The Performance and Practice of Research in *A Cabinet of Curiosity: The Library's Dead Time*

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Abstract—*A Cabinet of Curiosity: The Library's Dead Time*, an exhibition held at the Figure One Gallery in Champaign, Illinois, investigated how the materiality of information shapes the making of meaning. By showcasing the materiality of the codex, PDF, online catalog, and librarian, the exhibition fabricated an archive of the "dead time" of research in the humanities, and thus made visible for analysis some of the oft-overlooked practices around the production of knowledge. The following discussion explores the ways in which information is constituted, configured, and communicated, and suggests how the influential role of materiality in the transmission of ideas might be further exploited by both the librarian and the humanities scholar.

INTRODUCTION

The proliferation of digital technologies in the last decades has been accompanied by revolutionary narratives about information, and such celebratory rhetoric can marginalize discussions about the production, mediation, and circulation of knowledge in the twenty-first century.[1] In order to foster critical debates about the process of knowledge-making, the public exhibition *A Cabinet of Curiosity: The Library's Dead Time*[2] was constructed to suspend preconceived notions about information and its technologies and establish a terrain of scholarly investigation that drew into relation-

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1. Important exceptions include Alan Liu, *Local Transcendence: Essays on Postmodern Historicism and the Database* (Chicago: University of Chicago Press, 2008); N. Katherine Hayles, "Print is Flat, Code is Deep: The Importance of Media-Specific Analysis," *Poetics Today* 25, no. 1 (2004): 67–90; Lev Manovich, *The Language of New Media* (Cambridge, MA: MIT Press, 2002); and Richard Grusin and J.D. Bolter, *Remediation: Understanding New Media* (Cambridge, MA: MIT Press, 2000).

2. The show was staged for two nights, February 17–18, 2012, at Figure One Gallery in Champaign, Illinois.

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ship the librarian, codex, card catalog, digitally-encoded resources, and the Internet. By employing the cabinet of curiosity as a framing device, the curators (the authors of this article) sought to assemble and make sense of apparently disparate items related to the practices of research, and thereby legitimize alternative ways of perceiving and understanding the production of knowledge. The search for and interpretation of information are activities that have been naturalized in a variety of contexts—from the traditional library to online environments—and they are not conventionally considered aesthetic pursuits. Materialized as artful sculptures in a gallery, however, the practices of meaning-making were rendered visible and transformed into sites of critical inquiry. A tour of the exhibition follows.

1. A CABINET OF CURIOSITY: THE LIBRARY'S DEAD TIME

Description:
A facsimile of the 1822 self-portrait, *The Artist in His Museum,* by Charles Willson Peale.
A wooden frame.
A red curtain with gold detail.

Contents:
A cabinet.
A librarian.
The exhibition space.

The *Cabinet of Curiosity: The Library's Dead Time* (Figure 1) was a three-dimensional diorama inspired by *The Artist in his Museum* (1822), a self-portrait of Charles Willson Peale. Peale was active as a painter, inventor, and collector in Philadelphia around the turn of the century, and he is frequently acknowledged as the progenitor of the museum tradition in North America.[3] In his self-portrait, Peale underscores his role as curator by depicting himself holding aside a curtain to reveal his museum. He thus welcomes the viewer into a space that transmits his particular understanding of the world.

An important part of the diorama was the physical instantiation of the curatorial and exhibition spaces that were intimated by the staging of Peale's self-portrait. To articulate the two different arenas of performance, we hung a frame and curtain in front of the sculptures that constitute the *Cabinet* project. The space before the frame was thus designated as curatorial space, a zone from which the entirety of the exhibition could be perceived and understood as an object to be owned, authored, and presented to others. Meanwhile, the space beyond the curtain was the space of exhibition, much like the museum depicted in Peale's painting. By recalling the visual motifs of *The Artist in His Museum*, our device of frame-and-curtain was a life-sized footnote that explicitly introduced the notion of curation and suggested that all information—whether in the museum, library, archive, or online—is carefully formulated, instantiated, and prepared for consumption.

3. Susan Stewart, "Death and Life, in that Order, in the Works of Charles Willson Peale," in *The Cultures of Collecting*, ed. John Elsner and Roger Cardinal (London: Reaktion Books, 1994), 205.

Figure 1. *A Cabinet of Curiosity: The Library's Dead Time.* Image courtesy of Bonnie Mak. Please see the online edition of *Art Documentation* for a color version of this image.

Just as Peale employed creative approaches to taxonomy, taxidermy, and carpentry to enliven the exhibition of animals and objects for his audiences,[4] the *Cabinet* project used similar methods to vivify information and its related practices. The sculptures assembled in the exhibition sought to arrest, captivate, and amaze, as did the "librarian." The incongruity of the librarian in the context of the gallery operated to draw attention to her work as interpretive liaison. As she might do in her regular post in the library, the librarian showed others how to apply a critical lens to their own practices of meaning-making. But framed in the gallery like the objects around her, the librarian became an embodiment of practice; the theatrical staging of the librarian allowed her hand to be equally analyzed for its role in the shaping of knowledge. The overt association between the *Cabinet* and its curator therefore made evident the role of the librarian in the selection, arrangement, description, and care of knowledge, in the same way that the self-portrait did for Peale.

For the purposes of the project, Julia Pollack, one of the authors, performed in the capacity of the librarian. Her responsibilities included the thoughtful and critical construction of each sculpture of the exhibition. This exercise involved important meditations on the practice of research in the humanities and how best to embody humanistic inquiry—traditionally articulated in prose—as sculpture. Julia was therefore equipped to answer questions about the exhibition and its materialization in much the same way that a librarian is equipped to field questions from the public

4. Ibid., 207.

about her collection, its contents, and their manipulation and manifestation. The performance of librarianship in the show was a way to make visible some of the expertise and work upon which the production of knowledge depends. Our goal in integrating Julia into the exhibition was to recognize that, although the librarian is conventionally associated with the provision of assistance, she is more crucially key in influencing the formulation, explication, and circulation of information.

II. CABINET

Description:
A wooden cabinet of three sections, 8′ wide × 6′ tall × 1′ deep.
With shelves.
And a back door.

Contents:
Documents recording interactions between patrons and librarians from the 1970s; a researcher's tears of frustration, collected in a jar.
A dictionary; fragments of a binding of a book; passing thoughts, bottled in test tubes; an assortment of X-ACTO blades, some rusted.
Sweat from the brow of a librarian; shards of a CPU; pages torn from a copy of the *Universal Standard Encyclopedia*.

