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Big Digital Humanities

Svensson, Patrik

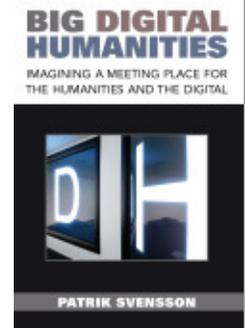
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Making Digital Humanities

This chapter outlines a set of strategies and parameters relevant to implementing the digital humanities—in particular, big digital humanities. In doing so, it builds on the notion of big digital humanities developed in chapter 3 and the infrastructural thinking discussed in chapter 4, but this chapter also draws together many threads running throughout the book and connects them to the implementation of the digital humanities.

I use *making* in the chapter title to accentuate the idea that implementing the digital humanities must be grounded in down-to-earth practice, material-intellectual engagement, and institutional strategy. Making happens on many levels at the same time, and the digital humanities needs to convincingly address these multiple levels. Scholarly motivation cannot really be separated from institutional structures, and the development of a field cannot occur in isolation from the rest of the university and the outside world. While the digital humanities is not a panacea, we should not underestimate the field's capacity to imagine futures and to give scholars, teachers, students, technologists, librarians, and other experts an opportunity to make a difference and be seen as important.

This chapter discusses factors relevant to the making of the digital humanities: building institutions, curatorial work, empowering individuals and groups, and making spaces and infrastructure. These factors can help create conditions for the digital humanities as a site for learning and knowledge building and for critically interweaving conceptual and technological making on a deep level.

Big Digital Humanities

Big digital humanities is a project with considerable potential and range. It

- engages deeply with the humanities disciplines;
- has a multifaceted engagement with the digital;
- intertwines the intellectual and the material;
- contributes to high-quality scholarship and methodological innovation;
- provides humanistic infrastructure;
- reaches out to the rest of the university and the world;
- serves as a model for a proactive humanities; and
- functions as a meeting place and contact zone.

It is also a day-to-day business, characterized not so much by big words as by individual work as well as collaboration, technical development, long-term research processes, institutional politics, and administration. In this sense, *making* is everyday engagement with technology, production of tools, building of databases, thesis work, application writing, dialogue, seminars, courses, and many other activities.

Making as a practice has a special significance for the digital humanities and is a much-discussed issue. Big digital humanities has no expectation that everyone must be a coder or builder of infrastructure, even if being interested and willing to try are important qualities. However, the digital humanities would not exist unless we had those competencies and interests. There must be interactional expertise and an interest in learning from each other. We need to incorporate different kinds of technological engagement, digital production, competencies, and practices of making.

Traditional critical work (itself an example of making) produced in such a context will also necessarily be affected by the conditions of production. Equally important, the making of technology and digital systems will benefit from being carried out in an environment where traditional critical work takes place. This is particularly important for an interdisciplinary meeting place such as big digital humanities, and the various modalities of making likely will also externalize some of the critical and creative processes at play. A framework such as critical making offers structured ways of thinking about how making can help facilitate critical work.

One of the most important functions of the digital humanities is to empower individuals and groups whether they are based in a department, a digital humanities lab, or elsewhere. The daily business of the digital humanities relies on individuals interested in the enterprise, and making the digital humanities is about empowering these individuals and finding ways of support-

ing a range of people interested in doing high-quality work at the intersection of humanities and the digital. Contemporary academia arguably lacks empowerment, particularly outside the structures of existing reward systems and disciplinary frameworks, and the return on investment for giving people the opportunity to do what they want can consequently be very high.

I draw on the notion of curating and curatorship, taken from the worlds of art and cultural heritage, to propose that making the digital humanities is about curating in several senses of the word: curating data, spaces, infrastructures, events, intellectually driven themes, and intellectual-material projects. Curating is often enacted in an orchestrated space, whether mostly physical or mostly digital, so I also discuss space in terms of making the digital humanities.

Another, more general concern is broader than just the digital humanities or this particular moment in time: the role of the humanities and arts in our society, and making in the sense of innovation and building our own future. Our society needs to incorporate more humanistic and art-based thinking and making to be innovative and sustainable in the long run. Former Rhode Island School of Design president John Maeda and others have articulated this vision under the umbrella of STEAM (Science Technology Engineering Art Mathematics).¹ Artist and engineer Natalie Jeremijenko addresses large-scale challenges such as the our relationship to the environment and to food through promoting agency, systemic understanding and use of technology:

So I think the cultural challenge is to take these technologies and figure out how to use them to create a desirable future. That's the fundamental participatory demand. We are better than drones make us look, and we have to make them better than that.²

The digital humanities can play an important role in activating the humanities and creating a place for such engagement. It is simply not responsible to think about the future of a field that has a certain degree of traction without connecting it to the bigger picture. This sense of responsibility and possibility underscores the fact that the digital humanities cannot easily be confined to a small box in an organization schema and instead exists somewhere in between other boxes, reaching out in different ways. Digital humanities is not a panacea, but it can be a significant player.

Interlude 7: A Day in the Lab

There is pleasure to making. In June 2013, as I was starting off the day in our new lab on the Arts Campus at Umeå University, the installation of a large (five-by-four-meter) interactive floor screen had just been finished. As often happens with conceptually and technologically challenging installations, the path to a finished product was long and iterative. Who can really know how the exact size of the bezels between the eight sheets of glass will affect our subjective perception of the floor? It takes trial and error as well as careful planning. And, on another level, what does it entail to stand on or in the material we are talking about or exploring? What kinds of intellectual engagement can such infrastructure solicit? One underlying notion, coupled with the making, is that we can challenge some of the basic properties of screens through this kind of installation, particularly in terms of orientation, perspective, and the idea of the screen as a flat, unobstructed surface.

Through we sometimes place a large and beautiful oriental rug on top of the screen when it is not in use, the project challenges our sense of the screen as an active surface. Over the next couple of years, we will discover new uses for the floor screen, but now, when the installation has just been finished, we feel a combination of memory of the building process, an almost instantaneous sense of material accomplishment, and the beginnings of a long-term engagement with exploring and using the infrastructure. The process of thinking up the floor screen has generated a broad range of ideas, impressions, and a presence in the lab, almost like a ghost screen. This ghost screen has served as a tool for thinking about what can be done conceptually, concretely, and experimentally, thus generating a good deal of making even before the actual making, so to speak. It has also served as a friendly provocation. When presenting the lab, I have sometimes stated that we do not really know what to do with the screen, and to some extent this is true. This is a provocative statement on several levels. Why should the humanities have this kind of infrastructure? More generally, the experimental and undecided nature of this installation challenges higher education as increasingly concerned with accountability and instrumentalism. Of course, there is and should be a conceptual basis for the interactive floor, but we do not know what it will become. If we already knew that, we probably would not have to build it.

One reason I got to see the interactive floor on this day in June was that I

was having meetings and less formal get-togethers in both of our labs, talking to students about their summer projects as well as to faculty and staff involved in various activities. Experiencing and discussing such work creates an instant feeling of joy, and one of the benefits of a lab environment is that it accommodates many such activities and projects at the same time. With the externalization of work processes and an open studio environment, it is quite natural to comment on and discuss ongoing work.³ A great deal carryover between people and processes also occurs. While much of my own making happens in my office or in meetings around campus or around the world, I need to be grounded in the lab. On a very basic level, the lab, with its people, things, and activities, makes me happy.

We had sponsored a couple of student projects, and I spoke to some of these students that day. One of them had brought a large church organ into the lab, seeking to connect the mechanical and analog with the mechanical and digital. She was working on various physical computing arrangements when I was there, particularly ones based on pressure and air, and her intense connection to the church organ was very apparent. Indeed, the organ had a strong presence in the lab and attracted a stream of walk-in visitors. At the same time, students were working on exploring connections between bodily movement and sound by using Kinect sensors (to track body movements), projection film on glass, and various visualization technologies. In another part of the lab, an interaction-design student presented seven concepts for using the interactive floor in relation to library materials and for discussing the library as idea and infrastructure. What does it mean to give digitally born materials physical materiality via scale and sensory engagement? I realized how different a large floor screen is from other kinds of visualization and interaction platforms, particularly when situated in a highly visible and public place. I also looked at some traces of a project in which an architecture student was using sticky notes as an architectural material. He was waiting for a large shipment of material but had already built a chandelier and another lamp structure using the light from the skylights.

I walked to our other lab on the main campus, where two methodology and programming experts and I discussed the further development of one of our most used digital platforms, faceted browsing. Simply put, our faceted browsing system makes it possible to navigate large and complex datasets by selecting and configuring facets, which in turn serve as the basis for different representations and visualizations. This type of development work is very dis-

tinctly linked to research processes, research materials, and user interfaces. The platform contrasts with traditional search query systems because it starts out by offering layered, user-created viewports to the material and its associated context. We had a productive conversation, and after laying out plans for future development of the web platform, I suggested that it might be worthwhile to deploy this web-based application on our eleven-screen screenscape, using the screens to map the facets and layers of visualization often present in such projects and thus challenging the developers to step outside the constraints and benefits of the web as a platform.

Finally, a 3-D artist and programmer showed me some of his work using Unity, a game platform. We had been thinking of ways to explore archives not as static and decontextualized representations (as many web archives are), but as experimental spaces. We had already built a series of prototype applications to explore the representation of the Virgin Mary in medieval Swedish churches, seeking to rethink the medieval relation between word and image through the lens of digital interface.⁴ These prototypes, representing a small selection of a large amount of material, were situated in the HUMlab screenscape, and we had been thinking about using a 3-D model of HUMlab to place the prototypes nominally in the virtual space and then to play with the archival material behind the prototypes.

We wanted to draw on the installation as spatially situated but also go beyond the constraints of the model of HUMlab and the reenactment of the installation. One possibility that emerged in the discussion was to change the walls in the virtual model of HUMlab. Many years earlier, I had taken part in a Storefront for Art and Architecture event housed in a temporary plastic conference space in a New York City park. This plastic was semitransparent, and people outside would touch it and even sometimes bounce into it. The idea was to replace the walls in the virtual model of HUMlab with such material, put the full project material (about five thousand images plus video and audio) in the space outside the virtual lab, and have some of the material bounce into the virtual walls. It would make itself known and call for attention, but neither too timidly nor too aggressively. It would also be possible to walk out into the space outside the walls in the 3-D model and encounter the material experientially and maybe even select material there and throw it onto the screens in the virtual model, which could then be mapped onto the screens in the real HUMlab. The screens would then display the archival material as spatially situated in the physical lab.

While these examples may not qualify as curated critical making processes

as described by Matt Ratto, they do to some extent combine critical processes and literal making.⁵ In addition, they externalize “thinking processes,” which is quite useful when working in a contact zone and when engaging with boundary objects. In a big digital humanities context, where technologists, students, digital humanities experts, and scholars from different disciplines often come together in an open environment, work that is primarily critical is likely to be influenced by ongoing making, and the making will ideally be influenced by dialogues with scholars and others who are not primarily invested in producing code, physical computing artifacts, or multimedia. This kind of contact zone thus pressures both practitioners and traditional scholars to engage with others. In an environment such as HUMLab, it should not be possible to maintain a “pure” critical approach; similarly, making will necessarily be critically inflected and enabled.

