

The Consequences of Framing Digital Humanities Tools as Easy to Use

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ABSTRACT

This article examines the recurring ways in which some of the most popular DH tools are presented as easy to use. It argues that attempts to couch powerful tools in what is often false familiarity, directly undermines the goal of encouraging scholarly innovation and risk taking. The consequences of framing digital tools as either easy or more difficult shapes the relationship between librarians and the students and faculty whose research they support, and, more broadly, the role and viability of libraries as spaces devoted to skill acquisition.

Keywords: infrastructure, digital humanities, DH tools, DH pedagogy

A digital humanities librarian provides consultations to researchers who are developing or struggling with DH projects. Frequently, these consultations begin with the researcher apologizing and explaining to the librarian their poor aptitude for digital humanities. In many cases, these researchers' prior experience includes a referral to one or more digital humanities tools that have been branded as user-friendly/easy to use.

At first, it can look as though this phenomenon is chiefly the result of language and rhetoric used to frame various DH tools — a component influenced by the software industry's move towards graphical user interfaces and marketing software for everyone to use, whether in the workplace or at home, regardless of gender, age, or other factors that affect digital tools. That language remains the article's primary focus. However, the issue is not simply tool-framing language. The taglines and framing in tool

documentation are the most visible and stable form, as opposed to more ephemeral instances of language in LibGuides, promotional materials, and workshops and conversations at conferences. Researchers are encountering and struggling with an approach to DH growth and expansion that substantially relies on marketing aspects of DH research as easy. In other words, this article explores the way that our framing for DH tools and resources shapes researchers' emotions and expectations. Sociologist Susan Leigh Star examined "the work behind the work" in scientific research contexts, meaning "the countless, taken-for-granted and often dismissed practices of assistants, technicians, and students that made scientific breakthroughs possible" (Timmermans 2016, 1). The infrastructure set-up for digital humanities, and the pressures that it places on students, serve as a parallel area of hidden work that can be illuminated.

Despite the presence of "easiness" rhetoric in multiple contexts, tool presentation language is often the most concrete example that is available for analysis. Tool presentation language is the material that constitutes users' introduction to the tool — usually the front page of a website, the about page, and any promotional videos — the materials that create a tool's reputation. Instead of residing in a particular tool, or the tool creators' choices, this is a problem within the design of the larger field of the digital humanities, a problem that can remain largely invisible. Recent efforts in library and DH scholarship have focused on illuminating work in digital humanities that tends to go unseen (Shirazi 2016); by unpacking the challenges around tool framing, one can lay the ground for working with them more effectively.

Defining Easiness

Ease of use is one of the most desirable characteristics for any given tool — rivaled only in popularity by the quality of being free. It is not merely a digital humanities fascination — developers have been pursuing the creation of user-friendly graphical interfaces since the late 1960s. That pursuit has its own complex and continuing history, bound up in corporate rivalry and the outsized influence of certain tech leaders, such as Steve Jobs and his fascination with skeuomorphic design. As the tech industry has exerted influence on DH in many ways, it is unsurprising that DH tools have emulated this aspect of tech design.

Easiness can seem like an obvious goal for DH support practitioners and tool developers; it goes hand in hand with efforts to democratize the field and make learning and research opportunities more available, regardless of whether institutions have existing and active DH programs. The easier it is to do DH, the more people will try it out — an appealing prospect at a time when humanities departments are looking for ways of asserting their continuing relevance, reinventing themselves in response to cultural shifts, and working to demonstrate that they provide students with job-ready skills.

Easiness is attractive in part because it is powerful. The availability of easy-to-use tools shapes DH support infrastructure and affects how DH is incorporated into the classroom, in terms of how much time is needed to show students how to configure a tool and begin using it. For individual scholars developing projects, perceived ease or difficulty can be a deciding factor if there are multiple tools from which to choose and may determine whether the scholar decides to pursue the project at all. Transitioning to digital from conventional printed scholarship includes an adjustment to iterating through

multiple stages; and may involve multiple, modular outputs, such as datasets, websites, and processing workflows (Brown et. al. 2009, par. 7). The technical and scholarly ambitiousness of a particular project will intersect with each other. Depending on a scholar or team's prior experience, the impacts of this intersection may be hard to predict (Brown et. al. 2009, par. 6). The problem of unpredictable challenges is complicated further by the pressure researchers face to show their deliverables to colleagues who may be less accustomed to the ups and downs of iteration, but are still called to evaluate it, either for promotion or degree completion. While guidelines and articles from major disciplinary organizations (Modern Language Association 2012; Presner 2012; American Historical Association 2015) discussing the evaluation of digital scholarship acknowledge the iterative nature of digital work, it is harder for such guidelines to prepare colleagues for evaluating mid-stage outputs with aesthetics that may not match the sophistication of the various commercial websites that individuals encounter every day. All these factors contribute to making "easy" tools compelling.

