastructure (often supported, it seems, by Mellon Foundation resources) for digital publication. We have followed these developments carefully and find them encouraging. If a model of university-funded publication is to succeed, there must be a variety of presses that have the capacity and the willingness to participate in such a program. One of the values that a university press brings is its ability to cultivate and market specialized lists of authors and titles in particular fields, and faculty will continue to seek those presses that can place their scholarship in an appropriate intellectual network. (Elliot 2015)

The case put forward by Elliot is one many academics and members of the public may agree with in principle, but the question ‘who really pays?’ within this scenario still requires an answer. A parallel report notes that, “in a recently published Mellon-funded study, the university presses at Indiana and Michigan put the average costs respectively at \$26,700 and \$27,600 ... The study reports average costs ranging from \$30,000 per book for the group of the smallest university presses to more than \$49,000 per book for the group of the largest presses” (Hilton et al. 2015).

In parallel, in the UK the REF, which has a strong influence on academic publication strategies, is increasingly requiring open access publication in order for a work to qualify for submission. While this does not yet extend to monographs (but will from 2027 according to current guidance), there is a growing culture of open access publication as a gold standard, and some scholars and institutions have begun to push for open access monographs. In response, presses are increasingly charging fees on the order of £10,000 to offset lost revenues. The situation raises a number of questions: “How are these costs to be afforded in a new regime of long-form monographic publishing, with growing pressure for open access? Can the need to advance scholarship be reconciled with the need to drive down the costs of both monograph and other long-form publication to affordable levels” (Waters 2016)? This discussion is also relevant in the context of reports for developer-led archaeological projects, as the profession considers the cost and effort of producing excavation reports, in balance with the imperative to inform and engage the public. In both the academic and professional communities, the financial questions are crucial because of their impact on the ability and willingness of authors, managers, and publishers to experiment with new digital publication formats.

Further, and as noted by Hilton and colleagues (2015) the above, “are costs for monograph publication only; the costs of

innovative long-form genres that are non-linear, data-intensive, or multimedia rich are still not yet well understood” (Waters 2016). The implication of this last statement is that, “non-linear, data-intensive, or multimedia rich” digital publications are likely to be particularly costly, and consequently are seen as higher risk projects and less publishable. In the case of *A Mid-Republican House*, which actively experimented with the form of the publication, the Gabii Project and University of Michigan Press were fortunate to receive support from the National Endowment for the Humanities, the Mellon Foundation, and the University of Michigan to defray some of the costs of developing the publication and its platform. This situation, however, must be the exception when considering a widespread shift in the form of publications across projects at varying scales, with substantially lower production costs for most projects. For example, in Elliot’s suggested scheme, authors and publishers may elect to split the content for a digital project into two parts, “Long-form scholarship published digitally with a strong resemblance to print monographs, and then a separate supplement with materials that do not fit into a format that mirrors print publication” (type 2 in the Elliot 2015 classification of forms of digital scholarship). This split allows for part of the project to be completed following established publication workflows, reducing cost and risk. In parallel, the community may coalesce around a limited set of platforms that have been developed and are maintained through the efforts of a few projects, shared on an open access basis.

The discussion in this section has focused on the costs of producing digital publications. The cost of the preservation of a complex digital publication, both in the archival sense and as a functioning accessible product, likewise must be considered when discussing the economics of producing digital excavation reports. The issues surrounding archiving digital data have been well and repeatedly rehearsed (e.g. Faniel et al. 2013; Jeffrey 2012; Kansa et al. 2013; Kansa 2016), covering the creation of appropriate metadata, the selection of stable and open formats, and the costs of producing and maintaining community archives. In one sense, the archiving of a complex digital publication like *A Mid-Republican House* falls well within the scope of current good practice, as the component parts of publication exist in archive-friendly formats. Preserving and maintaining a ‘live’ version of the interface presents a greater challenge, and one that should be met if we are to succeed in making the interface and interactive format of the publication integral to its character and to the way in which the narrative and interpretation are constructed. The archiving of digital interfaces has seen less attention, and this topic, we argue, should be collectively addressed by creators of digital projects, archivists and librarians. Beyond eventual archiving, the maintenance of a ‘live’ version of a digital project that depends on rapidly changing technologies requires careful negotiation and commitments from both publishers and authors. Planning for future forward migrations of the technological platform and interface at the moment of contract negotiation may provide one route forward. These challenges are not insurmountable, but will require discussion and change across the entire scholarly publishing system.

Considering the costs and benefits of production, maintenance, and archiving, at a community scale a balance must be struck between developing a new excavation report format that will not be prohibitively costly or complex to

produce for most projects, while recognizing the limitations imposed by approaches like the ‘digital supplement’ and encouraging experimentation with and development of more interactive multimedia platforms. For *A Mid-Republican House* we have elected to pursue a format not suitable for print publication in order to keep the interactive 3D models, active links, and searchable database integral to the written work. This approach was pursued because of the conviction that if we produced a ‘digital supplement’ work that separates the main text from the online content, we would risk the online-only material becoming inherently undervalued and accessory. The ‘digital supplement’ approach to publication also forbids, to a great extent, strong or dense connections between the text and other components of the publication, a real detraction if we wish both to enforce links between data and interpretation, as suggested by Dallas (2015) and Huggett (2015) and to encourage contextualized data reuse (Faniel 2013) to form new interpretations and understandings. Thus while acknowledging the costs, in developing a publication that is more reliant on its digital format, we attempted to tightly integrate various components of digital scholarship, e.g. databases, visualizations, and interactive archives, into the excavation report in its digital form, with the intention to add value through the enhanced ability to communicate the archaeological story of a part of the town of Gabii in direct connection to the evidence on which it is based.

Conclusions

This article discusses the experience of producing *A Mid-Republican House from Gabii* in the context of over twenty years of experiments and attempts to reform the excavation report within both developer-led and academic archaeology and a broad transformation in scholarly communication driven by increasingly data-embedded humanities scholarship, the emerging prioritization of public engagement, and the opportunities afforded by digital platforms. Our proposed contemporary excavation monograph format integrates several forms of scholarly and public-facing communication to create a digital product that reaches multiple audiences and serves both as a platform for data reuse and for communicating current interpretations. It wraps together data publication and archiving with primary publication, reflecting increased contemporary concern with responsible digital data practices. This form requires us to be flexible as readers and consumers of archaeological information. Many challenges remain in developing linked multi-layered texts and creative interfaces for prose, media, and data that simultaneously are works of rigorous scholarship and platforms for public engagement and future research. In grappling with these emerging digital forms, we see an opportunity to reinvigorate the publication and reading of archaeological excavations’ data and stories.

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