In the early modern period, the cabinet of curiosity was a dedicated space in which collectors experimented with different ways of ordering and understanding the world. Contents of such cabinets might include real or fictive specimens of nature, such as a stuffed crocodile, a unicorn's tail, or a botanical oddity, as well as books, religious relics, and works of art. The disparate objects were arranged and classified in multiple ways, and descriptions frequently emphasized the curiousness, rarity, and beauty of the artifacts. The organization of knowledge was thus not yet entangled in formalized systems of classification; instead, in this period, sensoriemotional rationale might be validly deployed in a personal performance of understanding.[5] The cabinet of curiosity was therefore a place in which collectors grappled with the diversity of the world around them, linking their aesthetic sensibilities with the production of knowledge.

Capitalizing on this established tradition, we hand-built a cabinet and stocked it with items that we fabricated to represent the library's dead time (Figure 2, foreground). "Dead time," in the context of cinema studies, refers to events that are edited out of the final version of a film because they are considered unproductive for the overall narrative.[6] Applied to the practices of the library, dead time might elide activities that are not perceived to be useful with respect to a preferred narrative. The dynamics of dead time, however, go beyond a simple privileging of certain events over others. The "uneventful" activities are overlooked as inconsequential and are there-

5. On aesthetic motivation, see Brian W. Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago: University of Chicago Press, 2006); on collecting in early modern Europe, see Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley and Los Angeles: University of California Press, 1994).

6. Mary Ann Doane, *The Emergence of Cinematic Time: Modernity, Contingency, the Archive* (Cambridge, MA: Harvard University Press, 2002), 159ff.

Figure 2. Foreground: Detail of cabinet. Bottle of tears on left; sweat on right. Background: Card catalog. Image courtesy of Bonnie Mak.

fore not registered in the archive.[7] Dead time is not only about selective *seeing*; it is about selective *archiving*. The implications are serious, for as the archive of the library as a site of knowledge-making unfolds, its configuration in turn sets a model for how such work ought to be perceived, understood, and evaluated. In order to interrogate the formation of this archive and its particular depiction of productivity, we invented a complementary device for the measuring of work that takes place in and around the library.

Nestled between other artifacts on the shelves of the cabinet were two large glass bottles. One of the bottles contained a good sum of tears from a frustrated researcher. The other held a noble accumulation of sweat from the brow of a librarian. The collection of bodily fluids was a novel way to identify the work of humanities scholarship that is conventionally recognized by the publication of peer-reviewed articles or books. By assembling traces of physical exertion, we argued that labors which seem to

7. Kathleen Biddick, "Doing Dead Time for the Sovereign: Archive, Abandonment, Performance," *Rethinking History* 13, no. 2 (2009): 141. On the selectivity of the archive, see Francis X. Blouin Jr. and William G. Rosenberg, eds., *Processing the Past: Contesting Authority in History and the Archives* (New York: Oxford University Press, 2011); Ann Laura Stoler, *Along the Archival Grain: Epistemic Anxieties and Colonial Common Sense* (Princeton, NJ: Princeton University Press, 2009); Joan M. Schwartz and Terry Cook, "Archives, Records, and Power: The Making of Modern Memory," *Archival Science* 2, no. 1–2 (2002): 1–19; and Eric Ketelaar, "Tacit Narratives: The Meanings of Archives," *Archival Science* 1, no. 2 (2001): 131–41.

have no apparent publishable outcome can nevertheless be reckoned in an assessment of productivity. Our model thus foregrounded the human body in the search for, retrieval, and interpretation of information. Moreover, the juxtaposition of the bottles implied an important link between researcher and librarian. The work that goes into cultivating relationships that support the academic enterprise is often painful and protracted, and it is correspondingly difficult to represent. In these bottles, we proposed a new corporeal metric for scholarly collaboration.

Also in the cabinet were sheaves of papers from the 1970s that preserve a survey about interactions between librarians and researchers at the University of Illinois. The survey offers details of the time, date, duration, and nature of these interactions. For instance, the type of question was characterized: directional (to the photocopier or change machine; to a subject-specific library) or reference (bibliographical; card catalog; brief instruction). If the patron's question was not satisfactorily addressed, a reason should be selected from a list: lack of subject expertise; too little time; communication problems. The librarian then paraphrased the question and located the interaction in the context of a subject area. Entries here include, "Illustrations of Dragons—Mythology, English"; "Designing gas stations—Art Index (Architecture)"; "Where is the pencil sharpener?"; and "Is that the light-bulb man?—Yes."

A close reading of the papers indicates that the librarian's engagement in research activities was not merely limited to a brief consultation with a patron. Her work also comprised the documentation of these interactions, which included the careful planning, accumulation, and interpretation of large-scale usage statistics in an era when such efforts were often carried out by hand. Such exercises are rich in detail about the practices that occur in the library, involving not only librarians, but also researchers, support staff, and others. Yet productivity in the library is often described using phrases such as "reference interactions are up" or "thousands of visitors came through our doors," which render uneventful and elide the particular activities of the librarian who recalls a passing conversation with a colleague in the English department about her decade-long study of dragons in folklore, or the maintenance worker who returns early from a scheduled break to change a light bulb in the library stacks. This labor, too, is part of research, supporting the pursuit, production, and publication of knowledge.

On loan for the *Cabinet* show, the documents from the 1970s regularly reside in limbo in a temporary location in a closet of an office in the main library building, having been neither accessioned formally nor discarded.[8] The unresolved relationship between these historical materials and the official archive of the library is symptomatic of dead time. It is difficult to find an appropriate place for that which has been edited out of the narrative; the cut has already been sutured. That the papers still linger on the fringes of consciousness, however, betrays an uneasy sense that the documents are significant in some way not readily accommodated by, or reconcilable with, current frameworks of accounting. With the cabinet, we crafted a mechanism by

8. The documents were generously loaned to the authors by the Reference, Research, and Scholarly Services of the University Library, University of Illinois.

which the papers, their information, and the work that they describe could be made visible.