Despite its considerable dazzle, easiness is an abstract and intangible quality; the promise of easiness, or an easy-to-use tool, is that some process (whether display, formatting, organization, or analysis) can be accomplished with minimal difficulty, confusion, or extra labor. When such processes are simplified, researchers feel more able to focus their learning on what they perceive as most relevant to their research question and intellectual work. In digital humanities, and in the context of technology generally, easiness is most likely to be associated with tools that are classified as "out-of-the-box," meaning that they do not require configuration or modification to work, or "off-the-shelf," meaning that they are standardized, rather than customized, and

intended for general audiences to be able to use. Because easiness is abstract, it can be taken as synonymous for other qualities, like speed (cf. various statements about accomplishing a process or analysis with “one click”). Though the variants on “easy” are common in tool branding, terms like “fast” and “simple” are regular alternatives. For many tools, it would be more accurate to say that they make a given process not easy, but *easier* than an alternative.

Easiness is subjective — what is easy for one user may not be for another. It is important to understand that easiness is subjective because it is situated and dependent upon other factors. These factors include the particular nature of the material being worked with (i.e., whether the material is text or image-based), and its condition (i.e., whether a dataset has been examined and normalized), as well as the availability (or lack) of training or experience that provides a user with relevant contextual knowledge. However, researchers may not see this situatedness clearly.

Finally, because easiness is both powerful and subjective, it is value-laden; and it carries a backlash for individuals who expect to find a process or tool to be easy yet discover the opposite. The backlash comes in part from researchers’ inexperience with the various interdependencies and situatedness of easiness — many of which are complexities of technological, academic, and library systems and infrastructure. Ideally, a researcher pushes past the backlash, and over time they gain familiarity and experience that help them make choices about their research project or their career with greater autonomy. Part of the reason that claims about easiness have such weight is that they inevitably tell us stories about the available infrastructure and its condition — whether or not there are opportunities to learn a particular skill (e.g., a coding

language), and how legible and genuine those opportunities appear to the audience for whom the tool is intended. As a result, scrutinizing easiness rhetoric can be helpful for librarians and administrators who are trying to get a clearer sense of their patrons' needs, or who want to think more critically about the type of support they are providing.

Examples of Easiness Framing

Easiness has become sufficiently important that in digital humanities LibGuides and tool bibliographies, it may be the first or second characteristic mentioned for any tool listed. A typical description might consist of one or two sentences explaining “[Tool] is free and easy to use and allows you to [process/visualize/analyze content].” This sort of description echoes the taglines and catchphrases associated with various tools. Besides Omeka and Scalar, there is Stanford’s Palladio (“Visualize complex historical data with ease.”), the Knight Lab’s TimelineJS (“Easy-to-make, beautiful timelines”) and JuxtaposeJS (“Easy-to-make frame comparisons”), CartoDB (“Maps for the web, made easy” – while this is no longer CartoDB’s official catchphrase, it is still widely visible in search results). Although qualities such as access, sustainability, and portability are significant concerns in DH, in examining libguides and other DH tool roundups, one sees that they are referenced far less than if a tool will be easy. The guide authors try to succinctly articulate what each tool is meant to do; what processes it speeds up, facilitates, or makes easier; and the language that is used to present its capabilities and its value to potential users.

In order to get a concrete sense of how this language appears, and the promises and assertions that tool framing makes, this article will examine three tools developed

specifically for DH use within the last ten years. The point of this examination is not to critique or accuse the tools – they are merely the most concrete and available examples of a more widespread ephemeral phenomenon that shows up not only in written contexts, but also in workshops, webinars, and casual conversations.

Omeka.net

Omeka was released by the Center for History and New Media at George Mason University in 2008, and it is intended for an audience of users in the galleries, libraries, archives, and museums (GLAM) sector, as well as anyone else wanting to build exhibits and collections online. It allows for the creation of multiple collections of items with metadata structured according to disciplinary or institutional schemas and standards. Users have the ability to follow widespread practices that will make their data interoperable, adjust those schemas to a local house style, or do a bit of each as needed. The sort of functionality that Omeka makes possible is available in software developed for the GLAM community but is often priced at an institutional level that puts it out of reach of individuals and the smallest institutions. This sort of software may be available as open-source and may require experienced tech support personnel to manage the back-end setup and ongoing maintenance. Since the initial release, the Omeka development team has worked to improve the tool's functionality and accessibility, both through the Omeka.net subscription service and by making it available as a "one-click install" through Internet service providers like Reclaim Hosting.

Omeka's contributions are remarkable, though hard to explain succinctly for audiences who are unfamiliar with the existing software contexts. Dan Cohen summarized it as "WordPress for your exhibits and collections" at the original release,

aiming at a description that would make it easy for people to describe the tool to others. Up until September 2017, Omeka.net featured a prominent tagline: “your online exhibit is one click away.” In its website redesign that tagline was replaced by a less exuberant description: Getting started is easy with Omeka with our hosted service.” The Omeka.org website continues marketing Omeka via Cohen’s original WordPress reference under the heading “Simple to use”: “Our ‘five-minute setup’ makes launching an online exhibition as easy as starting a blog. No code knowledge required.”