Making Factors

Many types of making are often at play simultaneously. The interactive floor screen is a very concrete example of material making, but it is naturally also the result of a strong idea. Can we challenge the cinematic and vertical paradigm of screen use? What does it mean to see screen-enabled content from above or to be inside it? How does working around a screen change collaborative possibilities? How can we experiment with layering information and experiences on top of the floor screen? What artifacts and materials were meant to be seen from above or from the inside? It takes institutional work, accumulative building of trust, and a collective culture of technological and intellectual engagement to move from idea to material manifestation. This particular piece of making is situated in relation to layers of previous making and systems. The actual use of the screen relates closely to how the lab is curated, what middleware is built, how experimentation is supported, how individuals and groups are empowered (or not), and how the operation is organized and carried out.

Some perspectives and strategies are particularly relevant to making the digital humanities. They cluster into institutional-level making, curatorship, empowering individuals and supporting collaboration, and making infrastructure and space. All build on a foundation of intellectual and technological engagement and in turn help create conditions for the digital humanities as a site for curiosity-driven learning and knowledge production.

Building Institutions

The digital humanities and earlier humanities computing have had a long-standing preoccupation with their institutional status, which has been contested and undecided. Occupying this uncertain position and facing pressure from conventional academic structures can be frustrating and difficult, but there are also benefits to not having been absorbed fully by those structures. One such benefit is a lively ongoing dialogue about matters that do not seem to be discussed as much in many other fields. Issues often discussed in the history of the digital humanities include: What counts as scholarship? What are viable career paths for digital humanists with a technological or methodological focus? Does the field serve traditional disciplines, or is it autonomous? Who does service to whom? Is the digital humanities a field or a discipline? What is the size of the field? Who is in and who is out? Is making a basic epistemic commitment of the field?

While this discussion is worthwhile, it can lead to the repetition of the same arguments. This long-lasting discussion not only possesses a weariness and staleness but also runs the risk of the obsessive self-examination that Louis Menand identifies in the humanities in the late 1980s and 1990s.⁶ Nevertheless, many of these questions remain current, and it is slightly worrying when Sean Gouglas and his coauthors argue that the topic of whether the digital humanities is a discipline is exhausted.⁷ This may be true for old-timers, but this reasoning excludes newcomers to the field, many of whom come from lineages other than humanities computing. Some of the new people indeed have a strong institutional interest, and they may well be building institutions, networks, and centers over the coming decades. And the question of whether or not digital humanities is a discipline is both current and critical to the future of the field.

Institution building is in many ways an ideal process through which to address questions of identity and to embody one's answer to the question of what the digital humanities can be. Such incarnations can range from small projects, temporary working groups, urban pop-up labs, and local fellowship programs to regional centers, international networked communities, intrainstitutional centers, digital humanities labs, and departments. There is no single model or solution, and institutional contexts vary considerably. Institution building is always local, which is why digital humanities needs to acknowledge a broad range of initiatives, contexts and strategies.

If the history of mainstream digital humanities is one of partial marginalization and the institutional struggles of centers and initiatives, the situation has clearly changed in the past few years. With increased leverage and interest, the question has arisen of how to operationalize this interest and make the best use of available or potential resources. This is not a simple matter, particularly given the history of the field and the fact that the pressure now comes much more from the outside. And the current relative well-being of the digital humanities does not mean that no problems exist or that higher education has suddenly become perfect. On the contrary, higher education and the humanities in many parts of the world are facing critical challenges, including reduction of base funding, a neoliberal agenda, instrumentalism, and academic isolation of the humanities.⁸ From the point of view of big digital humanities, these challenges are not separate from the work of digital humanities, and the field needs to take on at least some of them. It would simply be irresponsible not to use the reach and leverage of the digital and institutional plasticity of the digital humanities to engage with the bigger picture and the bigger world.

The idea of a broadly conceived big digital humanities that has multiple modes of engagement with the digital and the ability to take on major intellectual and technological challenges is highly compatible with the digital humanities as a meeting place and intersectional operation. This type of digital humanities differs from traditional disciplines and departments, which can be useful when arguing in favor of investments in the field. A dean or a university president may be quite happy to see the emergence of a platform that not only will deliver good-quality research and development but also promises to help revitalize the humanities and to create new collaborative networks across and outside the university. And most institutions of higher education are more in need of intersectional centers and initiatives than yet another department or discipline.

There is more to this than simply seeing the digital humanities as a center- or lab-like activity. Indeed, centers may not be the optimal organizational form in all contexts and situations, and in some cases, network models or departments will certainly be a better choice. Implementation and local needs will vary in different settings. But it is important to see the digital humanities as a whole as an intersectional meeting place where a text-encoding initiative, physical computing activities, and media history work can exist simultaneously. Involvement must include the digital humanities platform as well as existing departments and centers. Double affiliation is a useful model, and

flexibility and integrity are important. The digital humanities is not a servile function and does not always need to work with others.

Most of these matters have institutional ramifications and will sooner or later have to be addressed in terms of institutional strategy. However, we have to start somewhere, and as long as we have a basic idea, interest, and leadership, most other things can be worked out.

Some Reflections on Doing Institutional Work

While institution making and administrative work combined with an academic career trajectory sometimes can seem unrewarding, distracting, and uninspiring, this is where much of the conditions of academic work are determined. Given the relatively unsettled status of the digital humanities and our current leverage, we have plenty of opportunities for administrative and academic leadership as well as a real need for such leadership. Institutions do not just exist. They are made and remade by people, and the institutional structure seems less fixed and more moldable at certain times and in certain contexts. We now have an opportunity to make ideas come through and to create real change.

Institution building is contextual, situational, and local. There is no standard blueprint that can be employed, and convincing the people in power will likely require us to strike a balance between, on the one hand, the national and international state of affairs (for example, the current interest in digital humanities) and, on the other, the anticipated local contribution and role in relation to this movement. While the local institution as well as funding agencies probably want to see international excellence, they may not be primarily interested in a carbon copy of another institution at another university, no matter how good that model. It is important to demonstrate a good sense of the international situation, but there should be a particular flavor to what is being suggested. This flavor can be carried by a strong idea about something that does not yet exist, but it typically makes sense to connect this idea to what exists in terms of faculty, infrastructure, and regional strengths.

A particular, locally situated, and intersectional framing of the intended operation will also give digital humanities builders the opportunity to frame their own platform. Doing so eases the process of including people from across the local institution rather than from only one school or a department. Looking broadly, talking with people, and making connections simply results in more choices. At the same time, it is important to avoid limiting oneself to

the local context. Most initiatives must seek to make substantial international contributions. A junior scholar pushing for a new center or network might want to recruit five leading and up-and-coming international scholars and institutional leaders—people who are passionate and committed about the mission of the new initiative—to serve as part of a distinguished advisory group. And make sure that this group is diverse.

Institution building, like most other forms of making, requires ideas and conviction. Most conventional departments offer limited opportunities for this kind of idea-driven institutional work because much of it is already set, and it is difficult to change large-scale operations that are deeply invested in substantial undertakings, educational or otherwise. The digital humanities benefits from being seen as a relatively new area as well as from being different, fairly small, and comparatively rich in terms of ideas and energy. What gets imagined does not have to be modeled on what is already there or what is expected, but it should be institutionally aware. There is a remarkable power to strong ideas and to people who can manifest and articulate those ideas. Regardless of one's personal persuasive abilities, it is almost always beneficial to let other people see one's interest, drive, and intensity. Such sentiment cannot easily be simulated or constructed. In a meeting with serious academics and administrators, it can be remarkably useful to let some of that energy show and to stress the academic side of things. At the same time, it is advisable to be moderate, not too aggressive, not too opinionated, and scholarly and institutionally anchored.

Such positioning can be achieved by local and international networking, by creating a solid scholarly and educational grounding for the vision, by introducing one's own academic work, and by talking to sympathetic administrators. Formal documents—locally produced white papers and beyond-the-state-of-the-art reports, national strategy documents, and international reports—can be useful for this process. A wide variety of material is available for the digital humanities, and even if only a little can be used, it is good practice to have a profound sense of the national and international context, including the funding landscape. But it is equally important to bring one's own positioning, flavor, and conviction to whatever is being proposed. And why not include a 3-D rendering, a simulation snapshot, or some other kind of digital expression?

While proposals and planning documents often benefit from taking a visionary approach and a long-term perspective, they can also lock the proposer into a “large” mind-set and vision that will at best take a very long time

to realize. It is therefore often a good strategy to combine far-reaching goals with a direct line of action. This is why it makes sense to connect to existing faculty, expertise, and resources. At the same time, it may be advantageous to indicate clearly that something new and promising is being created. One possibility is to go for prototype labs, networks, or projects and to use such platforms to test ideas and concepts for a possible full installation. It is often advantageous to have a physical site, even if it is just a small space, that stands out and has clear signage. A strong online presence is useful whether coupled with a physical site or not. Before any of these features are in place, it may be possible to single out a project or a network as a way of initializing or channeling work in the area in question. Doing so can often occur without substantial cost, and for more leverage, flexible and relatively quick seed money is at times available from universities and funding agencies. Seed money is also useful in the sense that it indicates a buy-in from the funder, which can help in the continued process.

Balancing long-, intermediate-, and short-term perspectives in this way is an important part of institution building. Experience shows that building institutions takes more time than one would like to think. Persistence and the ability to overcome temporary (and sometimes long-term) setbacks are important qualifications. And five years can be enough of a window to make a real difference and create real change, so this might serve as an appropriate mental time frame.

Much of this work involves framing and thinking collaboratively about what can be achieved given enough resources. It usually helps to be concrete, listing what might be accomplished within a specific period. It is also useful to have a sense of what will be needed to reach these goals. One of the most difficult questions to answer without preparation is, “How would you make use of a ten-million-dollar donation?” One generic answer would be that over a five-year period, 30 percent of those resources could be spent on infrastructure, while other major investments could include a postdoctoral program, a distinguished visiting researcher program, a fellowship program for the university, and possibly an endowed chair. One might also want to add that the goal of securing additional external funding for research projects and other initiatives. Of course, one would also have to be prepared to answer the same question for a fifty-thousand-dollar donation, academic crowdsourcing, and many other possibilities.⁹ The ability to answer such questions requires preparedness, strategic thinking, and on-the-spot making.

Institutional building requires leadership: it involves having a sense of di-

rection, empowering others, inspiring confidence, building trust, and making a difference together with other people. It makes sense to draw on trusted senior advisers and colleagues and to be sensitive to expectations and possibilities, but leadership is ultimately about making choices and daring to be distinct. Over time, the ability to be reasonably true to a basic idea and to avoid unnecessary compromises on core issues is critical to such leadership. Brashness can be a useful quality when doing institutional work but is not recommended on an everyday basis and should be exercised with caution. However, some initiatives—especially in the humanities—suffer when leaders are too timid and unwilling to think and speak big enough. The institutional context and power structures matter here, and it is easier to be brash when one is structurally privileged. In any case, a certain degree of brashness and imagination can help.

