Collaborative Digital Publishing in Archaeology:
Data, Workflows, and Books in the Age of Logistics

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The last two decades have witnessed the regular use of the phrase “digital workflow.” As you might expect, the Google N-gram plot for this term looks like the proverbial hockey stick. The term “workflow” has its roots in the language of early 20th century scientific management, and the notion of “digital workflow” appears to have first emerged at the turn of the 21st century in the field of publishing. In this context, the use of computer technology in the production of print media required a new way of organizing practice and spawned a series of “how to” style books. A similar response has occurred in early 21st century archaeology with the spread of digital tools, technologies, and practices giving rise to a distinctive place within archaeological methodology. Today, I’d like to think a bit about workflow in the context of digital archaeology with special attention to archaeological publishing.

The paper has two impetus. [slide] One is a passage from an article by Michael Given in which he applies Ivan Illich’s idea of conviviality to an understanding of the premodern agricultural landscape of Cyprus (CAJ/28.1 (2018)). Illich proposed his idea of conviviality as a way to describe the creativity that arose from the fluid interaction and interdependence between individuals in the premodern world, and he articulated as a critique of an impoverished, isolated, and exhausted modern condition. Toward the end of his article, however, Given suggested that modern conviviality is not only possible, but necessary. Collaboration between archaeological specialists from soil scientists to ceramicists, bioarchaeologists, architectural historians, and field archaeologists
would produce a deeper understanding of the past convivial landscapes in which premodern Cypriots lived. My first reading of that passages was relatively uncharitable. Illich’s notion of conviviality was anti-modern and attempting to reconcile this idea with the specialized practice of archaeological work seemed as doomed to fail as the plantation style sugar works established by the Venetian colonizers on Cyprus’s south coast. If convivial relationships mapped the seamless sociability of premodern production, specialization and workflows created Frankenstein creatures which have the superficial appearance of reality, but are, in fact, mottled monsters of recombined fragments.

At the same time that I was thinking about Illich and Given, [slide] I read Anna Tsing’s work, the *Mushroom at the End of the World* and Deborah Cowen’s work on logistics, *The Deadly Life of Logistics*. Both books, in their own ways, describe the fluid of movement of people, things, and capital around the world. They explore the tension between the local and the global, places and movement, and the Deluezian “dividual” and the Enlightenment individual. While Cowen’s work is, as the title suggests, practical and pessimistic in tone, Tsing’s work offers the rhizomic world of the matsutake mushroom holding forth the “possibilities of life in capitalist ruins.” She draws freely (and playfully) upon Deleuze and Guttari’s ideas of deterritorialization and flow adding a new conceptual layer to the idea of workflow. While I dread bringing too much theory to this paper, I do think that Deleuze and Guttari offer a way to understand Given’s use of conviviality as a rather radical way to conceptualize the reterritorialization (and perhaps the recoding) of modern archaeological knowledge making. My paper today will swing back and forth between these two poles and offer both a critique of archaeological practice as well as some more optimistic reflections on why maybe Michael Given was right (and maybe I knew that all along) and convivial social practices in archaeology are possible, even in our digital age.

At the risk of being solipsistic or self-referential, I’d like to ground some of
my paper in my experiences running a small press, [slide] The Digital Press at the University of North Dakota, which I co-founded about five years ago [slide]. Part of the goal of starting this press was to think about the role of publishing in the larger academic and intellectual process. [slide] Our first book was, appropriately, *Punk Archaeology* (2014) and as much as a test case in DIY (digital) book making (albeit under the watchful eye of the experienced publisher, Andrew Reinhard) as it was a kind of anti-manifesto of punk practice in archaeology. Since that time, [slide] my little press has published over a dozen books on topics ranging from digital practices in archaeological field work to the historical and cultural significance of Colin Kaepernick’s protests. At present, we have in various stages of production, a 21st century archaeological autobiography, a 3D catalogue of digitally scanned votive objects from Athienou on Cyprus, and the republication with critical updates of a 1958 report on the social conditions in the Bakken oil patch in North Dakota. Each of these books has a discrete workflow both before and after it lands on my desk at the press.