This rhetoric isn’t precisely mismatched, because Omeka does indeed allow users to start adding items and metadata right away. For those already versed in metadata standards and best practices, the main learning curve will involve getting accustomed to the interface. However, many digital humanists coming from departments such as English and History are unlikely to have received this training, and as such, face an additional and substantial learning curve, because there is more to a good Omeka exhibit than simply getting content onto the web. The Omeka.net documentation acknowledges this challenge in its Getting Started section, where it recommends that users plan out their content *before* building an Omeka website and refers them to Cohen & Rosenzweig’s *Digital History: A Guide to Gathering, Preserving, and Presenting the Past on the Web*. The Omeka.org documentation goes further, recommending that users sketch out wireframes of their site prior to building it. Both versions of Omeka encourage new users to explore the showcases of existing Omeka sites. But while Omeka may make building an exhibit as easy as blogging on a technical level, its framing is easily misunderstood by users who fail to anticipate the complex intellectual work required to produce a site that is ready to share publicly.

Scalar

Scalar is the creation of the Alliance for Networking and Visual Culture (ANVC) in association with Vectors Journal and the Institute for Multimedia Literacy at the University of Southern California. An open beta version was released in spring 2013, and the current version, Scalar 2.0, was released in late 2015. ANVC presents their work as “explor[ing] new forms of scholarly publishing aimed at easing the current economic crisis faced by many university presses while also serving as a model for media-rich digital publication,” and describes Scalar as a “key part” of this process, facilitating collaboration and material sharing between libraries, archives, scholarly societies and presses” (ANVC: About the Alliance n.d.). These partnerships have resulted in one of Scalar’s most unique features: the ability to add images and videos from organizations like the Shoah Foundation and the Internet Archive to a Scalar site by performing a keyword search, selecting results with a checkbox, and clicking a button to import them, along with any associated metadata. This entire process (including the optional step of editing individual item metadata) can be performed within the Scalar user interface. Once imported, users can select from a few different layouts available via a dropdown menu in order to emphasize text or media, or split the emphasis between the two (Scalar: Selecting a Page's Default View, n.d.).

The other feature that especially distinguishes Scalar from other CMSs is the structural freedom that it grants users. Where blogging platforms like Blogger, WordPress, and Dreamwidth structure content chronologically, Scalar has no default organizational structure. Instead, it allows users to create pages, which can be

combined into paths, annotated, tagged, or used as tags for other content. This gives them multiple options for creating non-linear, nested, radial, recursive, and intersecting narratives. Configuring these choices is accomplished primarily through a Relationships menu at the bottom of each page created, below the main text input window. The actual, final steps of creating an organic structure through a combination of selecting objects and dragging and dropping them within a GUI requires far fewer steps in Scalar than it would in any other environment, and is further enhanced by the fact that Scalar includes options to show visual representations of the structure (Path View, Tag View). However, this structural freedom is also the aspect of Scalar that requires the most careful advance planning from users in order to avoid producing a tangle of disconnected, disparate files. As such, its organizational freedom is simultaneously the feature that most complicates Scalar's self-presentation of easiness.

Like Omeka, Scalar articulates its claim of easiness through a comparison to blogging ("...if you can post to a blog, you can use Scalar"), pointing to the similarities of the WYSIWYG interface in its text input window and those used by WordPress and other blogging platforms. The trailer also connects itself to the activity of blogging by emphasizing the simplicity with which authors can work with a wide range of media types — not just how easy it is to "import media directly without cutting and pasting code" but also combining different types of media, such as "tagging poems with videofiles or tagging images with audiofiles." What the trailer wants to convey is that *any* media type the user could imagine — from images and text to maps and source code — can be juxtaposed within a Scalar book, all without requiring the book's author to have any knowledge of markup language. This emphasis on diverse media formats is

coupled throughout the trailer with statements about Scalar’s ability to handle quantity — not only in terms of media, but also that Scalar makes it “easy to work with multiple authors because each author’s contributions are tracked and all versions preserved.” As the trailer ends, the narrator reiterates that despite the wide variety of options available (visualizations, paths, annotations, etc.), “all these objects are designed to work together to make it easier for you to create objects to think with — the thinking is still up to you.”

As was the case with Omeka, Scalar’s claims aren’t untrue – it does offer unique functionality that simplifies and streamlines the processes of juxtaposing media and crafting non-linear narratives; and it does so in a way that saves considerable technical labor. In emphasizing its most innovative functionalities, however, Scalar’s framing underemphasizes that these functionalities come with their own particular workload. The more complex a narrative structure is, and the more material it contains, the more important it is to have experience managing data with workflows, strict file naming practices, and/or data dictionaries. Without such practices, or a site structure that has been carefully determined in advance, users are more likely to end up with a tangled mess rather than the sophisticated site that they had hoped for.