Efforts to collect information about the activities of librarians have lately been sharpened with the adoption of digital technologies. Indeed, many initiatives advocate for a culture of assessment in the library and rely on digitally embodied tools such as the Reference Effort Assessment Data (READ) scale to compile and manage data for statistical analysis.[9] Similar to the survey from the 1970s discussed above, the six-point READ scale attempts to gauge the effort that a librarian might expend in addressing a question. Such tracking software is frequently deployed to correlate productivity with that which its metrics can measure—for instance, the number of encounters with patrons, books shelved, or documents delivered.[10] But the reliance on such tools for evaluating the work of the librarian makes visible only a fraction of her activities that support research and the production of knowledge. Moreover, as this particular subsection of her work is further analyzed and weighed in assessments of usefulness, other spectrums of practice are elided and erased. Similar tensions in the calculation of influence were evident even to early proponents of scientific management practices in the library. Indeed, in his painstaking articulation of cost accounting methods at the Wesleyan University Library in 1936, Fremont Rider acknowledged, "We must ever remember . . . that the finest service that every library gives is the very one that can never be measured."[11] Because these unmeasurable practices might be discursive in nature, participate in longer temporalities, or be inspired by an aesthetic sensibility, we imagined other models of seeing and archiving. Our cabinet, then, eschewed commonly employed strategies for collecting data and instead experimented with creative ways to mark the activities in and around the library. By presenting alternative ways to make manifest the activities related to the production of knowledge, we constituted our cabinet of curiosity as an archive of the library's dead time.

III. CARD CATALOG: AN INDEX OF *MEMBRA DISJECTA**

Description:
Two pieces of wooden furniture, arranged back to back, each with small drawers. Some drawers are open.

Contents:
Cards that record and display information.

*from Latin, literally, "scattered members"

9. For "culture of assessment," see Amos Lakos and Shelley E. Phills, "Creating a Culture of Assessment: A Catalyst for Organizational Change," *portal: Libraries and the Academy* 4, no. 3 (2004): 345–61; and T. Bruce Fraser, Charles R. McClure, and Emily Leahy, "Toward a Framework for Assessing Library and Institutional Outcomes," *portal: Libraries and the Academy* 2, no. 4 (October 2002): 505–28. On the READ scale, see Bella Karr Gerlich and G. Lynn Bernard, "Introducing the READ Scale: Qualitative Statistics for Academic Reference Services," *Georgia Library Quarterly* 43 (Winter 2007): 7–13.

10. See the influential work on macro- and micro-evaluation of performance in libraries by F.W. Lancaster, with the assistance of M.J. Joncich, *The Measurement and Evaluation of Library Services* (Washington, DC: Information Resources Press, 1977), as well as the ongoing Association of Research Libraries series on statistics; and ISO 11620:2008 on "library performance indicators." An important caution by Martha Kyrillidou, who warns that indicators of performance are often developed from "data that can easily be gathered," but "what is easy to measure is not necessarily what is desirable to measure," quoted in, "An Overview of Performance Measures in Higher Education and Libraries," *ARL: A Bimonthly Newsletter of Research Library Issues and Actions* 197 (1998): 6.

11. Fremont Rider, "Library Cost Accounting," *Library Quarterly* 6, no. 4 (October 1936): 379.

Many libraries have now adopted online cataloging systems, a shift that seems to render their preceding technologies obsolete. However, entries in the online catalog are predicated upon bibliographical information and architectures that were developed in previous centuries.[12] That is, the online catalog relies upon the card catalog—as well as the printed and handwritten inventories of the early modern period—for much of its form and content. The card catalog is therefore part of an important genealogy that links anterior systems of organization with those that shape present-day engagements with information, and it is material witness to the careful nuancing of knowledge through time.[13] By exhibiting two card catalogs in the show, we acknowledged the long history of the practices related to curation, and we made visible the evolving infrastructures of information and their crucial role in the production of knowledge (Figure 2, background).

Like many other library systems, that of the University of Illinois embarked on an initiative to consolidate its services in 2007.[14] Among the first subject-specific libraries to participate in the centralized service model was the one devoted to the area of library and information science (LIS). The LIS library had long resided in room 306 of the main library building, its collection organized according to a dedicated card catalog located in the same room.[15] The card catalog described and arranged the materials following the Dewey Decimal System, which correspondingly dictated the conceptual order of the books and, by extrapolation, their physical order. When the LIS library was shuttered on May 15, 2009, its books were sent to different collections across the university campus, the librarians were relocated, and other services were shifted online.[16] The body of the LIS library was no longer to be fixed in a single space.

As a consequence of the reconfiguration, the LIS card catalog continues to describe particular books that exist within the wider university system, but it no longer accurately represents how those books are arranged in physical space as it once did. The materials to which the card catalog refers are now dispersed, reordered and reclassified in different campus libraries—*membra disjecta*, or "scattered members," of the old collection.[17] For instance, as part of their incorporation into the subterranean

12. Christine L. Borgman, "From Acting Locally to Thinking Globally: A Brief History of Library Automation," *Library Quarterly* 67, no. 3 (July 1997): 220–24; Herman H. Fussler and Karl Kocher, "Contemporary Issues in Bibliographic Control," *Library Quarterly* 47, no. 3 (July 1977): 242–44. For the organization of knowledge in early libraries and the connection between the catalog and ways of knowing, see David McKitterick, "Libraries and the Organization of Knowledge," in *The Cambridge History of Libraries in Britain and Ireland, Volume I: To 1640*, ed. Elisabeth Leedham-Green and Teresa Webber (Cambridge: Cambridge University Press, 2006), 592–615.

13. On the development of the card catalog in general, see Markus Krajewski, *Paper Machines: About Cards & Catalogs, 1548–1929*, trans. Peter Krapp (Cambridge, MA: MIT Press, 2011); Judith Hopkins, "The 1791 French Cataloging Code and the Origins of the Card Catalog," *Libraries & Culture* 27, no. 4 (Fall 1992): 378–404; and Gerri Lynn Flanzraich, "The Role of the Library Bureau and Gaylord Brothers in the Development of Library Technology, 1876–1930" (DLS diss., Columbia University, 1990), esp. 142ff.

14. University of Illinois Library, "New Service Models: Report to the Provost" (June 4, 2009), http://www.library.illinois.edu/nsm/actionplan/NSM_Report_09.pdf.

15. Patricia Stenstrom, "The Library and Information Science Library," in *Ideals and Standards: The History of the University of Illinois Graduate School of Library and Information Science*, ed. Walter C. Allen and Robert F. Delzell (Urbana-Champaign, IL: The University of Illinois, 1992), 72.

16. University of Illinois Library, "New Service Models," 5; Susan E. Searing, "The Library and Information Science Library, 1990s to 2009" (unpublished paper, http://www.library.illinois.edu/lsx/about/LIS_Library_history_update.pdf).