In field archaeology, projects tend to distinguish between fieldwork and lab work, data collecting and analysis, research and writing, with various degrees of separation. [slide] Most projects also distinguish between writing and submitting a manuscript and the formal process of publication. The final division between the manuscript and the published volume tends to be among the most formal with the publishing process neatly separated from the research and writing by its own set of professional methods, standards, and credentials. The professionalization of publishing has led, in part, to its important role as a mediator in the hiring, tenure, and promotion processes on many campuses as well as its development as a multi-billion-dollar industry. [slide] The relatively autonomy of the publication process allows us to describe it as a kind of “black box” in a Latourian sense that certain basic assumption about the publishing—from the role of the publisher and editor in peer review to the mechanics of typesetting, distribution, and marketing—have escaped a certain amount of
critical scrutiny and exist, to some extent, outside of the traditional definitions of
the knowledge making process.

My experiences as an archaeologists, author, and publisher have led me to
become interested in the way in which our increasingly digital workflow has
come to shape the relationship between the various stages of archaeological
knowledge making. I am not the first to think about these things, of course, but
I’m hoping that my focus on workflow can offer one view of how digital culture
and practices might change the structure of academic work.

[slide] The prevalence of the concept of workflow in digital publishing and
archaeology highlights the growing fluidity in how digital data of all kinds move
through our academic ecosystem. The liquidity of this workflow shapes the basic
character of digital data. Data is fragmented across scale into bits, packets,
objects, bundles, files, and various other terms in order to allow it to flow more
easily between devices, across platforms, through the multitude of tubes that
make up the internet and between the various processes that constitute digital
practice.

The celebrated potential of interoperability of fragmented digital
archaeological data both facilitates the flow of information between individuals,
teams, and projects and also negotiates the tensions between the contextual
nature of most archaeological knowledge and the importance of area specialists
who produce discrete data sets that must have defined relationships with other
archaeological datasets to preserve context. Digital technology increasingly
produces and mediates the relationship between these data sets. This technology,
in turn, shapes practices which, in turn, influences the organization of
archaeology on the ground and as a discipline.

[slide] Efforts to understand the interaction of tools and practices—the digital
habitus of archaeological work—has prompted a valuable range of auto-
ethnographic reflections and observations sometimes framed as methodological
interventions, sometimes as reflexive practice, and sometimes as simply
description of procedure. There also exists a small but growing body of systematic ethnographic studies of behavior conducted by Isto Huvila’s team in Sweden, by Sarah and Eric Kansa (and team), and Costis Dallas in various contexts (as well as the work by Matt Edgeworth on the ethnography of archaeological practice). These approaches, however, have rarely extended their critique of digital practices from archaeological work to publishing. It is worth noting one prominent exception: Rachel Opitz’s recent work on the intersection of archaeological genres, digital publishing, and data rich humanities scholarship based on her experiences working to produce *A Mid-Republican House from Gabii*. Opitz’s work, so far, has not considered in a sustained way on how the interplay between archaeological practices in the field and digital publishing will shape the discipline.

As numerous scholars have demonstrated, workflows look to erode obstacles to their path in the name of efficiency. The entire conceptual framework of logistics involves removing barriers to movement and the distributed production of value. Efforts to promote this in an archaeological context involves standardization that ensure that archaeological tools and data can relate to each other in consistent and predictable ways. Standardization and fragmentation also promote a kind of modularity of archaeological knowledge that supports interoperability and reuse.

[slide] While it is clear that certain forms of archaeological knowledge defy standardization—like narrative, analytical, and interpretative texts—and resist interoperability across scale and platforms (indexing, for example, remains more of an art than a science, the reuse of archaeological data between projects, is, at present, less of a technological barrier than a social and professional one, as the Kansas’ have consistently demonstrated. Grants, professional organizations, and institutions have only recent come to regard the work to archive, much less publish, archaeological data as a key responsibility in the discipline. The growing insistence on archaeological data plans for major grants and the recognition of digital work and publication by professional organizations demonstrate that a
shift is taking place, but it's difficult to anticipate the rate at which these top
down protocols will shape practice in the field. More than that, this emphasis
reveals the changing landscape of archaeological publishing as data, both in the
field and as a research output, has become as much the product of archaeological
work as traditional reports and monographs.