Likewise, Scalar’s documentation raises the question of what tool managers tell users to prepare them for the work of developing site structure. Scalar’s presentation materials focus on the ease with which Scalar can keep track of multiple users – however, this focus tends to obscure the social decision making that will almost certainly be required; as well as the emphasis on how much freedom to show different objects skirts around the reality that producing a good site is often a case of learning

what *not* to show in order to keep the narrative streamlined and compelling, rather than simply showing a great quantity of objects.

DH Box

DHBox (<http://www.dhbox.org>) is currently in development at the CUNY Graduate Center. As the newest of the tools that I have examined in this piece, DHBox is an indication that easy tool rhetoric is still being used. DHBox uses containers to create remote environments in the cloud that are already configured for several popular and powerful DH tools, including IPython, RStudio, WordPress, and Mallet. Containers allow programs to run in virtual environments that are identical, rather than risking the possibility that some users' settings and configurations will generate errors. Using pre-configured container environments can substantially cut down on the set-up time before students can get started actually using tools. The streamlined setup enables students to work with complex tools like Mallet and the NLTK on their own laptops without needing a physical computer lab, or requiring the instructor to consult or negotiate with campus IT personnel.

DHBox makes a few prominent claims about its easiness. A brief statement centered on its front page explains that “setting up an environment for digital humanities computational work can be time-consuming and difficult. DH Box addresses this problem by streamlining installation processes and providing a digital humanities laboratory in the cloud through simple sign-in via a web browser.” The “About” page reiterates that DHBox allows a cloud laboratory to be deployed “quickly and easily” from

any computer with an internet connection, promising a device agnostic lab ready to go in minutes.

Though DHBox emphasizes how much easier it is to use than it is to create a lab from scratch, it is not actually intended for beginners, as a closer look at the About page shows. DHBox makes it simple to set up a lab if you have an internet connection and “some contextual knowledge.” This abstract phrase gets clarified further down — the tool is intended for users who “know what the command line is” and “what a server does.” For others, the creators recommend a list of four resources to help bring potential users into the target audience, including a portion of the Apache HTTP Server documentation, Shaw’s “The Command Line the Hard Way” book, lessons hosted at the Programming Historian site, and Posner’s “How Did They Make That?.” This is a substantial reading list, but one that should provide a novice digital humanist with a solid grounding in the relevant concepts. Oddly enough, there is no explicit suggestion that individuals using DHBox need to understand how the gold-standard tools it contains work — the implication is that once the virtual lab is up and running, the rest of the progress will follow naturally.

The idea of easiness, especially in tech contexts, is often associated with support for new and inexperienced users; however, DHBox is a reminder that the situated nature of easiness means that it can also be intended specifically for advanced users. The presentation materials for DHBox attempt to be direct with would-be users by offering two benchmark questions that must be answered in order to use the tool productively; and the creators acknowledge that users might need to learn more, rather than simply suggesting that the tool will have excellent results for anyone and everyone.

What tool users are looking for

Tool users want the easiest experience possible, but looking at these three tools in particular enables one to more concretely define what easiness means in the context of DH. The emphasis on graphical user interfaces and no coding or technical knowledge suggests a desire for as little preparation as possible — particularly the desire to avoid learning material that is purely technical and has no equivalent in their home disciplines, such as understanding image aspect ratios or file compatibility issues. For researchers who are already overburdened, this is an understandable rational economic choice.

Users are also looking for tools that give them the ability to fully realize their imaginations, and to produce something new and dramatically different from what non-DH methods allow. This output could be new because it is a highly visual digital exhibit, or because it features non-linear narratives or juxtapositions of strikingly different media, or because it makes it possible for an entire graduate seminar to have access to sophisticated analytical tools like RStudio and Mallet. Users may likewise be looking for tools that allow them to explore a particular method in depth, and achieve mastery, especially within a given period of time, i.e., one semester-long course (Goldstone 2016).

Finally, though this is rarely made directly explicit by the tool presentations themselves, users want stability, and to feel that any effort that they make in a tool will be rewarded and worthwhile, rather than failing (Terras 2014a; Terras 2014b). This is most evident in language that gestures towards the tool's output. Sometimes this is conveyed by promising speed (an exhibit that is one click away) and sometimes by

promising complexity. Scalar's creators understand that "important topics require time and sustained attention to be fully explored," and work to convey to authors that with Scalar, they will be able to create a Scalar book that is worthy of committed attention from readers. While digital humanists may want to avoid spending time acquiring extraneous knowledge, they are drawn to the field because they are willing to make an investment — but they want that investment to "provide a satisfying moment of completion" (Brown 2009, par. 10) or move them closer to being able to declare the project finished (Kirschenbaum 2009, par. 1).