17. In manuscript studies, *membra disjecta* refers to fragments of a manuscript that have been dispersed. See Roger S. Wieck, "Folia Fugitiva: The Pursuit of the Illuminated Manuscript Leaf," *The Journal of the Walters Art Museum* 54 (1996): 233–54; Elisabeth Pellegrin, *Bibliothèques retrouvées: manuscrits, bibliothèques et bibliophiles du Moyen Âge et de la Renaissance: recueil d'études publiées de 1938 à 1985* (Paris: Centre national de la recherche scientifique, 1988); and N.R. Ker, *Fragments of Medieval Manuscripts Used as*

undergraduate library at the University of Illinois, some books have been recategorized and relabeled in a different scheme, the Library of Congress Classification (LCC) system. Because of their reconceptualization in LCC, these books now have a different home with different neighbors. Meanwhile, other books from the LIS library were transferred to the opposite end of campus and absorbed into the collections of the engineering library. The *membra disjecta* have been thereby enfolded into a new academic discipline and introduced to another set of scholars and students with affiliations in the computer sciences and engineering. Our exhibition of the LIS card catalog thus illustrated how the shifting infrastructures of a library can influence the direction of fields of study and reshape the contours of knowledge.

By staging the card catalog in the gallery with an artful name, we presented it as a sculpture of information. The card catalog was reimagined as a database fashioned from wood, housing hundreds of handcrafted records. Each record is inscribed on a single paper card; each card bears the traces of a unique trajectory through time. A card may transmit typographical idiosyncrasies, or the smell of paper stock of a particular age; it may attest to human contact through the form of a dog-eared corner, a smudge produced by a librarian's moist finger, or a mark of a reader's errant pen.[18] Furthermore, generations of librarians have corrected and augmented the bibliographical details listed on the cards, and the accretions serve to document the constant work that is required to maintain the collection. Perhaps transmitting the hand of a particular librarian as she registers the change in a journal's title, the marginalia emphasize her authoritative role as curator and also indicate the dynamic nature of cataloging records, making visible the shifting infrastructures around knowledge.[19] Each card therefore conveys the history of its own act of recording and presents this entire chronology to the viewer in a single vertiginous moment. The cards are thus embedded in broader movements in society, reflecting changes not only in record-keeping and the classification of knowledge, but also in the approaches, technologies, and markets related to the communication of information. In the early twentieth century, for instance, when many cards were still copied by hand, the New York State Library recommended the use of Carter's record ink and Stafford's fountain pen ink for their permanence, and furthermore dissuaded librarians from using fine-nibbed pens on behalf of those who would be users of products generated with such technologies: "Library records are for the general public to read. We have no right to use hair lines or pale ink or to tolerate any other peculiarity which interferes with easy reading."[20] Meanwhile, a discussion in the *American Library Association Bulletin* in the

Pastedowns in Oxford Bindings, with a Survey of Oxford Binding c. 1515–1620 (Oxford: Printed for the Oxford Bibliographical Society by A.T. Broome, 1954).

18. On the "sociology" of such texts, see D.F. McKenzie, *Bibliography and Sociology of Texts* (Cambridge: Cambridge University Press, 1999).

19. For more on marginalia in general, see William Sherman, *Used Books: Marking Readers in Renaissance England* (Philadelphia: University of Pennsylvania Press, 2008), and Stephen A. Barney, ed., *Annotation and its Texts* (New York: Oxford University Press, 1991).

20. New York State Library School, *Library Handwriting: A Guide for the Use of Students in the New York State Library School* (Albany: The University of the State of New York: 1916), 4–5.

1950s raised questions about the preferred system of capitalization employed on the cards, as well as the relative size of the typeface.[21]

In the setting of the gallery, the valence of the card catalog need be no longer restricted to its ability to index specific books. Rather, the card catalog was presented as an important repository of knowledge, each of its cards a resonant interface with history that transmits clues about the processes and practices of reading, writing, and knowledge-making. Our card catalog was the material manifestation of such histories, having both shaped and been shaped by them. Re-created as a sculpture of information under a spotlight in the gallery, the card catalog inspired a diverse range of aesthetic responses—from nostalgia to total bafflement—that the librarian exploited to foster a broader discussion about the organization of information and the social practices surrounding the production and transmission of knowledge.

IV. *HOW THE PAGE MATTERS* / THE ART OF RESEARCH

Description:

Nailed on the wall, four rows of three sheets of paper. Each sheet measures $8\frac{1}{2}'' \times 11''$.

On a shelf below, a book measuring $6\frac{3}{4}'' \times 10''$, opened to a facing page of two color plates.

Contents:

(i) The first three pages of a manuscript submission; (ii) the copy-edited version of the same; (iii) the proposed typesetting of the same; (iv) the pre-print galley proofs; and (v) the 2011 edition of *How the Page Matters*, published by the University of Toronto Press.

How the Page Matters is an academic publication that explores the different iterations of Buonaccorso da Montemagno's *Controversia de nobilitate*, a fifteenth-century text on nobility. Surviving versions of the text include those copied by hand, printed, microfilmed, and digitally encoded over the span of five hundred years. In addition to being re-imagined in different media, the *Controversia* was also configured with illustrations for a late medieval Francophone audience, often using parchment pages as a medium to communicate luxury; augmented with explanatory commentary on paper for audiences who read in the Italian vernacular; and, for sixteenth-century readers of German, part of a larger collection of humanist treatises circulating together in translation. Designers of the *Controversia* thus took great liberties in customizing its look to make the text recognizable to different reading audiences.

As the narrative of *How the Page Matters* unfolds, it becomes clear from the study of the *Controversia de nobilitate* that the material form of a particular book shapes the reader's engagement with it; the size, shape, smell, and weight of the object communicates to the reader by offering clues about how it ought to be read and used. If a book is large and heavy, the reader concludes that it is not meant to be portable; it should be treated with a certain solemnity. If a book is composed of photocopied pages, handed

21. See the letters to the editor of the *ALA Bulletin* 48, no. 2 (February 1954): 53–54, and the subsequent discussion in the following issues.