[slide] In effect, the emphasis on the efficiency and interoperability of the
fragmented data within the archaeological workflow has transformed how
archaeologists understand the output of our work. Just as the emphasis on
logistics and flow has demonstrated that these processes produce value, the
attentiveness to workflow within archaeological practice demonstrates the value
of interoperable data within and between projects. This has created some
interesting professional complications ranging from the ethics behind sharing or
publishing the 3D images of human bones, to the challenges associated with
evaluating the accuracy of 3D models and the limits to their use. New
technologies, as almost always, introduce new challenges for archaeologists
which often require social and disciplinary decisions rather than technological
solutions.

The value assigned to data produced at various stages of archaeological work
has challenged the basic assumptions which support the organization of field
work. [slide] Traditionally, archaeologists have modeled their work on industrial
practices where authority typically followed a clear hierarchy, although
significant variation exists, of course, between projects, circumstances, and
national contexts. In an overly simplified form, archaeological responsibilities
and tasks define the roles of project directors, field directors, trench or team
leaders, and diggers. This division of labor is designed, at least on one level, to
facilitate efficient archaeological work and to produce specialized, accurate, and
precise data. This form of organization allows for control over a project’s
outcomes and the knowledge making process. The formal definition of the site
and the recognition that archaeological work involved embodied knowledge
reinforced the spatiality of the discipline and field work. The long-standing concern for provenience, for example, and the location of the physical archives of a site in a dig house or storeroom near the site’s location further reinforce the connection between space and archaeological knowledge. The connection between the hierarchy of archaeological knowledge making and the spatiality of archaeological place evokes the factory floor and the processes of enclosure that defined regimes of control during the modern era. The flatter less hierarchical universe of logistics and the flow of data, in contrast, breaks down the barrier of space, enclosure, and hierarchy allowing for more decentered engagement with knowledge.

[slide] Of course, this conceptualization of archaeological work has found compelling support among the digital and non-digital alike over the past 30 years. Shanks and McGuire argued that archaeology should embrace its roots in craft practices as a way to challenge the industrial modes of archaeological knowledge making. McGuire’s radical efforts to create more a egalitarian and democratized archaeology, with the Colorado Coal Field War Project, demonstrated the potential of such an approach in practice (Walker and Saitta 2002). A few radical projects in the U.K. have likewise sought to introduce democratic processes to field work (the Sedgeford Historical and Archaeological Research Project (Faulkner 2000, 2009) cited by Morgan and Eddisford 2018). While these projects remain outliers, they demonstrate that the social organization of archaeological practice remains a topic of discussion and, to a lesser extent, experimentation for archaeologists. Morgan and Eddisford (2018) have suggested that single context recording represents a far more decentralized and even anarchic method for producing archaeological knowledge. There is likely more variation as well; Mary Leighton has argued that a certain amount of “black boxing” in archaeological practice masks a diversity of practices that are both more and less hierarchical than the formally reported results might suggest.

The intersection of field practices and digital technology create an environment where the growing interest in workflow and logistics in
archaeological knowledge making traces a scholarly trajectory that understands the movement, use, and reuse of data in a digital medium as a key element to transforming the institutional landscape of the discipline. [slide] Linked open data standards, for example, have established protocols that promote the integration of data from multiple projects, datasets, and individuals. This parallels a growing interest in ways to standardize data collection in the name of efficiency and regularity from the field. In effect, digital practices in archaeology have streamlined the ability to produce and even disseminate data directly from the field, although some curation of this data is clearly preferable. [slide] Our ability, however, to publish data through platforms like Open Context demonstrates how the fluidity of the contemporary workflow is already challenging the barriers between fieldwork and publishing. There is something complementary between the often radical challenges to archaeological work as hierarchical and value of the archaeological data in decentralized workflow.