In light of these needs, we might ask whether easiness is a quality that digital humanities tool creators should pursue. In "Blunt Instrumentalism: On Tools and Methods," Dennis Tenen (2016) argues in favor of caution around easiness in DH research, because prioritizing it often comes at the expense of understanding the critical inner workings of analytical tools. Overreliance on out-of-the-box tools can result in researchers confusing the tools themselves with methodologies (117), and the end result is that the scholarship is less finely-grained and rigorous. The best kinds of tools, according to Tenen, are "the ones we make ourselves" – though he acknowledges the formidable labor involved in producing, marketing, and maintaining such tools, especially when working within academic contexts. Tenen characterizes a preference for easiness as a sort of intellectual laziness or lazy thinking, when more attention to method is warranted (118). In some cases, this critique is highly applicable; in others, it fails to take in to account that the preference for easiness is influenced by a lack of infrastructure – and that some tools, like DH Box, are intended specifically to solve the common infrastructure problem of a lack of physical space. Out-of-the-box tools, which

might be better characterized as “entry-level” DH tools, are arguably fulfilling a community need. But whose role and responsibility is it to guide new users through those tools and into the more complex understanding of methodologies that might develop as users become more familiar with them?

How libraries fit into DH infrastructure growth

Whether identified as “digital humanities” or previous terms like “humanities computing” or “technological humanities,” librarians and scholars have been using tools in research contexts for a long time. The current wave of DH seems to have begun around ten years ago, kicked off in part by the creation and release of affordable and user-friendly tools like Omeka, as well as CHNM’s Zotero citation manager. William Pannacker’s 2009 pronouncement in the *Chronicle of Higher Education* that DH seemed like “the first ‘next big thing’ in a long time,” was disputed by digital humanists for whom the field was nothing new — still, Pannacker’s observation reflected the start of a rise in DH-focused hiring. While the quantity of available new DH-focused positions was overstated in some cases (Risam 2013), there has been demonstrable growth in certain sectors. In 2010, there were two searches for Digital Humanities Librarian jobs, and that number has risen steadily since, with twenty-eight job searches for librarians or similarly titled library-based, front-facing positions (such as Digital Scholarship Coordinator, Digital Scholarship Lead) in both 2015 and 2016 — an indication that libraries are actively working to increase their direct involvement with DH (Morgan and Williams 2015).

As the field of digital humanities and the number of roles associated with it have grown, various concerns and questions have arisen about how to effectively build infrastructure and support systems that are both productive and scalable. Many of these discussions focus on the roles that libraries and librarians play — whether in supporting DH as a service, being the driving force or an active collaborator in DH growth, or providing much needed guidance for archiving and maintaining digital scholarly work. As projects and tools have been created and aged and sometimes disappeared, the larger DH community has begun to be more aware of the importance of sustainability (Davis 2016). Furthermore, in enterprise-level software and hardware provision, librarians have far more expertise and experience than traditional academic personnel. However, this pressure to achieve success and provide expertise risks becoming unsustainable for libraries themselves, while simultaneously failing to fully acknowledge the contributions that they have made to DH growth.

There are several excellent articles and essays discussing the opportunities and challenges that libraries face as they develop involvement and support strategies for digital humanities and digital scholarship. In this instance, I want to focus on the challenges that out-of-the-box, easy-to-use tools seem to have the potential to ameliorate, if not solve completely. These include the tendency to assign librarians or coordinators ample amounts of responsibility for creating digital humanities successes without giving them the necessary authority to do so (Posner 2013, 47), a lack of training opportunities (Posner 2013, 46), and a tendency to award credit for achievements to faculty, rather than library collaborators (Posner 2013, 48). These hurdles are further complicated by the sheer variety of requests that occur, many of

which include requests for time-consuming and non-extensible customization (Vinopal and McCormick 2013, 28). Libraries and librarians are under pressure to produce demonstrable results; to have learned enough from “intensive development for boutique projects” to provide the scalable support that scholars need, often as inexpensively as possible (Maron and Pickle 2014, 30); and to have a reproducible model that can be clearly articulated to stakeholders, and adapted as needed over time.

Easy-to-use tools can help with many of these challenges. Because they are branded as entry-level tools, and have documentation, they are positioned to allow librarians to be more hands-off, relieving them of the responsibility for success. If librarians are more hands-off, they are less likely to go uncredited for their work; and if the tools can offer the right balance of restrictions and customization, then the library is absolved of that burden as well.

The 2011 ARL SPEC Kit for Digital Humanities survey found that 48% of libraries characterized their digital humanities services as offered on an “ad hoc” basis (Bryson et. al. 2011, 23) — sometimes described as a “service-and-support” model, where projects are initiated by faculty who approach the library with ideas (Posner 2013; Muñoz 2013). An alternate approach is the skunkworks or library incubator model (see Muñoz 2013; Nowviskie 2013), where the library develops DH projects in which it plays a leadership role and allows students and faculty opportunities to be involved. The ad hoc or service-and-support model can be problematic because relatively few members of the campus community have access to it. The skunkworks/incubator model depends on the library having the startup expertise it needs to develop and execute good projects that are compelling to faculty and students, and that provide them with

opportunities to develop the experience and skills that they see as useful. Even when an incubator can successfully create opportunities that draw faculty and students in, access can be fairly limited. Both of these models have risks in terms of sustainability and scalability.