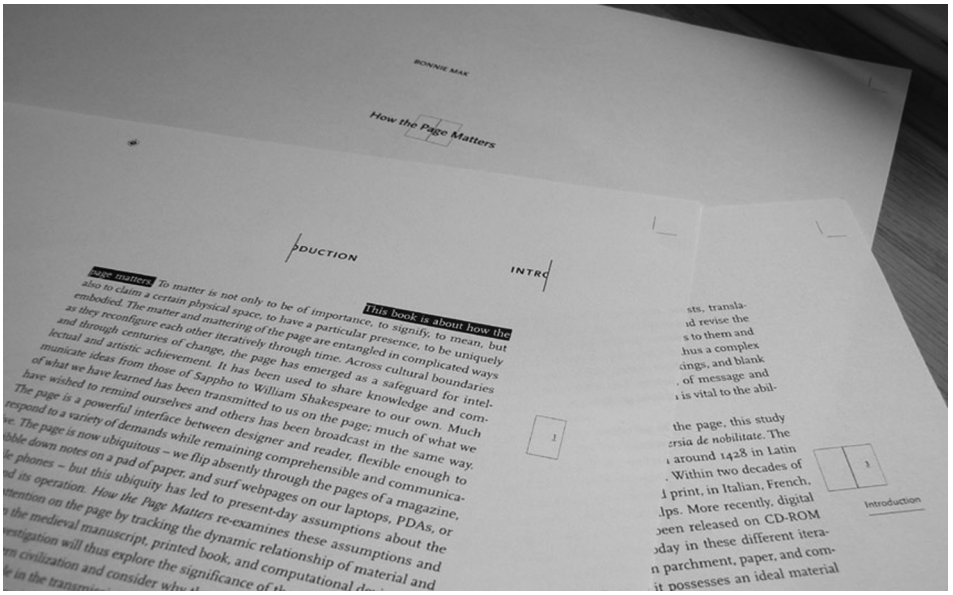

Figure 3. Detail of Jimmy Luu's design for *How the Page Matters*. Image courtesy of Bonnie Mak. Please see the online edition of *Art Documentation* for a color version of this image.

out in class, the reader knows that it invites annotation, and that it is designed to be ephemeral. In this way, the physical form of the book contributes to the reading experience; the materiality of the book influences how meaning might be made. Such an understanding of the symbiotic relationship between form and content was the basis for negotiations between the publisher of *How the Page Matters* and the author about its ideal design. In the exhibition, the arrangement and display of different iterations of *How the Page Matters* made public the author's argument about the relationship between the materiality of the page and meaning-making. The sculpture offered a graphic embodiment of the debates about the typesetting and layout of *How the Page Matters*, as well as a review of the multiple hands involved in its composition, revision, editing, design, and publication. The iterations were as follows:

(i) The first three pages from the manuscript submission of *How the Page Matters*, as it was initially submitted by e-mail, CD-ROM, and paper copy to the acquisitions editor at the University of Toronto Press by the author. The text is double-spaced and employs Times New Roman, 12-point font. The pages have margins of 1.5 inches on all sides. Time-stamped: September 30, 2005, 5:08 p.m.

(ii) The copy-edited version, sent by e-mail from the freelance copy editor to the author. Palatino Linotype and Times New Roman, both in 16-point font, have been added. The pages carry reduced margins of one inch on all sides. Time-stamped: October 11, 2010, 5:21 p.m.

(iii) A schema proposed by graphic designer Jimmy Luu, who had sent this sample by e-mail in PDF to the production manager of the Press (Figure 3). The text has been re-imagined in the Scala family of typeface. The margins have increased to 1.25

inches. The design emphasizes the gravity of the opening sentence, "This book is about how the page matters," by generating an aesthetic that operates on a different visual plane from that of the rest of the page. The sentence is shown in white letters on a black background, which is the reverse of the conventional register of the page in which black letters appear on a white background. Recalling the medieval tradition of illuminated manuscripts in which an opening initial might be elevated from the surface of the page with gesso and ornamented with silver or gold to create a multisensory reading experience that was visual and tactile as well as verbal, Luu similarly created a space that is acutely three-dimensional. In Luu's design, aspects of the page have been carefully devised to be distinguished visually, topographically—and, by extension, conceptually.[22]

(iv) The pre-print galleys of *How the Page Matters* that had been sent on CD-ROM from the managing editor at the Press to the author. These sheets depict the configuration of the page before the book was to undergo its final stages of printing and binding. The typefaces include Palatino and Caslon. The margins have reverted to one inch in size, with a compressed gutter. Time-stamped: April 11, 2011, 9:15:46 a.m.

(v) The cloth-bound version of *How the Page Matters* that had been sent by parcel mail from the distribution center of the Press to the author. No longer a series of loose pages, this iteration is glued, sewn, and bound under a hard cover, with images gathered together in the middle of the book. It bears the copyright year of 2011.

By juxtaposing multiple versions of the same text, the sculpture exposed some of the competing social practices that underpin the research, writing, and publication of an academic work in the humanities. The pages displayed the dead time of the publication story of *How the Page Matters*, marking the trajectory of the submitted manuscript as it evolved into a published book over the span of six years and registering the involvement of the author, acquisitions editor, freelance copy editor, managing editor, production manager, freelance designer, and customer service representatives. In this way, the sculpture was a material engagement of Robert Darnton's "communications circuit" and other models that chart the movement of books through production and publication.[23] The sculpture further demonstrated how differing opinions around the presentation and scope of humanities scholarship were elided in the final and authoritative product of the book publication. Namely, as the author and freelance graphic designer attempted to develop a visual language that would adequately reflect the argument of *How the Page Matters*, they also had to take into consideration the conventions of the university press, a body which has long set the formal standards for academic work and procedures for academic publication. By making manifest the networks of players and pressures that molded the material codex that is now called *How the Page Matters*, the sculpture highlighted the enduring difficulties of identifying and surmising authorial intention.

22. For more on verbal and visual text, see Johanna Drucker, *The Visible Word: Experimental Typography and Modern Art, 1909–1923* (Chicago: University of Chicago Press, 1994). On illuminated initials, see Christopher de Hamel, *The British Library Guide to Manuscript Illumination: History and Techniques* (Toronto: University of Toronto, 2001), esp. 57ff.

23. Robert Darnton, "What Is the History of Books?" reprinted in *The Kiss of Lamourette: Reflections in Cultural History* (London: W.W. Norton & Company, 1990), 107–135, at 112, and his later thoughts in, "'What Is the History of Books?' Revisited," *Modern Intellectual History* 4, no. 3 (2007): 495–508, esp. 503.

V. DISSECTION: PHYSIOLOGY OF AN OBJECT

Description:
Three pedestals.

On the first pedestal, a digitizing bed with two lights and a camera, upon which lies a codex (a device for viewing information), opened.
On the second, a glass bottle from which plastic surgical tubing emerges, connecting the first and third items of the sculpture; and assorted surgical instruments.
On the third, a computer monitor (a device for viewing information), opened.

Contents:
In the codex: paper pages, boards, glue, string, and pieces of a computer monitor.
In the bottle labeled "blood" and plastic tubing: a red viscous liquid.
In the computer monitor: metal, plastic, capacitors, and pieces of a codex.