[slide] The Digital Press fits into the space created from the growing interest in digital workflow and its impact of the social organization of disciplinary practice within archaeology. Our current publishing model is fluid, but follows certain relatively consistent conventions. First, we use digital tools to produce and distribute our books at a low-cost using print-on-demand printing for paper books, we distribute also through PDF downloads on a low-cost website running Wordpress, and finally, we archive our books at UND’s (and our authors’) institutional repository and the Internet Archive. Second, we publish mainly under various open access licenses. Finally and most importantly for this paper, we strive to collaborate closely with authors on all aspects of a publishing process. While none of these things are particularly radical or innovative, we feel like we’re harnessing the flow of the digital world and territorializing it as a conventional and familiar looking book. The involvement of archaeologists in the production of publishable data at the edge of the trench opens the door to a more dynamic model of archaeological publishing.
[slide] The Digital Press is almost entirely run by academics who lay out manuscripts, prepare marketing materials, use their own and their colleagues’ social media reach to promote the books, and manage acquisition, peer review, and copy editing. We even try our hand at cover design (with varying results). Our ability to perform these functions is possible largely because the basic publishing tools common to most presses - Adobe InDesign, the PDF format, Adobe illustrator - are available for relatively minor costs and they are increasingly simple to use. It is now possible to link descriptive text to discrete pieces of archaeological data, to create familiar and portable media rich documents, and to produce and archive these digital objects easily. In short, the development of digital infrastructure allows archaeologists to extend their workflow from trench side to final publication while remaining involved in all aspects of knowledge making. To be clear, my work at The Digital Press does not, necessarily, emphasize the creation of standardized, linked data, or even the kind of interoperable data the flows freely across the discipline. Instead, it leverages the breakdown of certain barriers present within the discipline, particularly between research and publishing, to expand the process of knowledge making and complicate the traditional black boxing of the publication process.

Conclusion

[slide] To conclude, The Digital Press - and digital publishing practices in archaeology (and I’d propose in academia more broadly) - offers at least one way to think about the tension between the fragmenting of digital archaeological data and social practices at the core of knowledge making. The collaborative environment made possible by digital technology is not grounded simply in the relative ease of using mainstream professional design tools, but in the transformation of archaeological workflow. Following the fragments of digital knowledge along the rhizomic streams connecting field practices to final publications disrupts some of the traditional forms of organization that define archaeological work. The ease with which objects, human remains, and even
buildings can move through digital media demonstrates, at some level, how
digital workflows can transform the social and disciplinary limits on
archaeological practice. This work to reterritorialize the digital workflows goes
beyond producing a digital object with the familiar form of a book and extends
to attempting to re-create the convivial spaces of premodern craft in an effort to
wrest archaeological knowledge from the flow of fragmented data. In the end,
the Digital Press aspires to offer a critical model for digital archaeology by both
unpacking by the black box of publishing and creating a new, digitally mediated
model for the production and dissemination of archaeological knowledge.
Collaborative Digital Publishing in Archaeology

Data Workflows, and Books in the Age of Logistics
More widely, projects need to study their particular places with a wide range of disciplinary specialists, who will walk and talk through the different players, roles, connections, dependencies, symbioses, tensions, co-productions and assemblages—both the ones which tend to increase conviviality and those which reduce it. Engaging with all of these approaches and perspectives requires the willingness to cross disciplinary boundaries into difficult zones, and to enact the conviviality ourselves through professional collaboration.

Conviviality and the Life of Soil

Michael Given
Gilles Deleuze, *October* 59 (1992), p. 5

We no longer find ourselves dealing with the mass/individual pair. Individuals have become “dividuals,” and masses, samples, data, markets, or “banks.”
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PUNK ARCHAEOLOGY
321 Lamar
This is another Renewed House
Near consisting of 321 and
320 with 320 key access
and 321 door

Door is traditional lamellar
Door with granite threshold
transom window now replaced
Interior of door has wood
Door awn but door closer
bad looks run. Exterior
Door has name plate.

* Swall has 3 book lavender
hat rack, thermometer (may not
well) off conduct a 3 door stop. Pale green paint: 50G

* South door is well preserved
with a recent "Best" deadbolt
set above door knob. Looks
very recent ad door knob
might be original. On side of door a lot of

3-Port Electrical conduit to 2nd floor.
A 3 port receptacle box. A 3 power
Socket outlet fed by conduct

from west wall.

Incandescent bulbs on 5 wall
incandescent bulbs in a
bulletin board now removed.
Above then are 3, 3-M Brand
Command ships.