One may not want to play by the book in certain situations. If the dean is not supportive, one may have to approach the provost or vice chancellor. Such end runs should not be attempted without very careful consideration but also should not be excluded as an option. If one has a casual encounter with a potential donor, it might be a good idea to strike up a conversation even when a representative of the university's Office of External Relations is not present. If the members of the university board are visiting, one option involves telling them directly what is needed. A brash answer to the question of how to spend ten million dollars would be that a great deal can indeed be done with such generous funding but that fifteen million dollars would enable one to raise another ten million dollars, creating a much stronger and sustainable center of excellence. Sometimes getting what one wants requires pushing the envelope regarding rules and regulations, though not too far. Nevertheless, rules are not set in stone, and personal conviction and warmth can go a long way. Again, it is vital to be cautious and sensible about these things and to protect one's back (make sure to keep a paper trail and do not trust institutions blindly), but one should not accept at face value the statement that something is not possible.

Curating the Digital Humanities

The digital humanities requires more than an ideational underpinning and an institutional platform. These factors create conditions, but hard work and adaptability are needed to move from conditions to long-term implementation. Dynamic and intersectional operations such as big digital hu-

manities particularly require ways of connecting ideas to practice on an everyday basis.

A range of strategies and practices can be adopted to make these connections. While institutional leadership is necessary, it does not quite cover the type of navigation required to manage a big digital humanities operation or many other intersectional collegial operations. Strong leadership is necessary, but such leadership cannot be about control; rather, there must be a constructive space for dialogue, negotiation, knowledge work, and challenging of ideas. The notion of curating, borrowed from the domains of art and cultural heritage, can be instrumental for thinking about the making of the digital humanities.

Curation traditionally incorporates acquiring, classifying, and safeguarding objects. In 1963, zoologist Boyd W. Walker wrote,

The curator's job is to contribute to knowledge, in the unique way that museums have established for themselves: through the gathering, study, and display of natural objects and the products of men's minds and skills.¹⁰

The notion of curatorship has long been debated and developed: Walker was worried about curators devoting too much time to research rather than caring for the collections. These debates can partly be explained by the range of responsibilities associated with curatorship as well as the need to balance different interests, a situation that resembles digital humanities. To what extent is curatorial (or digital humanities) practice a theoretical and scholarly endeavor? How is the custodial role upheld? How visible is the curator? What is the relation between the art curator and the artist? What is the relationship between the researcher or artist and the space or infrastructure? How do new forms of art, expression, and technology influence curatorial practice?

One way of looking at curating is to see it as a question of making meaning and creating context in some kind of institutional setting. In the digital humanities, this may translate to the properties of being in between, working with others, and respecting their positions as well as of being instrumental and helpful in shaping patterns and bringing together perspectives. One example could be the intellectual and practical-level steering required to stage an international digital humanities workshop, where new or emergent themes are brought forward and manifested. On an institutional level, curato-

rial skills may be useful when negotiating digitally inflected faculty lines with departments and disciplines. An important sense of space or infrastructure is also a part of much curatorial work and big digital humanities and is an important facilitator for the digital humanities.

Although digital technology and new orientations have challenged curatorial institutions, they still uphold a traditional sense of curatorship. In particular, such curatorship often focuses on objects. According to the 2007 guidelines of the Association of Art Museum Curators,

Although curators have many duties and responsibilities, their primary value to the museum lies in their specific expertise. Curators are art historians engaged in scholarship with a special emphasis on physical objects. Many museums provide the necessary resources—library, research time, grant and sabbatical opportunities—for curators to pursue scholarship. This scholarly activity enhances curators’ understanding of the works in their care, and redounds to the credit of their museum. Given their unique position as art historians and keepers, curators have particular knowledge of and access to art objects that can generate valuable new insights.¹¹

The sense of curatorship presented here is fairly traditional, evidenced, for example, in the emphasis on art history as a disciplinary background and the clear privileging of physical objects. Walker, too, emphasized objects, and this is a clear point of connection with the digital humanities. The curation of digital cultural heritage, as supported by the digital humanities and memory institutions, often has a strong emphasis on objects taken out of their regular context, and sometimes the original museological context is also limited. In this sense, a web-based collection may not necessarily be different substantially from a physical museum, although the digital representation of physical objects may pose a practical challenge. This problem applies both to web-based material and to many traditional museums. Peter Galison and Jeffrey Schnapp suggest that collection-centric museums can learn from science museums, which are better at connecting touch and thinking, albeit in an arcade game format. They claim that traditional museums often use technology to offer the digital equivalents of “wall labels, catalogues, and brochures”:

However well executed and intended, the models of interactivity here employed still tend to reduce the contact of the physical with the digital to the notion of support.¹²

Technology tends to be used either to replicate objects and collections or to create digital wall labels. Not only are individual objects or sets of objects replicated, but ontologies and structures that reinforce certain conceptions and logics are created. What other experiential modalities, contextualization, and conceptual ideas might be possible? Cultural heritage institutions and the digital humanities overlap in this area, and the digital humanities can play an important role.

Cultural heritage institutions and the digital humanities have a common opportunity in the area of creating intellectual middleware.¹³ Both the digital humanities and memory institutions need to work harder to connect conceptual ideas to their technologically supported manifestations. For the digital humanities, doing this involves not only cultural heritage contexts but also creating research and educational tools and supporting scholarly expressions and modalities. The production of intellectual middleware, placed somewhere between scholarly issues and technical implementations, is a deeply collaborative, interdisciplinary, and iterative process and requires curatorial expertise. This function comports well with big digital humanities as an intersectional meeting place and trading zone and with curating as a liminal process.¹⁴ Susan Leigh Star and James Griesemer's primary case study for their pioneering work on boundary objects was a museum.¹⁵ The digital humanities can be a laboratory for intellectual middleware and for meaning making between the humanities and the digital. This requires curatorial integrity and the ability to work across professions and disciplines and to develop research and educational infrastructures. This is a key concern for big digital humanities.

Curating is also needed on a more practical level to accommodate such work, and the term *data curation* (or *digital curation*) is often used to cover the more data-centric part of the managing and making of digital resources. Data curation essentially involves the management of data, including methods of data capture, migrating data, and annotation and descriptive and interpretative information.¹⁶ Digital humanities offers a great deal in terms of accumulated experience and long-term investment in cultural heritage materials. Furthermore, almost any kind of data-inflected research in the humanities and the digital humanities could benefit from the methodological rigidity and technological expertise associated with these practices, especially if they are deeply embedded in a critical and material context. The data or digital curation community has to some extent called for such epistemic awareness.¹⁷

A specific example of such critical work is Emily Drabinski's scholarship on library cataloging. She traces how library classifications have been chal-

lenged as objective descriptions through the critical cataloging movement, but also argues that the correctness associated with such movements is problematic and that classificatory decisions “always reflect a particular ideology or approach to understanding the material itself.”¹⁸ Most data curation efforts may not engage with queer theory in the way Drabinski suggests, but such critical awareness is useful and, moreover, it would be possible to create experimental platforms and curatorial installations for challenging traditional classificatory thinking in this vein. As the area of data curation exemplifies, however, the most prevalent connections between curatorial work and the digital humanities tend to relate to the custodial and object-based model of curating. And although far-reaching, the description of curation in the book *Digital_Humanities* also seems focused on cultural heritage rather than active making beyond “organizing and re-presenting”:

To curate is to filter, organize, craft, and, ultimately, care for a story composed out of—even rescued from—the infinite array of potential tales, relics, and voices. In the Digital Humanities, curation refers to a wide range of practices of organizing and re-presenting the cultural record of humankind in order to create value, impact, and quality.¹⁹

At the same time, technological development puts pressure on curatorial practice more generally. While this applies to most types of curatorial institutions, some seem more susceptible than others. Focusing on art curation, Sarah Cook argues that over the past two to three decades, perception of museums as “storehouses of objects and gatekeepers of the history of art” has shifted in favor of views of museums as “sites of engagement.” In particular, new media art or digital art has played a destabilizing role in this process through its tendency to be participatory, time-based, interdisciplinary, and mobile.²⁰

The digital humanities would benefit from thinking of itself more as a site of engagement along the lines of Cook’s view of museums. Curatorial exhibitions have a natural sense of place, interaction, and situational fixedness that connects usefully to the digital humanities as a project. So while traditional curatorial practices struggle to adapt to distributed media, the digital humanities lacks some of the situational anchorage of curatorial practice. Such situatedness is relevant generally for digital humanities as a meeting place as well as specifically for exploring scholarly modalities outside the conventional ways of making scholarship.

Such work can be carried out through mostly digital platforms. For ex-

ample, *Digital Pedagogy in the Humanities: Concepts, Models, and Experiments*²¹ is a carefully curated effort to discuss and demonstrate digitally inflected pedagogy through keywords such as ‘queer’ and ‘interface.’ In trying to open up student writing to a networked world and reshaping how we conceptualize such writing, the online project *Social Paper* can be seen as a curatorial task involving a range of communities, identities, structures and tools.²² Alex Gil’s work to establish a framework for creating “low-decay” minimal editions of texts is also curatorial work driven by an interest in going beyond large-scale, high-threshold, expensive editing practices.²³

Experimental scholarly exhibitions or installations provide another opportunity to explore alternative genres of scholarship. Supporting the development of scholarly installations, whether mostly physical or mostly digital, is clearly a curatorial task. The artists and scholars involved remain the primary agents, helped by the curatorial and collaborative processes that lead to the production of such works. While scholarly installations could not normally be considered to be artistic expressions, overlap exists in terms of expressive modalities and the curatorial process.

The terms *curating* and *curation* have become more widely used in society, and while we may not want to draw on uses such as collecting photos of cookie recipes and organizing them on a Pinterest board, a more inclusive sense of curation can nevertheless be useful when discussing the digital humanities.²⁴ This looser sense can be exemplified by TED Talks telling us that curation lies at the heart of their mission.²⁵ In this case, curatorial practice seems to involve programming, selecting speakers, and essentially creating experiences. This ties in with the programming and curation built into museums and art galleries and requires integrity, administrative leadership, and many of the skills associated with curatorial practice.

Such curatorial practice is highly relevant in the context of big digital humanities, a liminal actor with integrity placed between other institutions and groups. Most center-like digital humanities initiatives do some curatorial work in identifying common themes and potential collaborators, organizing activities, offering fellowship opportunities, pushing traditional structures, and creating a common narrative. Curating is thus a key competence and process required for making the digital humanities.

A connection exists here to humanities centers and advanced institutes, which employ similar strategies. Humanities centers have existed in the United States for half a century. Facilitating a semester-long fellowship program at a humanities center in relation to a particular theme and organizing

associated activities is curatorial work. At Duke University's John Hope Franklin Humanities Institute,

The Audiovisualities Lab aims to provide a structure for encouraging teaching and research in the booming field of sound studies, complementing and challenging the existing primacy of visual studies. It offers a privileged space for research gathering of undergraduate and graduate students, and faculty, around a series of topics approached through specific classes, seminars, and workshops.²⁶

This institute uses humanities laboratories as a way to package a series of activities and initiatives. And if a digital humanities center works to find faculty across a university interested in multilayered mapping methodology and ends up organizing a series of workshops with those faculty members, this is also an example of curating. Affinities between the digital humanities and humanities centers could develop into more far-reaching partnerships.