A third model has emerged, one that is more scalable and sustainable — let's call it "lightweight-service-and-support." This model may include one or more dedicated personnel, i.e. a DH librarian or specifically DH programmer, but it is resource-conservative, and cautious about providing too much one-to-one guidance that would be unfair to other support seekers, because such guidance would not scale, and would quickly constitute a significant/unsustainable time commitment for the librarian or team. The lightweight-service-and-support model relies heavily on easy-to-use tools, which offer researchers several options while still scaling well to a library's support capacity. The tools' user community, documentation, and their popularity (which can result in how-to videos and example projects) helps to lessen the amount of training, management, and outreach that librarians need to do. This model looks very similar to the second tier of support that Vinopal and McCormick (2013) explain how the supported tools "should offer a fixed set of templates, so users can pick the format, style, or functionality that best meets their needs ... If services at this level are well-designed and supported, a majority of scholars could rely on these sustainable alternatives to one-off solutions" (32). Vandegrift and Varner likewise gesture towards this model when they provide a concise formula for how libraries should conceptualize their DH offerings: "the goal is to have the fewest tools to support that meet the most needs" (2013, 71). Lightweight-service-and-support need not be the only tier of the

model as Vinopal and McCormick's four-tiered model makes clear; however, in the absence of resources for higher tiers to develop potentially ground-breaking and grant-winning projects, lightweight-service-and-support can still serve a wide range of community members.

Establishing practices and models that can help make DH in libraries sustainable and scalable is important work that can and will help libraries continue evolving along with scholarly disciplines. But are the practices that are scalable and sustainable for libraries equally sustainable and scalable for the faculty and students who look to the library for DH opportunities?

DH as scalable and nonscalable

To explain further, anthropologist Anna Lowenhaupt Tsing defines scalability as the ability to expand without having to rethink or transform the underlying basic elements. She examines scalability as a specific approach to design — one that has allowed for both the precision of the factory and the computer; and she argues that scalability is so ubiquitous and powerful that it stops us from noticing the aspects of the world that are *not* scalable. To push back against this suppressive impulse, Tsing's nonscalability theory is to allow us to see “how scalability uses articulations with nonscalable forms, even as it denies or erases them” (Tsing 2012, 506). Scalability prioritizes and values precision-nested fit — and it is the driving force behind much of our current infrastructure. The goals of nonscalability theory are to focus on perceiving the heterogeneous and nonscalable forms and understand that they, too, have roles to play in growth. At the heart of nonscalability theory is the question of how we look at,

and how we handle, the idea of diversity — specifically, the diversity of objects that do not fit within the precision-nested growth structures of scalability. Diversity, argues Tsing, isn't simply different — it can contain the potential for transformative change.

Rawson and Muñoz (2016) adapt Tsing's theoretical framework to unpack and examine their work “cleaning” data in the NYPL's “What's On the Menu?” archive, featuring over one hundred years of menus from restaurants, cafés, hotels, and other dining establishments. They argue that the concept of “data cleaning” and the use of the phrase “data cleaning” obscure the complex and heterogeneous details of the process as well as the degree to which it is high-stakes critical work with far-reaching effects that can impact the value of research findings. To reduce that process to “data cleaning” is to misunderstand a highly nonscalable process as a scalable one.

Rawson and Muñoz set out to “clean” and normalize the data of different dishes and food items within the collection. Although the NYPL had arranged the menus in the collection to be interchangeable objects within the catalog, and although menus have a common overall format (i.e., food items with prices, grouped according to particular meals or particular sections of meals), each menu showed considerable variation. Some of this variety was straightforward to normalize (e.g., fifteen variant listings for potatoes au gratin). To clean this data would be to make it scalable — to allow users to query the entire archive of menus to understand when, where, and how potatoes au gratin appeared, and get an accurate answer. However, as they worked to clean the data so that it would help answer research questions about the effect of wartime food rationing on menus or the changing boundaries of what constituted a dish over time, Rawson and Muñoz began to understand that reducing variants to a single value was “not a self-

contained problem, but rather an issue that required returning to [their] research questions and investigating the foods themselves.” The individual menu items’ heterogeneity was central to answering the research questions, and what was needed was not to make each food item scalable, but instead to create a dataset that would be compatible with the NYPL archive and illuminate (and allow users to interact with) the non-scalable heterogeneous aspects of the menu contents.

Becoming aware of the pressures of scalability can be difficult even for experienced digital humanists. Rawson and Muñoz explain that when they began “cleaning” their data, they saw their main challenge and goal as “processing enough values quickly enough to ‘get on with it’” (page). The characteristics associated with scalability — speed, simplicity, and unimpeded growth — have considerable overlap with the characteristics associated with easiness. The tools we use — whether we are their creators or their consumers — are not immune to the pressure to be scalable.