West wall - electrical conduit
leading to N wall, and of
2 square, 3 prong box. Window
with covered AC unit for
Windows. and with wood fill on
eighth side. Is perimeter.

Window frame is broken and can

be good cond fron

Desk in NW corner facing
W wall. Steelcase brand. Under
Box code: 6 drawers and
Phone Pulitzer on both sides
Pencil draw contains thumb tacks
header board.
Project

Western Argolid Regional Project

An interdisciplinary project to investigate all periods of human activity in the western Argolid; under the aegis of the Canadian Institute in Greece and the Hellenic Ministry of Culture.

Suggested Citation

Project

Pyla-Koutsopetria Archaeological Project I: Pedestrian Survey

Pedestrian survey near Pyla, on the southern coast of Cyprus

Project Abstract
The dataset collected by the Pyla-Koutsopetria Archaeological Project (PKAP) documents fieldwork that began in the summer of 2004 near the modern village of Pyla on the southern coast of Cyprus. Over seven field seasons, PKAP teams documented the coastal zone of Pyla using intensive pedestrian survey. We systematically sampled 100 ha in
The Digital Press at the University of North Dakota publishes high quality peer-reviewed and popular books. It uses digital and print-on-demand technologies to publish timely works in the digital humanities, broadly conceived. Whenever possible, we produce open access, digital publications, that can attract local and global audiences.

Epoiesen: A Journal for Creative Engagement in History and Archaeology

Volume 2 (2019): FREE Download | Buy on Amazon ($10)
Volume 1 (2018): FREE Download | Buy on Amazon ($6)
Visit on the Web

Epoiesen (εποιέσαι) – made – is a journal for exploring creative engagement with the past, especially through digital means. It publishes primarily what might be thought of as “paradata” or artist’s statements that accompany playful and unfamiliar forms of singing the past into existence.

What have you made? What will you make? This journal, in its online home, makes space to valorize and recognize the scholarly ways of knowing that are expressed well beyond the text. Bill White reminds us why society allows archaeologists to exist in the first place.
Maxwell Anderson

Today marks the anniversary of the death of playwright Maxwell Anderson, who died in 1940. He was one of the most important American playwrights of the twentieth century.

Born in 1888, Anderson spent his first three years on a farm near Adams, Pennsylvania. The family moved to Jameson in 1889, where Anderson graduated from high school. He then attended UND where he joined nearly every club related to writing and drama. For money, he waited tables and worked the night copy desk of The Grand Forks Herald.

After taking his B.A. in English Literature, Anderson moved to Minneapollis, where he was the high school principal and an English teacher. He was an ardent pacifist, and two years later he was tried for protesting World War I in front of his students. Later he moved to Palo Alto, California, to get his Master's degree from Stanford University. He eventually became chair of the English Department at Whittier College near Los Angeles, but was fired again for making public statements on behalf of a student seeking conscientious objector status.

Anderson decided it was time to get into a different business—newspaper reporting. He worked for several papers in San Francisco and New York, and then began a different calling—he penned his first play, Where Desire, in 1919. He enjoyed only twelve performances, but it won the attention of Lawrence Stallings, a reviewer for the New York World, and the two collaborated on a war comedy, What Price Glory? It was a giant hit and had a run of more than 400 performances. Anderson quit the newspaper business and went into writing plays full-time.

In the next few years Anderson wrote, among many others, Elizabeth the Queen, Mary of Scotland, Aye Larga, and Anne of a Thousand Days. In 1931, his play, Both Your Houses, won the Pulitzer Prize. He also won the first Annual New York Critics Circle Award for Whistler in 1935 and again for High Tor in 1939. He also wrote radio shows and collaborated on screenplays for movies like All Quiet on the Western Front and Devil Take a Holiday.

During the 75th anniversary of the founding of UND in 1938, Anderson was conferred as a Doctor of Humanities. He was too ill to attend, but he wrote a letter saying the university had been there for him when he needed it, saying “If I hadn’t gone to the university, I might have been an embittered and discrimate hater. forever, or stonekeeper. I’d have gone no further.”

Maxwell Anderson died the following year after having a stroke. He may have lost his health because of his work, but his words have forever tricked his place in history.

Merry Helno