On one level, all of these strategies seek to make critical meaning between the humanities and the digital—that is, to make the digital humanities. Doing so requires scholarly, administrative, and technological abilities as well as an honest interest in inspiring other people to grow, take on challenges, and see connections. The role of the curator has been discussed extensively in the literature, and big digital humanities needs neither an invisible, humble curator nor a high priest.²⁷ The curator in this context is instead a facilitator with integrity, someone who can both steer and stand back and who has respect for the work and ideas of scholars from a range of disciplines as well as of students, technologists, and artists. Curatorial work can be individual and also collaborative (including teams of curators). Curatorial practice in the context of the digital humanities differs substantially from other types of curating work, but many similarities also exist, as is evident in Ceri Hand's description of the relationship between the curator and the artist:

In my experience a good working relationship with an artist means that you both respect each others strengths & ideas, recognising that together you can make something new & hopefully exciting, that perhaps either one of you wouldn't come to by yourselves or with anybody else. . . . [T]he "power" balance shifts all the time throughout the creative process. . . . [I]f you have set off on the right foot then this is an interesting process.²⁸

Managing a digital humanities operation or project similarly often involves working with researchers, teachers, students, and other actors and ideally allowing oneself to be changed as much as the people with whom one engages. An important part of making the digital humanities thus becomes establishing processes and building trust that can support such work. This work is both intellectual and material.

Curatorial Qualities

On a practical level, some qualities are particularly relevant for curating the digital humanities: managing the field's in-between position, tracing and shaping emerging patterns, and combining integrity and respect.

First, since the digital humanities sits in between disciplines, departments, competencies, ideas, and technologies, managing and embracing this liminal position is a critical component. How do we support and facilitate first-rate work between the humanities and the digital? What scholarly, educational, and methodological crossovers can be suggested? How do we integrate critical thinking and making? What might a scholarly exhibition or installation look like? How can intellectually productive meetings be facilitated regardless of whether they occur within a discipline, between disciplines, or with external parties? What intellectual middleware do we need? What infrastructure can meaningfully support the intellectual pursuits that drive some of our best researchers? How can technology and methodology push intellectual agendas? How do we support individuals who want to work outside their disciplines' comfort zones? While no single strategy or response can answer all these questions, the idea of digital humanities as a meeting place contains strategies that can help. This meeting place needs to be dialogic, generous, challenging, and open to renewal. It needs to bridge intellectual and material interests. It needs to encourage risk taking, experimentation, and exploration. These qualities require curatorial work, trust, and curiosity.

Second, the ability to see and sometimes to shape patterns may seem quite abstract, but in part it involves knowing about good scholarship, the direction in which the best research is heading, upcoming interdisciplinary challenges, exciting milieus, technological advances, and emerging areas. An April 2013 symposium at the Maryland Institute of Technology, *Shared Horizons: Data, Biomedicine, and the Digital Humanities*, sought to

create opportunities for disciplinary cross-fertilization through a mix of formal and informal presentations combined with breakout sessions, all designed to promote a rich exchange of ideas about how large-scale quantitative methods can lead to new understandings of human culture. Bringing together researchers from the digital humanities and bioinformatics communities, the symposium will explore ways in which these two communities might fruitfully collaborate on projects that bridge the humanities and medicine around the topics of sequence alignment and network analysis, two modes of analysis that intersect with “big data.”²⁹

Curatorial work went into this symposium, sponsored by the National Endowment of the Humanities and carried out in collaboration with several other national bodies: choosing the topic, working with the communities, talking to funding agencies, structuring the event, selecting the specific methodologies or modes of analysis, and choosing the keynote speaker and other principal participants. Not every academic event is a massive curatorial effort, but some are, and this kind of work is part of the curatorial profile of big digital humanities.

Such curatorial practice not only involves what is considered new but also involves picking up traditional themes in humanities scholarship. Curators must possess a critical awareness, a sense of what is good work, and the skills needed to collaborate closely with other parties. Furthermore, curatorship in this context requires a good sense of established scholars and their work as well as the ability to identify and sponsor early-career faculty, graduate and undergraduate students, teachers, and technologists as well as nascent themes and ideas.

Mixing junior and senior participants can be a very useful strategy, and it is wise to avoid making junior participants subservient or overly reliant on their more experienced peers. Everyone involved should feel challenged, and in this context, shaping entails listening to key people, identifying themes, recruiting scholars, hosting activities, and building infrastructure. At the same time, curating also includes balance and adaptability and the skills needed to support up-and-coming work and long-term engagement with significant topics. One of the strengths of a big digital humanities framework is the play between the digital humanities and humanities disciplines and that some longer-term work can be absorbed by other disciplines and departments, freeing up the digital humanities to engage with other themes and technologies.

Integrity, the third curatorial quality, is often omitted or discussed only im-

plicity in the curatorial context. References to integrity often occur only in relation to the integrity of the artist and the artist's vision or of scholarship.³⁰ Furthermore, when distinctions are made between curators as invisible, humble curators and as high priests, neither archetype necessarily invokes much integrity.³¹ Curatorial integrity requires navigating the waters in between many strong actors and certain situational conditions and constraints. Doing so is not necessarily easy. Curators with strong backgrounds in particular disciplines or practices associated with the digital humanities initiative in question may have more success as long as they also have an equally strong investment in the overall goals of the initiative and are institutionally and interpersonally savvy. Without integrity, the digital humanities might well become a service function or a passive onlooker rather than a proactive and inspirational agent in a range of scholarly, educational, and technological processes. Integrity must be combined with humbleness and respect, however, and managing this position is a key challenge for curatorial work in the digital humanities. For example, creating digital artifacts and intellectual middleware might require challenging researchers or educators involved in the process as well as technologists and artists. The curator's primary role here involves facilitating an intellectual direction or argument that is materially enacted in such a way that new knowledge and insights can be produced.

Curators must strike a balance between integrity and respect. Curatorial work involves more than just being nice and genuinely interested—though these are key qualities. It also requires a willingness to point to connections, competencies, and possibilities and sometimes to be clear about which pathways or solutions make the most sense in a particular context or appear most interesting or challenging intellectually, technically, and practically. As result, curators must sometimes say that something is not interesting, worthwhile, or feasible. In most cases, constructive dialogue and suggestions will suffice, and intervention will not be needed. Curators may lack the authority or function to question the premises of individual projects, but being involved and having a milieu that supports dialogue and experimentation is often all that is required.

In other cases, particularly when projects or themes are closely associated with the core operation of a digital humanities initiative, decisions may have to make the preferred choice very clear. Balancing different parts of a digital humanities operation may require preventing one set of interests to control the initiative's direction. Curators may also have to overrule specific expertise, prioritize specific sets of methodologies, or point to missing perspectives.

Maintaining this balance can be tricky, and intuition-level work often requires simultaneously honoring and resisting academic structures—tweaking but not breaking. It involves gently pushing intellectual, technological, and institutional questions while maintaining a high level of integrity. And it involves having something to offer and on a very simple level supporting and facilitating good work.

Big digital humanities depends on managing the field's liminal position, finding and shaping points of interaction, and combining integrity and respect. Such curatorial work is complex and exciting and always involves dialogue and other people.

Empowering the Humanities

Big digital humanities works to empower people who want to explore questions, perspectives, methodologies, and technologies that would otherwise be difficult to pursue as well as lends support and sanction to people with ideas and drive. The in-between position of digital humanities can be used to empower individuals and groups inside more traditional structures, such as departments, as well as within the digital humanities itself.

Individuals who work within large organizations such as universities are both enabled and restricted by institutional structures. Many things that we take for granted—access to library materials, work space, and largely functioning administrative systems—enable us to do scholarly work. Anyone who has stepped outside such an institutional structure or has not had access to it knows that the lack of such resources can be palpable and disempowering. At the same time, we may feel restricted by the disciplinary structure of academia, territoriality, rigid administrative structures, limited resources, and slow reactions to new ideas and initiatives.³² Meeting places such as the digital humanities can offer empowerment by breaking up some of these structures, channeling resources, and taking risks. Individuals and groups within institutional structures can thus be helped to do things that might not otherwise be possible. Such benefits can be achieved without taking a confrontational stance toward departments when the digital humanities occupies a different position in an institutional ecology. The advantages of an intermediate position are part of the foundation of big digital humanities, and such a position allows far-reaching collaborations with disciplines, departments, and other actors.

The idea of empowerment in relation to organizations and businesses of-

ten presupposes that the candidates for empowerment already occupy a relatively privileged position. One might be disempowered in the context of an organization but privileged to be within that organization. This general position of empowerment comes with responsibility and points to the importance of having a civic and public role in the local community and of working with subjects that are meaningful on a larger scale. HUMlab is in many ways a very privileged platform, and we have a long-standing collaboration with various local and regional community groups (including several activist and comparatively underprivileged groups), and many of the topics around which we orient our work address issues relating to power structures (for example, gender perspectives on computer games and folkloristic perspectives on indigenous storytelling), environmental concerns, and the politics of platforms. The large civic question of societal, political, and cultural empowerment is vital, but the empowering potential of the digital humanities remains important within the context of academe.

What can small-scale empowerment entail on a more practical level? As a junior scholar trying to get traction for the Virtual Wedding project, I benefited greatly from the support of the early organization associated with HUMlab. At this point, we mainly needed infrastructural resources to do work with virtual worlds. I remember the benefits of employing an open, technologically experimental, and malleable lab space instead of an administrative lab with restricted access. I also remember the relief of feeling that we had strong support, that the people behind HUMlab really wanted this, as opposed to the slight resistance or indifference departments often offer despite a basic level of sanction. Out-of-the-ordinary ideas, especially if experimental, do not always sit well within departments, and the support of an intermediary digital humanities platform can help individuals and groups carry out and validate such work. This is often also helpful to the departments.

When I later found myself part of the HUMlab management, I came across a range of individuals and initiatives interested in working with us, and I was sometimes struck with how little we needed to do to make a big difference. When a group of cultural studies and literature students came to us to ask whether they could use the lab to practice “reception talk,” we were very happy to oblige. We contributed only the space for a few evening hours and some snacks, but the students put in much work, and the simulated professional reception event was useful even if it was not really digitally inflected.

In another case, a very engaged doctoral student who was researching creative writing websites suggested doing a public panel discussion on the future

of literary critique in the digital age. She had already contacted a few possible speakers, and we immediately agreed to sponsor the event. The immediacy of such decisions is significant. We helped to shape the concept, but again, most of the actual cost was the time invested by the junior scholar. Many such activities and projects eventually obtain funding from elsewhere, but it is quite important to have an institution that can offer support and buy-in, take a little bit of risk, and sometimes guarantee the cost, especially as higher education faces increasing economic constraints and administrative control, and becomes ever more compartmentalized. While risk taking can certainly be about money and resources, it also involves taking intellectual and institutional risk through asking difficult questions, challenging established structures, and mobilizing for critically driven action.

This empowering function applies not only to events and activities but also to supporting project work, initiating research strands, offering fellowship and training programs, and supporting different kinds of external funding applications. In many cases, all that is needed is a speaking partner. At other times, we can help to build a simple prototype, involve an international expert, or talk to a game company. The important point is that the digital humanities can be instrumental in enabling people to develop and test their ideas. All ideas or interested parties can probably not receive extensive amounts of time or resources, but there has to be an openness to ideas and willingness to engage. People can help each other, too, and a digital humanities operation can facilitate by forming groups or having open time slots in a physical or virtual space.