Tsing’s theory of non-scalability, which Rawson and Muñoz have shown to have considerable implications for how we conceive of our goals when working with data, is equally relevant to both DH projects and to the infrastructure that we build for people who are working on them. DH projects are non-scalable. This means that they are particularly non-scalable with various out-of-the-box tools (not only Omeka and Scalar) because as Tsing explains, scalability is the “ability to expand without distorting the framework” (Tsing 2012, 523). Tools designed to present and process data may appear or present themselves as though they come with that framework in place. Omeka has items and item types with metadata categories; Scalar has pages, paths, and tags — but these components are building blocks, and a highly incomplete framework, if they

can be said to be a framework at all. And this is precisely as it should be — they are there to be distorted, or, rather, to be transformed, as researchers' projects take shape.

When tools present themselves as easy, quick, and simple, they are promising the user that working with them will be scalable. And when those of us who are in the position of introducing those tools reiterate and reinforce that presentation, we are likewise telling researchers that they should expect scalability and strive for it, despite the fact that they are engaging in an eminently nonscalable process. We are encouraging them to imagine the complex diversity of their material without preparing them for the transformative process that including it will require. Instead of helping them learn to see heterogeneity, and find effective ways of interacting with it, by training them to expect easiness, we are leaving an empty space in their preparation — and that space is as likely as not to end up filled with a conviction of their own inadequacy. The consequence is not only this emotional plunge. Out-of-the-box tools may successfully circumvent technical work, but in doing so, they may also bypass the thought process of imagining a research question and its answers beyond the constraints and affordances of a single tool. This can impact the depth and richness of the answer to the research question, as well as the project's long-term sustainability. Thinking beyond the capabilities of a particular tool can also be an opportunity for researchers to utilize their existing disciplinary expertise in making decisions about data categories and relationships between materials — and in the process, gain much needed confidence for future experimentation, allowing them to work with less dependence upon librarians or other support personnel.

Possible avenues for intervention

The ways that “easiness” rhetoric can shape tool users’ expectations and experiences are a challenge. This challenge intersects with a related problem, namely, that the community of practice in DH is still grappling with how best to incorporate data modeling in DH. A data model defines the objects or entries that a database (or really any data presentation system, including content management systems) contains. It sets out the rules for how different pieces of data are connected with each other. If entries have additional data that modifies them (i.e., a data model about individuals might include their nationality, and depending on the focus of the database, one part of the model might specifically focus on defining how to record complexities around nationality, such as individuals who are born in one country to parents who are citizens of another country.)

Effectively incorporating data modeling involves articulating the questions and complexities that accompany it in humanities contexts; and the work of disseminating and/or training DHers to understand their work with various tools as data modeling. Posner has previously noted that “humanists have a very different way of engaging with evidence than most scientists or social scientists” (Posner 2015). For example, close reading is more likely to work towards describing a specific pattern within a text and tracing it from its start to end point. The focus of many traditional humanities scholarly essays is identifying and elucidating one or a small number of objects which are unique. To use Tsing here, humanities research is much more focused on illuminating and celebrating *nonscalability*; thus, it is no surprise that humanists have, even within the DH community, hesitated about invoking the idea of “data” in relation to their work.

However, organizing data is what allows researchers to produce scholarship (Posner 2015). When the Omeka documentation suggests that users should plan their site before beginning to use the tool, they are obliquely suggesting that scholars need to develop a data model that allows an Omeka site to be driven by a more complex principle than “let me show you all my stuff.” Scalar users face the same challenge — perhaps even more so, since in Scalar the capacity for non-linear and intersecting paths plus the ability to display both text and media-focused pages means that scholars could conceivably be working with two interlocking data models: one for their narrative and one for their non-narrative content. And this need applies to other DH tools as well — including several of the tools available through DHBox. Data modeling is not easy work — but helping students understand how it fits into the process of working with so-called “easy” tools would be one way of preparing them better.

This example (and potential impact) of data modeling underscores that the problems created by easy tool rhetoric cannot simply be attributed to the tool creators and the teams that designed and wrote their publicity materials. If our libguides and workshop promotional materials draw on the same tool presentation that emphasizes easiness, then we are also using easiness rhetoric just as the tool makers are. Who has the responsibility and capacity to intervene in this situation? What kind of intervention is appropriate? While tool creators bear some responsibility, there is, in most cases, a gap between the authors of a tool’s presentation site and the readers. Librarians who are mentoring students and faculty who are learning new tools — or who are in charge of designing and maintaining a local infrastructure system — are positioned to fill that gap because they are usually closer to the learners than the tool creators are. Given

humanists' uncertainty around thinking of their materials as data (Keener 2015, par. 33), librarians and instructors offering basic tool trainings are more likely to be successful because they can have conversations that go both ways in consulting contexts. Our models for DH development and support in libraries need to consider not only what tools to provide — but also how those tools' capabilities and reputation shape infrastructure — and how we can design around the tools' rhetoric in response.