By mixing the stock of the codex with that of its digital counterpart, "Dissection: Physiology of an Object" foregrounded the kinship between analog and digital technologies and explored ways that both the book and the PDF employ their material bodies to shape and transmit information. The sculpture was composed of three parts, arranged on three separate pedestals. The first pedestal featured a book lying on a digitizing bed, under lamps and a camera (Figure 4). The recto, or the page on the right-hand side of the book, was staged as the site of a surgical procedure. By removing a portion of the codex, we revealed parts of the book that are often overlooked, such as the space *inside* the page or the space *between* the pages. The sculpture suggested that information is communicated through not only graphic markings on a page, but also the body of the book, including its blank spaces, its spine, and fore edge. That is, both the form and content of a book transmit information simultaneously. The size, shape, and smell of the codex share with the reader something of its circumstances of production and distribution; this information, in turn, shapes the reading experience. The critical role of materiality in the transmission of text and image, explicated in *How the Page Matters*, was thus reiterated and graphically showcased in the surgical operation, for the result of the amputation was that the book could no longer be read. Without its body, the book was unable to transmit its message.

On the third pedestal was a computer monitor that had been dismembered and modified with pieces from a codex (Figure 5). We framed this piece as the dissection of a PDF, which served to represent any digitally encoded document or image that requires the use of a computer monitor or similar device to view. Plastic and metal components of the monitor were replaced by bound pages; the capacitors were wrapped with cloth tape that is regularly used to repair the spines of books. Arching over the remains of the hardware were strips of plastic transparencies on which computer code, a series of letters and numbers, had been printed. Such codes offer machine-readable instructions about how a document should be displayed—specifying typeface, size, page layout, and so on—and also convey the textual content of the document. These "intestines" disclosed how both the form

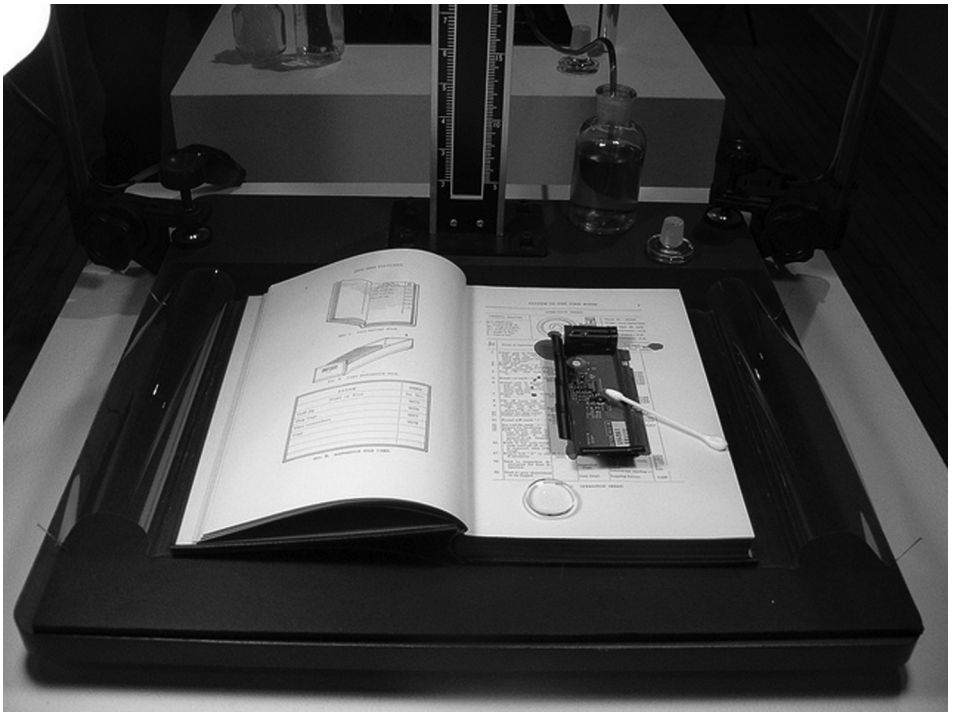

Figure 4. Dissection of a codex. Image courtesy of the Graduate School of Library and Information Science, University of Illinois. Please see the online edition of *Art Documentation* for a color version of this image.

and content of the digital document are transmitted simultaneously, intertwined in the source code.

The grafting of book pages into the computer monitor was a meditation on the materiality of the object of e-reading. Analogous to the dissection of the codex, the dissection of the PDF engaged the space inside a digitally encoded document; the question of where and how information is transmitted was repeated in this forensic investigation. Our dissection therefore brought to light the range of social processes and physical interfaces required to generate a successful reading experience in the digital environment, and thus participated in ongoing debates about the physicality of digital information that have alternately examined the significance of—among others—the hard drive, software, computational code, and Internet protocols.[24] Much of this body of the digitally encoded document is regularly hidden from the average reader, but the contingencies of production and transmission are nevertheless part of the PDF and influence any meaning that may be construed from it. "Dissection" presented a historicized account of the materiality of digital information in its juxtaposition of the PDF and the traditional codex, and it also revealed surprising similarities about how the two disparate

24. See Lev Manovich, *Software Takes Command* (New York: Bloomsbury Academic, 2013); Matthew G. Kirschenbaum, *Mechanisms: New Media and the Forensic Imagination* (Cambridge, MA: MIT Press, 2008); Adrian Mackenzie, *Cutting Code: Software and Sociality* (New York: Peter Lang, 2006); Alexander Galloway, *Protocol: How Control Exists After Decentralization* (Cambridge, MA: MIT Press, 2004); and Hayles, "Print is Flat, Code is Deep."