One building block of the platform of digital humanities is infrastructure, which can have an empowering function in itself. Access to equipment and associated competencies can help scholars and others to imagine what might be possible at the intersection of the humanities and the digital. Not only is this true of generic and instrumental technology, especially if used in conceptually interesting ways, but there is much to be gained from encouraging experimentation and exploration in relation to less predetermined infrastructure. Encountering conceptually and technologically interesting setups and discussing ideas with people can certainly be empowering, especially with a high degree of accessibility, a low threshold, and a culture that supports play in relation to intellectual and technological engagement. High-quality open access resources and tools can play an important role here, as can open and accessible lab spaces. Empowerment may also be found, however, in not having to rely on others for every move. For example,

everyone does not need to be an expert on coding, but scholars can benefit from having a good sense of technological platforms, not only because staff resources are necessarily limited but also because one can learn and imagine through engagement with technology.

Scalar is a multimodal production platform and infrastructure that offers scholars ways of constructing intellectual arguments by drawing on a repertoire of expressive modalities not normally present in most published scholarship. Media theorist Nicholas Mirzoeff, who used the platform for a companion piece to one of his books, *The Right to Look: A Counterhistory of Visuality*, stresses the importance of being able to include nontextual media:

Scalar allows me to share a wide range of North African and European cinema, newsreel footage, guerrilla documentary and photography with the reader in a way that is obviously not possible in print.

Mirzoeff's companion piece, "We Are All Children of Algeria: Visuality and Countervisuality, 1954–2011," seems a particularly good match for the platform both in terms of the topic and the material. However, using Scalar also allows Mirzoeff

to explore a more complex form of narrative in which multiple threads (or "paths" as Scalar calls them) can be developed. This opens up a new set of possibilities for comparative and cross-cultural work that have only just begun to explore in digital humanities work but which I think are among its most fruitful possibilities.³³

This technology is empowering in that it enables the scholar do to work otherwise not possible. Integrating visual materials is empowering on a more direct, instrumental level, while shaping new forms of narratives is empowering on another level. We are more likely to predict the impact of instrumental use of technology, while experimental use is more likely to yield results that we cannot foresee. In addition, results are less likely to be predictable when the technology is present in the digital or physical environment than when the scholar specifically uses the technology. Seeing, experiencing, and discussing technology and the digital in an intellectually rich milieu can stimulate engaged scholarship and education in ways that might not otherwise be possible.

Similarly, a media studies scholar may work in HUMlab on an individual book project with some digital inflection while simultaneously engaging

in a dialogue about how that work relates to the infrastructure in which the scholar and the work are embedded. This is not an instrumental or one-way relation but rather a complex, iterative, and (at least ideally) empowering interrelationship among people, ideas, and infrastructure that is central to the digital humanities. The media scholar's work and associated disciplinary traditions influence HUMlab. For instance, being situated in a carefully designed space surrounded by screens may influence how the scholar thinks about material and research questions. This process may lead the scholar to create material installations. In this sense, research is shaped by the infrastructure and the ideas behind it at the same time that the infrastructure is explored, defined, and made by the scholars and technologists involved.

However, platforms such as Scalar and the HUMlab screenscape offer constraints as well as possibilities. They are situated and conditioned in many ways, and the discourse surrounding them does not necessarily bring up these phenomena in any depth. The HUMlab screenscape clearly privileges visually oriented knowledge production and is part of a high-cost, lab-based setup, which comes with certain assumptions. The particular model of knowledge production and representation built into Scalar is not necessarily problematic but is important to bear in mind. And even if the possibilities are channeled through the technical platform, they are really the result of a combination of political, institutional, conceptual, networking, and technological activities. In addition, the platform is situated on multiple levels and points to how empowerment is inflected naturally.

Mirzoeff also touches on collaboration, another type of condition relevant to the digital humanities and empowerment. He argues that collaboration "is built into the platform" since Scalar projects are collaborative efforts involving the authors, designers, and other users of the platform. At the same time, his piece possesses a very individual sensibility, leading to questions about how much collaboration is built into the platform and how much results from the particular process in which Mirzoeff engaged, which among other things included an externally funded summer institute.

From a big digital humanities perspective, empowering different epistemic traditions and working styles is highly relevant and means accepting both more collaborative and more individualistic traditions as well as other modalities. In this light, the emphasis in the digital humanities on collaboration might become problematic, not because collaboration is not important but because a variety of working and organizational styles and strategies are needed.

Individual-Collaborative Empowerment

Constructing the digital humanities as inherently collaborative often depends on seeing other kinds of humanities as inherently individual. According to *Collaborative Research in the Digital Humanities*,

Collaboration within digital humanities is both a pertinent and a pressing topic as the traditional mode of the humanist, working alone in his or her study, is supplemented by explicitly co-operative, interdependent and collaborative research.³⁴

The image of the humanist working alone in his or her office is quite pervasive and persists both within and outside the humanities.³⁵ In actuality, most humanists are collaboratively minded, even if collaboration is often not manifested in the final scholarly products and even if much of the work process is individual. Seminar culture, scholarly networks, conferences, and collegial engagement are all part of the collaborative texture of humanities work. Nevertheless, the humanities is neither massively collaborative nor structured to meet challenges that require interdisciplinary sentiment, heterogeneous teams, or technological infrastructure. This is where the digital humanities can play an important role in supporting such work, even if digital humanities work is probably not as inherently collaborative as proponents often contend.

How can we empower different work practices within the digital humanities that focus on the individual-collaborative parameter? On a very simple level, drawing on the discussion of translucence as a design principle, the design of scholarly environments (whether mostly physical or mostly digital) can respond both to individual and collaborative sensitivities in a lab environment. For example, the mapping of professional roles and space is not a given. Technical work can be highly individualistic and can require the equivalent of an office or study, although in some cases, the use of headphones in an open office environment or sound-insulated sofas in lab space suffices. And many academics no longer have traditional offices. Accommodating relative privacy in a collaboratively oriented and technologically inflected milieu is a balancing act that embodies the idea that allowing different practices, engagements, and crossovers is necessary to making the digital humanities. Allowing people to see what other people are working on while simultaneously

enabling individual separation is important. Semitransparent workplace arrangements as well as the use of headphones can be useful in this context. These ideas apply to digital humanities initiatives without strong physical manifestations, but having a physical space is often helpful and makes some of these connections more obvious.

Translucence as a design principle can also be extended to institutional-level strategies, thus enabling working styles and epistemic traditions to mesh. For example, multiple affiliation—connections to several institutions at the same time—draws on the importance of linking the digital humanities to other departments and disciplines and of creating long-term commitments to such exchanges. People with double affiliations can be involved in changing both worlds (institutions), and individuals not only can help forge strong ties but are empowered by working across boundaries and using both institutional structures to build momentum.

Much potential lies in the spaces between established structures, disciplines, and areas, and big digital humanities draws on this potential. The quality of being in between has an empowering function, as Hakim Bey highlights with his “temporary autonomous zones,” which elude formal structures of control and are created on the boundary lines of established regions.³⁶ Bey’s work points to the importance of a dynamic footprint, and even if the digital humanities can be fairly stable in terms of organization, it also must have the ability to shift ground, to approach new areas, and to adapt to the actors involved at any given time. In a fairly static institution such as higher education, such dynamic zones can serve very important functions.

Peter Galison demonstrates the possibilities of combining the identities and practices associated with different epistemic traditions and how this tension offers empowerment:

Different finite traditions of theorizing, experimenting, instrument making, and engineering meet—even transform one another—but for all that they do not lose their separate identities and practices.³⁷

Galison’s point echoes the discussion of multiple affiliation as an empowering mechanism as well as the ideas behind big digital humanities more broadly. Empowerment can also be found in low-key work across different disciplines. Supporting collaborative cultures is thus critical to the digital humanities on multiple levels. James Cronin notes the importance of collabora-

tion among actors within the core digital humanities operation and among disciplines:

While it is understandable to want to reproduce structures institutions are familiar with, nevertheless, no matter what structure institutions may adopt, it is essential, I feel, to foster collaborative cultures between all participants be they academic, technical, or academic-related post-holders. Forming such cultures requires leadership, institutional support and a willingness on the part of all participants, irrespective of their individual disciplinary backgrounds, to engage in dialogue and dissemination.³⁸

Deeply collaborative work requires a supportive culture, which, as Cronin suggests, involves a range of factors. Again, engaging in dialogue is important regardless of disciplinary background. In addition, institutional questions and curatorship resonate with Cronin's list of factors.

However, we help to create the conditions for our own empowerment, as Cronin hints when he stresses the importance of a willingness to engage. Such cocreation occurs when people take part in a culture of dialogue and exploration. Mutual respect is an important factor here, as research on interdisciplinary practice points out.³⁹ This does not mean that there is no productive sharpness or tension. According to Michael Shanks, "Collaboration does not mean consensus—dissent is good. Enable such a diversity of voice."⁴⁰ Taking diversity of voice seriously means to be inclusive and incorporating participants beyond traditional patterns of inclusion. Roopika Risam points to the often necessary difficulty of carrying out such intersectional work.⁴¹ Empowerment in this sense can be uncomfortable, and informed and sensible curatorship is important. Élika Ortega importantly asks how we can "foster a true DH ecology of knowledge, that is critical, intersectional, interdisciplinary, and global?"⁴²

Empowerment comes into play with the digital humanities in many ways. In an everyday setting, of course, humanities scholars are empowered by access to digital resources and tools. In the context of big digital humanities, the field's intermediate position helps to create a range of possibilities regarding established structures and disciplines. Empowerment exists across disciplines and epistemic traditions and among people through the field's position as a meeting place and contact zone. Individuals and groups can be empowered to explore digitally inflected research questions, activities, and infrastructure in a way that would not easily be possible without the digital

humanities. We can also be empowered to change ourselves and to encourage real diversity. Infrastructural resources can shift perspectives, expressions, and subjects of study. At the same time, such resources are conditioned and constrained, as we must remain aware both while doing our own work and while doing critical work on these conditions.

Making Spaces

We tend to associate institution building and curating with physical environments. Most university departments have hallways with offices, and traditional curating is most likely to happen in a physical museum or gallery. Some examples of empowerment are similarly linked to physical space as a platform. At the same time, universities, cultural heritage institutions, and many other organizations are struggling with how to engage with an increasingly digital world. While massively open online courses or digital museums will not remove the need for physical space, they put considerable pressure not only on space but also on these institutions more broadly. What does it mean if university education does not require physical space in the form of a campus and buildings? Can browsing a museum website replace the experience of visiting a physical museum? Such institutions are strongly grounded in their physical spaces, so this is not an either/or question: we engage both with digital and physical materiality. The digital humanities can arguably contribute to the ongoing debate in this area. Material engagement is, however, also relevant for how the digital humanities organizes and builds itself: it is relevant for making the field.