In “On Nonscalability,” Tsing points out several examples in which scalability has been achieved in part through a reliance on disciplined labor. One example that she uses is that of sugar cane cutters in Puerto Rico in the 1950s. The workers had a limited time frame in which to work, and their working conditions were crowded and dangerous — especially because of the sharp machetes that each worker used. The result was that “workers were forced to use their full energy and attention to cut in synchrony and avoid injury” (Tsing 2012, 512). By disciplining themselves to learn the skill of synchronous cutting, they solved the company's problem — and transformed themselves from nonscalable individuals into a scalable work force. Disciplined labor can be created when any powerful entity (a factory, a corporation, or even a library) identifies an infrastructural problem that they then leave to less powerful individuals to solve by changing themselves in some way. The creation of disciplined labor isn't necessarily malicious. In the context of library infrastructure for DH tools, the problem is the nonscalability of individual DH projects versus the scalable support that we offer in the form of entry-level tools. Because the tools present themselves as easy to use, it is easier for libraries (and departments) to decide that only minimal training is needed, and that the rest can be left to the students themselves. The students become disciplined

laborers because they see DH tool facility as leading both to greater prestige and to jobs.

Even when tools make beneficial achievements in terms of what is possible, the potential for problems exists. Scalar, Omeka, DHBox, and numerous other tools that can be used for DH make it possible for researchers to produce scholarly objects that would not have been possible otherwise without months or sometimes years of training. DHBox takes three tremendous difficulties (money, space, staff), and transforms them into a different difficulty (an individual user's knowledge of servers and the command line). Scalar and Omeka transform the challenge of needing knowledge around databases, HTML, and CSS, transforming those challenges into the need for a user to understand how to develop an effective data model. All three tools are beneficial to the larger community of practice of digital humanities – and, yet, all three can be problematic as well, because through the combination of the way that libraries use them in building DH infrastructure, and the way that the tools present themselves, they shift tremendous responsibility for success directly onto the individual user and that user's capacity to pick up wide-ranging (and not always easily accessible) knowledge on the fly. The resulting phenomenon is a form of what economist Jacob Hacker (2008) has identified as "risk shift." Hacker identifies risk shift by tracing changes in frameworks for economic protection (including banking, income, healthcare, and retirement). Risk shift is the phenomenon by which support provided by larger corporate and social entities (employers, insurance companies, banks) is withdrawn, and responsibility for preventing risks is placed on individual families. While Hacker's research traces this phenomenon through the larger American employment system, sociologist Tressie McMillan Cottom's

recent book *Lower Ed: The Troubling Rise of For-Profit Colleges in the New Economy* argues that the same risk shift can be seen in the higher education system as credential costs that used to be supported by federal grants have shifted more onto students. A certain reliance on DH tools marketed as “easy to use” creates a similar risk shift for our students and faculty learning to use them, including librarians who are working with limited amounts of time to pick up DH skills and experience.

There is no simple solution to the problems that can be created by “easiness” rhetoric. Certainly, the answer is not that the tools featuring it are bad and that we should stop using them. Nor is it for us to take a reverse approach and brand the tools as ultra-challenging, suitable only for hardcore data nerds (a problematic approach that has been an aspect of DH in the past in debates about hacking vs. yacking (Cecire 2012; Nowwiskie 2016)). Training and dialogue specifically focused on data modeling throughout the community could and will be very helpful, but it will take time for that to happen. If it does, it will be well-augmented by a more complex understanding among DH infrastructure providers (whether in libraries, centers, or departments) of what scalability means with regard to DH. Among other things, this more complex understanding might involve scrutinizing what needs tools are meeting — scrutinize these needs especially through the tools’ marketing and self-presentation — and consider how those needs might shape infrastructure. One specific aspect of this might involve looking at the differences between what tool presentation leads users to think they need (i.e. lots of different types of media) vs. the contextual knowledge that more experienced digital humanists know they need (including naming conventions, data models, etc.). This doesn’t mean that libraries necessarily have to dramatically increase

their DH infrastructure investment or expend substantially more resources — if we are alert, deliberate, and proactive, it is possible to build infrastructure that is scalable, both for libraries, and for our users.

Conclusion

When researchers embarking on a digital humanities project look for the right tool, the perceived easiness of that tool is an important consideration. Tools that can provide an easy-to-use experience are becoming an important part of library infrastructure for DH because they seem to require less support and labor from library personnel involved in introducing DH methodologies to students and faculty. However, tools branded as “easy to use” can create a backlash in which users’ research stalls and they blame themselves when a particular tool was more difficult than they expected.

This article has sought to better understand the challenges presented by easy tool rhetoric for DH service providers by examining the presentation and documentation of three digital humanities tools. This examination revealed that though the tools have made valuable contributions that substantially simplify certain technical aspects of producing websites and multimedia objects, the rhetoric of their presentation tends to elide the vital and challenging critical thinking that users must do *while* using the tools. This elision underscores key competencies, such as data modelling, that the larger digital humanities community is only just beginning to grapple with. Libraries have an important role to play in helping tool users develop knowledge that will avoid the backlash of easy tools.

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