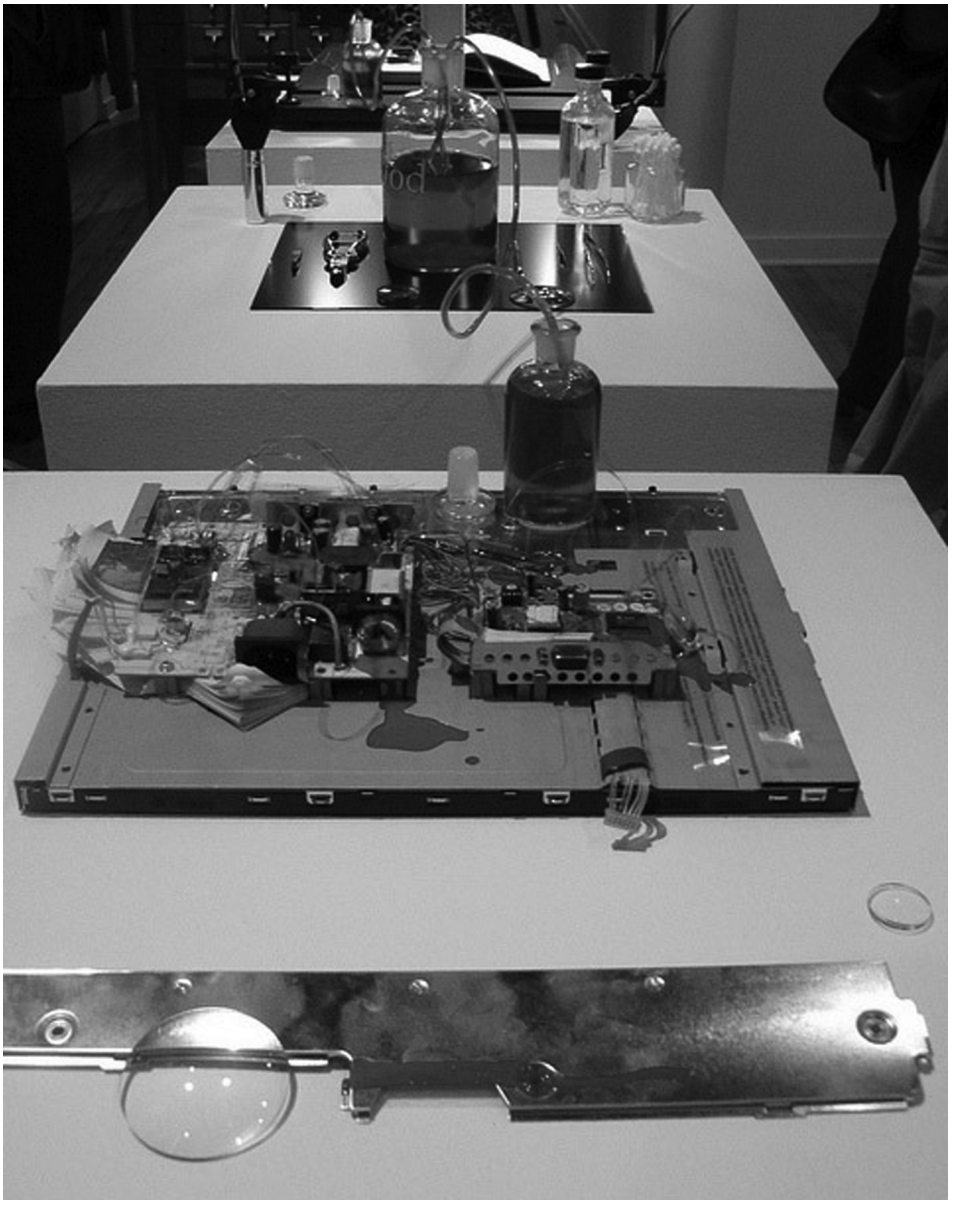

Figure 5. Foreground: Dissection of a PDF. Background: Blood transfusion and dissection of a codex. Image courtesy of the Graduate School of Library and Information Science, University of Illinois. Please see the online edition of *Art Documentation* for a color version of this image.

technologies transmit information: both codex and PDF communicate through their respective instantiations, their material forms engendering different responses. Not limited to a particular kind of singularity or concreteness, our notion of materiality invoked the social, a theme that would be revisited and explicitly addressed later in the show. The sculpture argued that the codex and PDF are importantly embodied and that those embodiments cannot be interchanged without affecting the information

transmitted and meanings made.[25] As objects commonly understood to transmit sources for humanities research, the codex and PDF literally shape the dissemination of ideas, and their materiality consequently plays an important role in the production of knowledge.

VI. TUPPERWARE

Description:

A television screen is mounted on the wall. Flickering images dance across its screen. Written across the wall above the television is the phrase, "Information is not Self-sufficient."

Contents:

A video composed of (i) an excerpt of a digitized Tupperware commercial from around 1960; (ii) the machine-readable version of its bibliographical description; and (iii) a 1947 film entitled *The Librarian*.

"Tupperware" examined how digitally encoded information, although destined for human readers, must nevertheless also be packaged for transmission between computers. A ten-minute video was constructed by interweaving excerpts from the downloaded digital version of a 1960s Tupperware commercial with a representation of its accompanying computer code.[26] By making visible the machine-readable code that surrounds and supports the digitized commercial, the video illustrated that digital infrastructures are material and furthermore shape information in their provision of it. With the video, we argued that digitally encoded information is not self-sufficient, but instead relies on a complex of infrastructures that may include, among others, traditional bibliographical description and computational code.

Our video generated a relationship between the Tupperware container and digital markup by imagining both as packaging devices. The recorded voice of a narrator declared, "This is Tupperware!" as the video showed images of plastic storage containers, and again as the video showed computer code. By employing the didactic and descriptive style of the mid-century Tupperware commercial, the video proposed a way to begin thinking about how computer code functions in the communication of digital resources. Of course, computer code is not a container in which digital information is merely packaged, for the code is indeed integral to the embodiment of such resources; the code provides both form and content in a machine-readable format. The video was thus a preliminary essay towards making visible, significant, and therefore appropriate for humanistic analysis, the computer code by which digital resources are configured and embodied on screens and other devices.

Understanding digitally mediated materials and their infrastructures is now part of the responsibility of the librarian of the twenty-first century, especially as she, in turn, repackages the resources and makes them available for her patrons. Such duties of the librarian were also taken up for consideration in "Tupperware." Incorporated into the video were excerpts of the film *The Librarian* (1947) which was originally

25. Marshall McLuhan, *Understanding Media: The Extensions of Man* (New York: McGraw-Hill, 1964).

26. Tupperware Commercial #2, http://archive.org/details/tupperware_2.

conceived as a teaching tool about careers in librarianship.[27] The intentional degradation of the quality of the vocational film in our video was designed to draw attention to the passage of time, and it alluded to changes in information and its technologies with which the librarian must always contend. Digitally manipulated and interrupted, the footage suggested that the advent of new media has complicated the image of the librarian and made the conventional description of the profession—as presented in the 1947 film—unintelligible in the present day. The video thus sought to trouble the image, depiction, and perception of the librarian in the twenty-first century, when she is at the forefront of developments in the production and exchange of knowledge at the same time that she participates in a tradition of librarianship that may be traced back to the organization of papyrus scrolls of the Library of Alexandria in the fourth century BCE.

VII. MASKED LABOUR

Description:
Two digitization stations, equipped with flatbed scanners that are attached to computers. An LCD projector displays images on the wall.