Interest in space has recently been renewed, driven both by technological development and by an intellectual reengagement with space as a category.⁴³ Geographical information and positioning systems have become infrastructural cornerstones, and maps provide a convenient way of organizing and accessing digital information. These systems also have built-in notions of what space actually is and how it can be described and understood. The so-called spatial turn is often traced back to the work of Henri Lefebvre and his discussion of the production of space and of space as a social product.⁴⁴ Similarly, research has demonstrated that creative ideas “emerge and develop in complex, dynamic interaction between the creator and his or her environments.”⁴⁵ Infrastructure is inevitably situated and is never purely immaterial. David N. Livingstone argues for the interrelation between spatially situated practice and knowledge production:

In important ways, scientific knowledge is always the product of specific spaces. To claim otherwise is to displace science from the culture of which it is so profoundly a part.⁴⁶

It is critical to connect the ideational underpinning of any operation to material manifestations, whether physical or digital, and to appropriate infrastructure. Generally speaking, big digital humanities as a meeting place and contact zone will benefit from both physical and digital manifestations. These manifestations are increasingly merged, and the digital world no longer seems so separate from the physical world. Walking around at an airport talking to a face on a tablet screen may not yet be fully naturalized behavior, but we are no longer concerned with separate and decontextualized video conference setups and stationary computers. A range of technologies supports this development, including 3-D printing and various mobile technologies, but the most critical factor is the quick social and cultural uptake of such technologies.

Since the late 1990s, many resources have been invested in building digital and online spaces, but the integrity of such spaces is difficult to uphold in a diversified and mobile media ecology. In particular, the idea of separate online places divorced from our physical world no longer seems tenable as the distinctions between physical and digital materiality become increasingly blurred. Recent developments seem to indicate a reassertion of physical space, a decentering of the idea of the primacy of digital space in certain discourses, and a realization that as embodied beings, we are profoundly situated spatially and materially. Digital materiality shapes and interacts with physical materiality, and this interaction plays out in embodied space, which is constructed culturally, socially, institutionally, and of course through our bodies.

Humans are always physically situated, even when taking online courses or engaging in distributed computing. And the details of that situatedness are important. It is now common to see as many screens as customers in coffee shops. I am writing this at my favorite table in a Umeå café with my laptop, iPad, and phone on the table in front of me. I am somewhat closing off the world around me by using headphones and listening to music. I carefully choose where to sit in places like this—probably more carefully than most customers—but I am certainly not the only one who cares about space. People pick seats in these types of spaces based on factors such as availability of outlets, interest in communicating with other patrons, location of and interest in TV screens, and the presence of other customers. I have observed that in most coffee shops, patrons follow patterns in selecting certain seats first. In

the coffee shop on the third floor of the Barnes and Noble bookshop in Union Square in New York City, a couple of tables close to the bay windows overlooking Union Square are usually taken first, often by the same people. Outsiders who wish to take these spots must not only arrive very early but also infringe on an established social order. Other positions are less popular in the long term. On one level, this is a matter of simple arithmetic, but if we take seriously the spatial situatedness of knowledge production, we need to consider such aspects when considering how to make the digital humanities.

A great deal of physical space is not necessarily required to implement the big digital humanities. Network models, multiple-campus platforms, working groups, and online environments can be critical to operationalizing the field. For small colleges and large, dispersed universities, it makes more sense to implement a network model or tap into platforms such as HASTAC than to build a physical digital humanities center. Even with designated space, it is a question of how much is needed. Make-do physical spaces such as a prototype lab or pop-up space can be more appropriate for many initiatives and projects. There is sometimes a sense that institutional space of this kind has to be vast, but small, well-grounded, and active spaces can often be attractive and functional.

It is not, however, necessary to choose between the physical and the digital. In most cases, any digital humanities operation has some kind of physical instantiation, and it is very unlikely that a physically situated operation would lack digital instantiation. One key challenge involves making the line between the physical and digital porous or maybe eliminating it altogether and encouraging different types of integration.

Physical space is extremely valuable in many contexts. Space partially structures our experience, and vice versa, and we coconstruct space with others and with our surrounding environment. Consequently, knowledge production, intellectual exchange, and development work are spatially situated.⁴⁷ From the point of view of big digital humanities, space can also be quite useful in terms of channeling resources, getting people together, manifesting work and ideas, and enabling deep collaboration. While space is an important parameter, we also need to be careful not to be deterministic about the function of space in knowledge production. Many other parameters condition and shape knowledge production. For example, the culture built around a place and institution plays a critical role. Also, a beautifully designed lab without people does not make much sense, and people can shape spaces to suit goals and visions even if the conditions are not optimal.

Space is institutional, symbolic, and ideational, as Shannon Mattern stresses in her work on public libraries and space:

The architectural design process provides an unparalleled opportunity for institutional closet-cleaning and psychoanalysis. What better time to prioritize the institution's values, to reassess its purpose, to reconsider what ideas and ideals it embodies, and to refashion its image than when considering how to physically embody these values, to structurally accommodate the functions, to materially symbolize these ideas, and to reflect these images? Through the design and construction of a new home, libraries reassess or reaffirm who they are, they reconsider what they reflect on how to assert their continued relevance in an era in which their obituary has already been written by a myopic few.⁴⁸

Mattern's work demonstrates the hopes and visions that can be ascribed to spatial reconfiguration. Much of her description does not concern space but rather prioritizing, reassessing, reconsidering, and refashioning operational ideas and ideals. Again, we need to be careful not to take this argument too far while acknowledging the institutional and symbolic power of space. And we need to ask who does the ideational work and for what reason.

As Mattern shows, reconfiguration is rarely a neutral process, as it is driven by different kinds of internal and external pressure. One example of current pressure is the role of the digital in relation to both public and research libraries. One of the main challenges faced by libraries and digital humanities initiatives is how to be simultaneously physical and digital. This challenge arises not so much from the distinction between the physical and the digital or from moving from one domain to another but rather from about thinking carefully about who one is and where one wants to go and adapting or creating material manifestations based on this ideational foundation.

We also need to take seriously material that is primarily digital. The exact materiality of the platforms and underlying architecture we use and create will shape us, our work, and our physical materiality. Widely used systems, such as presentation software and learning platforms, have an enormous impact on how we manifest ourselves and carry out our work. The fact that the most commonly used piece of presentation software is built on a slide paradigm (serial presentation of slides) is significant. For one thing, it means that thousands of talks, lectures, and discussions carried out at any point in time are facilitated by a platform that structures the presentation situation in terms

of presenter and audience and that does not easily accommodate multiple threads, multiple screens, distributed “live” collaboration, or a different presentation situation. This platform, in turn, is built into other technical systems and into expectations of what it means to give a talk, have a dialogue, or make a presentation.

What does this mean for the digital humanities? First, we should not underestimate the importance of the material qualities of spaces and platforms that are core to our operation, regardless of whether they are physical or digital. The details of these configurations matter and are linked to our vision and goals as well as to questions of identity and well-being. Second, we need to take the complexity of our operations into account when creating space and infrastructure. Doing so is particularly important when moving between physical and digital materiality, as we run the risk of forgetting important qualities when we move mostly physical operations in a digital direction, especially when those qualities are not clearly instrumental or necessarily computational. Third, ideas, space, and infrastructure are worth little if not used, negotiated, and changed by people. Individual people’s engagement plays a crucial role, just like people-centered processes such as curatorship and empowerment.

Collaborations in Space

In HUMLab, we have experimented since the early 2000s with incorporating distributed resources in the physical space, including virtual worlds, remote participants, and Twitter and chat feeds. For an operation grounded both in physical and digital materiality, this approach makes sense, and it has been important to integrate these distributed materials and presences in the lab environment in such a way as to not make them separated or too instrumental. In the early 2010s, we started to bring in remote people via Skype on big screens—portable screens measuring between fifty and sixty inches. One of the first times we did this, at a 2011 conference, the speaker’s screen was wheeled in on a mobile stand. His presentation material was shown on the main screen (just like with the speakers who were physically present). The material configuration and movement of the screen played a significant role, just like the prominent slot given to the remote speaker. If he had appeared on the main screen along with slides, the effect would have been quite different in terms of size, comparison to the local speakers, separation from the slides,

and embodied presence. It turns out that screen stands can have an almost uncanny human sensibility.

We have also used wall- and pillar-mounted screens to accommodate remote participants (as well as for many other things), and here the localized sound plays an important role, enabling people to walk around and chat individually with the on-screen participants. HUMlab's new space on the Arts Campus has a wall of four asymmetrically positioned screens, two in portrait mode and two in landscape mode. For a spring 2013 workshop on the digital humanities, we used these four screens and a portable one to bring in five international participants.

Each event of this type is an experiment, and we have learned, for example, about the importance of giving feedback to the remote participants. They benefit if they can see the whole space as well as the other remote participants, and we use a ceiling-placed camera to give an overview and deliver this feed separately to the participants.

This example demonstrates how space can organize physical and digital materiality for the digital humanities. This is an intellectual-material argument, grounded in the assertion that space and infrastructure can be an important part of (and even prerequisite for) the arguments we make and the work we do. The digital humanities benefits from a strong spatial presence. This is particularly true for big digital humanities, which sits between disciplines, centers, and other actors; works with boundary objects; makes humanities infrastructure possible; and functions as a contact zone. Tension can arise between working with digital technology and being physically situated, but the case for space seems fairly strong. However, many other kinds of models exist for doing work in the field, and there is no one-size-fits-all model. Also, space is notoriously difficult to come by in most institutional contexts. But given that the value of such an environment goes far beyond the field itself, it might be possible to convince leaders of the importance of such prioritizations.

Having a space can be quite useful to university and regional leadership in terms of channeling humanities work and interaction and in providing a site to showcase to outside visitors. The humanities traditionally has few such sites, and being seen as an exciting place to visit can have clear value. In the fall of 2013, the king and queen of Sweden visited HUMlab. The royal family may no longer wield much power, but the king and queen were accompanied by university and regional leaders as well as many others, and all of these peo-

ple heard the story of HUMlab. A week later, the minister of commerce came to HUMlab to discuss the digital humanities and entrepreneurship.

Space can also be shared institutionally. A fairly common strategy is to form digital humanities labs to work together with university libraries, who often have space and whose operations have changed fairly dramatically. Such joint ventures can be quite powerful and can help with the packaging of humanities infrastructure, but both parties must be willing to change and to devise a joint intellectual and material agenda. Dissonance can occur between the library model of infrastructure and what the digital humanities may need, but rightly done, both institutions can benefit from an alliance.

Other possible partners include humanities centers. A strong research-driven vision of humanities academic infrastructure can motivate the need for space. With external applications for infrastructure funding, the university may be convinced to put up space (among other things) as its contribution if the applications are successful. And even if such funding is mainly for research, it is unlikely that anyone would stop the inclusion of students and others in such an operation.

A good example of an argument for a digital humanities space in a library comes from a group of scholars at Columbia who wrote an open letter in favor of a digital humanities studio in which they noted that such spaces can facilitate THATcamps, open labs, and other “emerging models of getting together, sharing knowledge, and getting things done.” Although some of these models are distributed, their function stresses the importance of a local constituency and associated space. The authors also emphasized the need for “a neutral, flexible space for experimentation in the humanities” based on such environments as art studios, startup spaces, maker spaces, and science laboratories, which are “characterized by open, grassroots architecture, a variety of working surfaces, the presence of projectors and whiteboards.”⁴⁹ The resultant space, Studio@Butler, is described as “a collaboratory for educators, scholars and librarians” and a “bring-your-own-technology space.”⁵⁰ The inclusion of librarians is significant, and long-term success is of course more likely if the collaboration between librarians and scholars is genuine.

In other cases it might be more useful to align with science labs to stress the need for more costly humanities infrastructure. Another supporting factor can be the interest in such spaces outside the humanities, and how these spaces matter for the university as a whole and for connecting to the world outside the university. One possibility is to write a five- to ten-page document

that connects the underlying concept with the space as well as its importance for research and education.

Interlude 8: Operating on the Radar

In September 2013, the dean of the Faculty of Arts and Humanities at Umeå University called a meeting to discuss the allocation of doctoral positions for the next four years. This a very serious matter: in Sweden, doctoral students cannot be accepted unless there is funding. Almost all graduate positions are fully salaried for four years, but only a limited number of positions are available. Our standard practice had been to allocate positions based on indicators such as the throughput of students and the number of qualified advisers. At this time, between fifteen and eighteen positions were to be filled, a very significant investment for the faculty. In Sweden, a substantial part of research funding is spent on graduate students.

Other commitments had originally meant that I would not be attending the meeting, but some of those were rescheduled for other reasons, and by the time I realized that the others were less important than the meeting, I was twenty minutes late in arriving. When I got there, the room was overflowing: some faculty members were standing in the hallway and trying to peer into the room. I grabbed a chair from another classroom and found a spot inside. Many senior faculty were present as well as some junior scholars and others with an interest in the matter. The room was crackling with energy, and I realized that I had probably missed the most intense discussion, which was likely a good thing.

The dean had analyzed the present allocation system and found some basic problems. It was conservative in that the same disciplines tended to get the bulk of available positions, and it was not strategic in the sense that very few positions were geared toward specific areas. Furthermore, it was largely based on the conception of doctoral work as a series of individual projects and missed the idea of the students as part of a larger group. He offered a radical and surprising suggestion: allocate all the positions for one period to a strategically prioritized area. Each discipline would get at least one position, and about fifteen salaried four-year positions would be connected to one specific area. And the area he proposed was the digital humanities.

He was seeking not to take the positions away from the departments and disciplines but rather to make sure that all the positions had some type of

digital inflection. He suggested that these positions would be tied to projects defined by the departments and dangled the possibility of external matching funding for such an initiative. Furthermore, the dean pointed to HUMlab as a platform and a competitive advantage but did not make it the center of the proposal. In an academic culture where prioritization is not necessarily easy and where large strategic assessments may not be plentiful, the dean's proposal was daring and quite provocative.

The proposal challenged the epistemic and institutional tradition of the humanities. Senior humanities faculty do not necessarily think of their graduate students' work as projects or as connected to a designated research theme. Other faculty members felt unease about the idea that the humanities should invest in something because external interest (from funding agencies and others) existed. Someone said that she was inclined to say no to money of this kind. Several other participants brought up the speed of the suggestion, which was not compatible with the way the humanities usually operates. Comparisons to the sciences were also made, and one person argued that if we were to adopt a science model, we should do so completely rather than trying to come up with our own halfhearted version of it. Others brought up the strong belief among Swedish humanists that ideas for thesis projects come from the doctoral students themselves. Allocating graduate positions based on a strategic focus is thus a fairly foreign concept. Yet other speakers brought up possible problems with competent supervision as well as the issue some potential applicants would be shut out because their planned work was not digitally inflected.

The proposal was also provocative because of the choice of the digital humanities as a prioritized strategic area and the sense that the digital is a discipline-neutral area and boundary object. One junior faculty member declared that the field was really no longer as current. A senior faculty member likened the proposal to the royal warship *Vasa*, which sunk on its maiden voyage in 1628: "Remember this image!" Another senior scholar strongly opposed the idea that the digital can be a perspective, and someone else contended that the digital is already part of the disciplines.

Even though the discussion seemed unnecessarily pointed at times, I quite enjoyed it because it was the sort of open, strategic conversation not very often seen in academe. For my part, I tried to connect this initiative to past investments in the field (and HUMlab). I also suggested that it would be possible to have an open call for digital humanities graduate students without having the departments specify projects. Several moderate voices noted the rashness of

making such a large move all at once, which seemed to be a sensible perspective. Many faculty members were not particularly happy, but there was also a great deal of support, some of which was not vocalized at the time.

Any institutional platform is also a story. In many ways, HUMlab's story has distinct appeal. Making the digital humanities is also about finding and articulating these stories. At the same time, as such stories are retold and packaged over time, they naturally tend to focus on the successful and exciting moments rather than the hardships and mistakes. HUMlab has had good support, and much of its story is positive, but it is also a story of institutional struggles, resistance, and disappointments. This story is also important, particularly in relation to building new platforms for the digital humanities. At the same time, we also need to avoid becoming caught up in a story that merely repeats institutional critique. Someone once pointed out that my presentations of HUMlab drew on a mild form of opposition to the faculty, and I have subsequently tried to be clear that HUMlab is part of the faculty rather than an outsider—not because I was afraid or felt pressured, but because it made sense.

This meeting reminded me of Sandy Stone's 2006 comment that as director of the ACTlab at the University of Texas, she preferred to "operate under the radar."⁵¹ I was now quite aware that we were no longer operating under the radar—if we ever had been. Though interest in and support for HUMlab had grown over the years, the majority of faculty did not actively engage with us. The dean's proposal changed that fairly drastically. We were no doubt operating on the radar, and although the proposal was not primarily about securing resources for HUMlab, the suggested allocation model forced faculty to take an active position. The fact that the discussion took place at all says something about the relative openness of the faculty and the viability of big digital humanities. If HUMlab had been organized as a discipline and department rather than an intersectional lab, it would almost certainly have been impossible to secure more than just one or two doctoral positions. For developing the digital humanities, many doctoral positions are unquestionably better than a few—in part to forge connections to the disciplines and achieve long-term traction.

The humanities sometimes has difficulty applying its critical awareness to itself even though doing so is important. For example, the argument that it is important to allow students to choose the topics of their doctoral work is important, but it is also embedded in a system where many students are vetted locally (they earn their undergraduate degrees from the same department)

and where the senior professors (and their research interests) are likely to be quite influential. Doctoral candidates are not working with a blank slate, and a bias may well exist in favor of local students at the expense of external ones. I am not suggesting that faculty are not concerned with getting students of the highest quality; rather, we get locked into epistemic mind-sets and can lose the critical perspective. Moreover, criticality must be balanced by an interest in structural development and change or the humanities will never evolve. Meetings such as this one may lay bare existing positions and power structures and offer rare opportunities to discuss important matters such as the role of doctoral programs across a number of departments and disciplines.

Finally, the dean's approach would seem to be a productive strategy. By remaining calm and not argumentative, he probably made something possible that would not have happened otherwise. Provocation can sometimes be useful. A certain degree of daring is important in institution building, and long-term change and influence are secured by being moderate, constructive, sharp, and persistent. I became aware that I could now hold my ground fairly effortlessly in a weighty and concentrated context—and actually could enjoy the discussion and the heat. Shortly thereafter, we invited faculty members to participate in a workshop, *Sorting the Digital Humanities Out*. Instead of operating under the radar, we were confidently involved in an ongoing local and international dialogue.

Digital Humanities as a Site for Learning

So, what happens when one starts out from a conceptual foundation and builds competent institutions, curates the digital humanities, empowers the humanities, and makes appropriate spaces? Learning happens.

Because learning is essentially what higher education is about, claiming that the digital humanities is a site for learning is hardly a controversial or surprising move. It is a useful and relevant way to think about the field, however, allowing us to bring together a number of threads already considered as well as perspectives that may not receive enough emphasis in the literature or in online discussions.

The digital humanities can be seen as a curiosity-driven site for learning. Learning across epistemic traditions and intersectional junctions can be facilitated in the digital humanities as a contact zone. Such zones are not free from power structures, traditional assumptions about learning, or epistemic commitments, but they deliberately challenge and discuss some of

those assumptions and empower alternative modes of thinking and making. Learning in epistemically and structurally different environments has the potential to change the way we think. For example, accommodating many modes of engagement with the digital creates opportunities for deep-going intellectual-material engagement across disciplines and professional areas. Furthermore, critically based exploration through making can empower us as scholars and intellectuals and help us approach complex, real-world problems and opportunities. Also, curatorship can play an important role in creating conditions for learning through facilitating encounters, suggesting intellectual themes or discussions to be had, connecting to fields and domains outside of the humanities, and pointing to differences as something useful and important to explore.

Education has surfaced as an important point of discussion in the digital humanities, and a sense seems to exist that this perspective is underdeveloped.⁵² However, several recent initiatives emphasize digital pedagogy, among them *Digital Pedagogy in the Humanities: Concepts, Models, and Experiments*, a U.S.-based online open-access collection, and the edited volume *Digital Humanities Pedagogy*.⁵³

Learning and pedagogy are not separate from other activities but rather form the core of the field. Such learning is not generic but is oriented around the intersection of the humanities and the digital. Furthermore, we are concerned not merely with one type of learning but with a range of types of knowledge building that span education and research. These learning processes are situated in an intersectional and technologically engaged context that differs from many traditional academic settings. Knowledge production and learning are spatially situated, and space and infrastructure can be used to signal and manifest alternative types of learning and knowledge production. Such infrastructure is both physical and digital, and the capacities of networking learning, Cathy N. Davidson and David Theo Goldberg discuss, are quite significant.⁵⁴ They refer both to knowledge about networking tools and networks and to the possibilities of shaping learning processes through networking technologies and cultures. Another important factor is the multiple-mode engagement between the humanities and the digital, which presents us with a range of different types of knowledge building and epistemic positions.

Big digital humanities is in many ways ideally placed to constitute an exploratory site for learning. There is power in drawing on disciplinary depth while encouraging intersectional engagement. There is power in an inviting and open organization that sits outside the established departments and is

not part of the organized higher education pedagogy. There is power in a strong digital engagement and a long humanistic scholarly tradition. The processes of empowerment and curatorship are also key pedagogical strategies, as is opening up both the traditional classroom and the seminar room. What if a stronger flow existed between such institutional platforms? What if students and faculty engaged in knowledge making in the same environment? What if academic installations were to replace 10 percent of traditional publications? What if students built alternative database ontologies to challenge the platforms used by faculty? I am arguing not for the replacement of replacing current structures but rather for complementing and to some degree reshaping them. The digital humanities can play an important role in providing hope, innovation, and infrastructure.

Different environments support different types of learning and put different demands on learning. Contact zones would seem to require continuous learning in relation to different epistemic traditions, emergent themes, and technological development. For example, structuring and encoding data typically is closely linked to particular materials or research questions. According to Geoffrey Bowker and Susan Leigh Star, “Classifications should be recognized as the significant site of political and ethical work that they are.”⁵⁵ Ursula Heise shows how biodiversity databases are cultural as well as scientific constructions. Database structures are important to Heise’s work, and she is clear about the necessity and value of working with digital humanists to produce analyses using appropriate tools.⁵⁶ Such collaborations do not involve one party who knows only technology and another party who knows only his or her own research and material. Rather, they are intellectual-technological exchanges about learning and building knowledge.

Such exchanges do not have to be based on a clearly identified and instrumental need but can emerge in a shared environment that supports learning and facilitates meetings and infrastructure. Humanities scholars working on individual book projects in such an environment are also likely to be influenced by the infrastructure and learn from the people present, not necessarily in a shallow or trivial way. The technologist, conversely, is likely to learn from talking to such scholars about their individual projects. In terms of advising on structuring data and encoding materials, the technologist will have accumulated experience and knowledge from different projects in different epistemic traditions. Such knowledge is invaluable.