Contents:
Two librarians with black bags over their heads.
Handwritten and printed materials, i.e., information before digitization.
Digitally scanned materials, i.e., information after digitization.

Initiatives in the digital scanning of printed books and other materials have been launched by libraries, museums, and archives around the world, as well as by individual citizens and commercial enterprises. As a result, a wide variety of informational resources is advertised as abundantly, readily, and often freely available on the Internet. But information and information technologies have always depended upon human expenditure, even now in the twenty-first century. Because these histories are rarely represented in narratives about information on the Internet, we designed the final piece of the *Cabinet* project as an exploration of the social costs of the digital preservation and transmission of cultural heritage. In our performance piece, two librarians sat with black bags over their heads,[28] scanning handwritten and printed documents (Figure 6). The digital scans, the result of their labors, were projected on the wall across from them. By showcasing the body of the librarian in the act of producing electronic resources, the performance of "Masked Labour" was a deliberation of the human costs involved in the digitization of information, the "u" in the title of the piece gesturing to the global scope of the consideration. For instance, most of the electronic devices used for the transmission of such information continue to be manufactured by non-elite laborers, dramatically depicted in Jack Qiu's documentary on Foxconn and other factories in China.[29] Meanwhile, data centers, Internet searches,

27. *The Librarian* (1947), sponsored by Vocational Guidance Films, Inc., http://archive.org/details/Libraria1947.

28. For more on such imagery, see W.J.T. Mitchell, "Cloning Terror: The War of Images 2001–04," in *The Life and Death of Images: Ethics and Aesthetics*, ed. Diarmuid Costello and Dominic Willsdon (Ithaca, NY: Cornell University Press, 2008), 179–206.

29. See Jack Linchuan Qiu's documentary, *Deconstructing Foxconn* (2010), http://vimeo.com/17558439, and "Network Labour

Figure 6. Performance of "Masked Labour." Image courtesy of the Graduate School of Library and Information Science, University of Illinois. Please see the online edition of *Art Documentation* for a color version of this image.

and wireless access to cloud services are often powered in part by coal, a fossil fuel that is linked to serious health and environmental hazards that may include the emission of heavy metals, increased exposure to background radiation, and lung cancer, especially in those who live and work in proximity to mining activities.[30] To scan documents in a public spectacle was to expose the physical—and even manual—aspects of digitization and highlight the participation of human workers in the creation of what is commonly referred to as data.[31] The performance piece thus escalated the foregoing sculpture-studies by examining some of the broader social costs of information and its technologies.

In "Masked Labour," we argued that the erasure of human hands and the cost to

and Non-Elite Knowledge Workers in China," *Work Organisation, Labour and Globalisation* 4, no. 2 (Autumn 2010): 80–95. Also of relevance is Dan Schiller, *Digital Capitalism: Networking the Global Market System* (Cambridge, MA: MIT Press, 1999).

30. Gary Cook, for Greenpeace International, "How Clean is your Cloud?" (April 17, 2012), esp. p. 7, http://www.greenpeace.org/international/en/publications/Campaign-reports/Climate-Reports/How-Clean-is-Your-Cloud. Recent initiatives have sought to find alternative sources of energy for data centers, but wireless networks providing access to those centers are predicted to increase demands for electrical power by 460 percent by 2015. See Centre for Energy Efficient Telecommunications at the University of Melbourne, "The Power of Wireless Cloud: An Analysis of the Energy Consumption of Wireless Cloud" (April 2013), http://www.ceet.unimelb.edu.au/pdfs/ceet_white_paper_wireless_cloud.pdf.

31. A recent critical exploration of data may be found in Lisa Gitelman, ed., *"Raw Data" is an Oxymoron* (Cambridge, MA: MIT Press, 2013).

human lives is a measured rhetorical move that operates to situate online resources as laborless. As Michael Betancourt has noted, digital technology "presents the illusion of a self-productive domain, infinite, capable of creating value without expenditure."[32] The illusion of laborlessness helps generate for digital resources an aura of information, which in turn forecloses on the interrogation of the circumstances of their production and circulation. That is, the narrative around new technologies already marginalizes as irrelevant questions about the practices around the collection, classification, and curation of digitally mediated materials. By using the spectacle of the performance piece to illustrate that information is not laborless, we sought to shift attention not only to the materiality of digital information, but also to the human work and social processes supporting the scientific and cultural e-resources that are often presented on the Internet as "free" for use in research. As part of the show, visitors donned black bags over their heads, helping to scan documents and thereby "make" digital information. Thus complicit in "Masked Labour," the audience was invited by the librarian to confront questions about their own use of and access to information, and to participate in discussions about how and by whom data is constituted and made available, and at what cost.

CONCLUSION: ON PUBLICATION, OR, A SCULPTURE OF PROSE

As part of an interrogation of information and its infrastructures, *A Cabinet of Curiosity: The Library's Dead Time* explored some of the practices of humanities research. The simultaneous display of different bodies of information, such as the codex, PDF, and librarian, were arranged to argue that material form is always critical to the transmission of ideas. The *Cabinet* project furthermore suggested that such materiality has an important social aspect; elided in a book, an online catalog, or a database, are hours of human labor and exertions, from the most mundane to the rarefied. The exhibition concluded by inviting further discussion about how digital resources are created—by whom, for whom, and under what conditions—and how these circumstances, cached in the dead time of the information revolution, nevertheless influence scholarship and the making of meaning in the twenty-first century.

To counteract the ephemeral nature of the exhibition, this article has been designed as a re-performance in prose that will remain legible to present and future audiences. Although it was not possible to avoid adopting an authoritative voice in the description and explication of the show, we have striven to make visible the processes of our research, that is, the dead time of our work. As the narrative invites readers to reenact the conceiving, sawing, and sewing of the sculptures, and thus their claims about the relationship between materiality and meaning-making, it may also unfortunately preclude competing interpretation. Nevertheless, the article takes on a particular materiality that makes the *Cabinet* project recognizable in an academic context. The foregoing words, punctuation, and blank spaces are a sculpture of prose, representing the intellectual rigor and beauty of our work in a manner that can be regis-

32. Michael Betancourt, "The Aura of the Digital," in *1000 Days of Theory*, ed. Arthur and Marilouise Kroker (September 5, 2006), http://www.ctheory.net/articles.aspx?id=519.

tered by traditional metrics of scholarly activity in the humanities. In textual form, our arguments now have a presence in published scholarship, can consequently be located with respect to ongoing research, and may even begin to influence the further production of knowledge.

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