Digital humanists have realized that their field needs to engage more strongly with undergraduate education.⁵⁷ Digital humanities centers have

largely focused on research and development projects and have typically had little involvement in undergraduate affairs. One obvious reason is that most of these centers have not had departmental status and a discipline of their own. Consequently, extensive discussion of the field tended not to concentrate on educational issues. The massive *Companion to Digital Humanities* (2004), includes the word *education* only thirty-three times, more than a third of them in one chapter (on art history). In contrast, the word *research* appears 509 times in thirty-six of the book's thirty-seven chapters. In the decade-plus since that volume was published, however, the situation has changed quite drastically, with a larger institutional footprint for the digital humanities that is increasingly linked to undergraduate education. By 2012, *education* appeared 100 times in *Debates in the Digital Humanities*, while *research* appeared 153 times. While in this book I have used *research* about three times more than *education*, *learning* also appears rather frequently.

It should not come as a surprise that the digital humanities shows more interest in educational matters at a time when the field has leverage and institutionalization work is in progress. Building undergraduate and graduate programs is part and parcel of establishing a stronger institutional platform and a steady income stream in much of higher education.

Another factor connecting the digital humanities to learning is the resurgence of online education as a topic of discussion. In 2012–13, Stanford University president John Hennessy said that he planned to “think hard about . . . distance learning”:

Stanford, like newspapers and music companies and much of traditional media a little more than a decade ago, is sailing in seemingly placid waters. But Hennessy's digital experience alerts him to danger. He says, “There's a tsunami coming.”⁵⁸

The topic of online learning and massively open online courses (MOOCs) was particularly current at this time, and had Hennessy taken his sabbatical two years later, he might have had different priorities. However, the topic remains important. Given an inclusive notion of the digital humanities, it may not be surprising that online learning sometimes seems to fall under the field's umbrella. Online learning is a clearly a matter of technology and culture, and some might assume that digital humanists would bring competence to this discussion as well as possibly the know-how to build conceptually grounded platforms for online learning. However, given that the digital humanities has

not been particularly invested in education and learning tools, there may well be better candidates for taking on this task. Or it could be argued that there is need for a humanities-based sensibility in thinking deeply about online learning and in devising other ways of carrying out such education. Indeed, if present-day online learning systems are lacking conceptually, intellectually, pedagogically and technologically, the digital humanities might be able to help fill the gap.

Online Learning and the Digital Humanities

The spread of MOOCs and other online platforms has highlighted the intersection of the digital humanities and online learning. While, on one level, MOOCs do not necessarily differ substantially from earlier examples of distributed learning, they are also clearly not the same thing. Scale is a major difference: MOOCs were designed to accommodate vast numbers of students. Furthermore, many MOOCs are freely available (although generally embedded in commercial structures and uncertain business models), which means that they contrast with some other online learning platforms. The shift from fifty students to fifty thousand students is arguably more a conceptual and marketing shift than a technological or pedagogical one. Much of the pedagogics and technology would seem to be the same aside from the infrastructure needed to handle so many students. MOOCs offer mass education on a scale not previously possible (or imagined). Just as important is the idea of learning taking place outside established educational systems, physical campuses, and current business models.

However, MOOCs are not necessarily characterized by high-quality, innovative thinking or progressive pedagogies. Just like many other learning platforms, MOOCs are built primarily around information distribution rather than constructivist or student-centered pedagogies. Even if the scale, accessibility, and pricing of MOOCs are important benefits for many learners, the pedagogical vision is usually very limited. According to the Coursera website,

Key ideas include mastery learning, to make sure that you have multiple attempts to demonstrate your new knowledge; using interactivity, to ensure student engagement and to assist long-term retention; and providing frequent feedback, so that you can monitor your own progress, and know when you've really mastered the material.⁵⁹

The idea that materials must be mastered and that multiple tries and feedback systems will help students do so is reminiscent of 1980s arguments in favor of educational technologies.⁶⁰ Although we should not downplay the usefulness of such learning platforms in certain contexts, a mechanistic idea of learning lies at the heart of such pedagogy. The Coursera website argues that moving traditional lecturing to online platforms can free up time for active learning in the classroom. But do we still want or need the traditional lecture format (digitally mediated or not)? The digital humanities could be asking such questions.

Digital humanists could also voice concerns about the extent to which the hype around MOOCs is driven by market interests. Ian Bogost offers an excellent example of critical work in line with what the digital humanities could be:

The growth of private MOOC companies is driven almost entirely from financial speculation, speculation with an interest in private, short-term gain via industrialized scale. It's worth imagining what other kinds of growth might be possible if we had the stomach for a different kind of speculation meant to benefit long-term social institutions like schools instead of just the market.⁶¹

We should learn from David N. Noble and other scholars who juxtapose earlier generations of distributed learning (for example, correspondence learning and video-based education) and online learning. For example, clear parallels exist between the discourse that surrounded correspondence education in the late nineteenth and early twentieth centuries and the current discussion of online learning. Correspondence education was said to be independent of time and space, adaptable to different learning styles, and highly individualized. But as Noble shows, correspondence education, like many other platforms for distributed learning, was also about rationalizing higher education and developing new business models.⁶² This link between new technologies, predictions about radical impact, and rationalization efforts has always been strong. The discourse often does not highlight the will to rationalize and create business (in places where doing so is possible) but rather focuses on technologically driven visions and eliminating the constraints of time and place. While access and distributed learning are important, the pedagogical rationale for online learning platforms and most current MOOCs is rarely well worked out, and we would be hard-pressed to claim that they arise from a pedagogical vision.

Noble's harsh criticism of distributed learning has merit, but it is also clearly one-sided in blaming administrators and commercial interests. In addition, he idealizes traditional, classroom-based education, a common tendency in discussions of MOOCs.⁶³ As in the past, the polarities and many of the technologically driven dreams are strong. However, a broad push now comes from a range of factors, including financial pressure, space pressures, an increased sense of global education as opposed to exclusionary models, and a certain level of technological maturity. MOOCs have helped open up a conceptual space, a useful accomplishment whatever the shortcomings in implementation. This means that President Hennessy's priorities were probably right and that the question of whether the digital humanities can and should be part of this discussion of online learning is both current and important.

The Dark Side of the Digital Humanities

The connection between the digital humanities and MOOCs came into focus after a roundtable session, *The Dark Side of Digital Humanities*, held at the 2013 MLA conference. The first of the session's four speakers, Wendy Chun, pointed to the dismal situation of the humanities (and the academy more generally), declaring that we have "capitulated to a bureaucratic technocratic logic." Nontechnological problems are rewritten into problems that can be fixed by technology, and MOOCs become a quick fix to education, preferable to dealing with the real problems of increasing costs, temporary positions, and the quantification of research and education. According to Chun, the same holds true for the digital humanities, and we need to address the "dark side" of the field, which includes omissions related to critical theory, critical race studies, and the negative aspects of the Internet.⁶⁴

Not surprisingly, observers found Chun's statement provocative. She critiqued the digital humanities both for its failure to engage critically and for its use as a discursive means of approaching but not really solving serious higher education problems. Though Matthew Kirschenbaum, who was in attendance, perceived Chun as conflating the digital humanities and MOOCs, it is more accurate to say that she was making the point that both the discourse of MOOCs and the discourse of the digital humanities draw on technology to suggest solutions to large-scale problems.⁶⁵ The problem, however, is that humanities computing as digital humanities is normally not associated with a far-reaching will to change higher education. Chun's critique of the visionary sentiment of digital humanities therefore seems based on conflation of

several traditions of digital humanities. Nevertheless, it also seems fair to say that humanities computing has bought into a technological logic without substantively engaging with critical theories of technology, environmental perspectives, or gender studies, thereby opening up the field to charges that it is neoliberal and uncritical (although Kirschenbaum and other scholars have undertaken work that extends across technological and critical engagement).

The second speaker was Richard Grusin, also the organizer of the roundtable, and he, too, was accused of conflating MOOCs with digital humanities. Grusin largely read the digital humanities as part of a neoliberal movement, and he made a strong connection between the digital humanities and the (alleged) crises of the humanities. Furthermore, he depicted interest in making in the digital humanities as reflecting the neoliberal agenda and devaluing critical work:

At the same time that the market logic of neoliberalism has been used to decimate the mainstream humanities from within and without, this same logic has encouraged foundations, corporations, and university administrations to devote new resources to the digital humanities and beginning over the past year to the development of MOOCs and other online forms of “content delivery.”⁶⁶

Grusin attacked the digital humanities more forcefully than (though not necessarily as effectively as) Chun. Grusin’s talk had a much greater tendency to look back, and he argued that the digital humanities should not engage with collaborative work because doing so could be perceived as playing into the hands of the neoliberal powers. This attitude seems counterproductive and fails to acknowledge the benefits of working together. None of these issues is either/or, but it makes sense to include different work practices and epistemic traditions in the digital humanities. Grusin’s position also focuses on the United States, where issues of tenure, increases in temporary employment, and rising tuition are particularly worrying. Furthermore, his denouncement of “making” as instrumental and buying into a neoliberal system is quite problematic, as it devalues making and erects rather than dismantles the boundaries between different practices. Making can indeed be instrumental and uncritical, but this sort of making is not most important to the development of the digital humanities.

In her contribution to the roundtable discussion, Rita Raley also pointed to the digital humanities as a discursive panacea, asking whether the field can

be everything to everyone. She then voiced one of the discussion's most sensible positions: "I teach and write about digital media, so clearly I should want to participate in working groups and pilot programs for online education."⁶⁷ This statement encapsulates the ideal intersection of the digital humanities and learning; not without critical awareness, but with an interest in engaging.

This roundtable is interesting for several reasons. The panel did not include any old-time digital humanists—that is, people who have been heavily involved in the institutional work of the field. Nevertheless, many people from the traditional digital humanities community apparently attended. This tradition largely controls the organizations, journals, and many other digital humanities channels, and the session represents one of the few instances where the community came to the table but did not have any speaker slots. The roundtable seems to exemplify one-sided curatorship rather than to constitute a genuine attempt to bring together different perspectives in a productive manner. I see no problem with discussing the dark side of the digital humanities and using speakers outside the digital humanities proper, but this session seems to me to have been too one-sided and confrontational to constitute more than a provocation.

Indeed, this roundtable session, like some traditional digital humanities orchestrations, can be useful in helping us think about the future. Making the digital humanities is about curatorship, and better curatorship exists that is less aggressive than what was evident at MLA panel. The roundtable failed to find that respectful place in between. The digital humanities needs to involve the interweaving of critical work and making work as well as work practices that are more firmly placed in the book-writing or technology-building categories. It needs to accommodate both text encoding and the search for a future for the humanities and the academy. It needs to be unafraid, assertive, receptive, critical, humble, and forward-looking—all at the same time.

Conclusion

The digital humanities needs to be big to make possible the things that the field empowers us to imagine and to take on the challenges facing us. This bigness does not involve hiding in big digital humanities tents or building large institutional structures but rather involves being open to multiple modes of engagement between the digital and the humanities and to the bigness of the humanities itself. Curatorship and empowerment can be key strategies for facilitating this expansive vision.

I see making the digital humanities as a humanistic responsibility that includes embracing key intellectual questions, expanding our critical-material vocabulary and expressive practices, and exploring what it means to be human. This work must necessarily engage with the technological and always be driven by curiosity. Such an undertaking may not be small, but it is important and exciting.