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**critical
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DESIGN and
the DIGITAL
HUMANITIES

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guest editors

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critical making

DESIGN and the DIGITAL HUMANITIES

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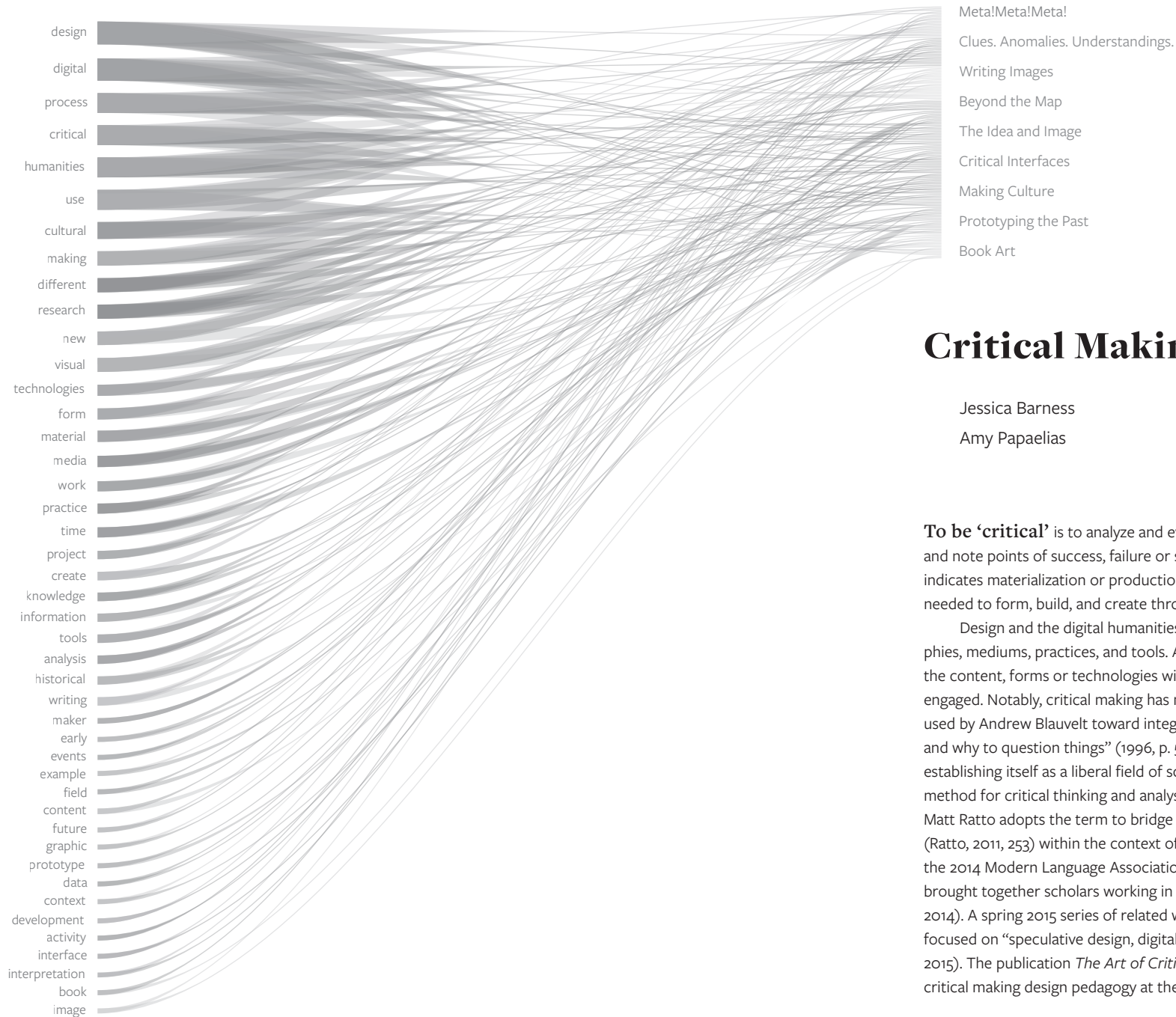
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Critical Making at the Edges

Jessica Barness

Amy Papaelias

To be ‘critical’ is to analyze and evaluate, examine the existence of something, and note points of success, failure or shifts in perspective. ‘Making’, in contrast, indicates materialization or production, a means to determine the essential things needed to form, build, and create through a process of construction.

Design and the digital humanities share common ground as disciplines, philosophies, mediums, practices, and tools. Attempts to further define these areas rely on the content, forms or technologies with which their practitioners and scholars are engaged. Notably, critical making has marked inquiry in both disciplines. The term is used by Andrew Blauvelt toward integrating design practice with “teaching when, how and why to question things” (1996, p. 57), as an essential part of the design discipline establishing itself as a liberal field of scholarship (Swanson, 1994). Defining it as a method for critical thinking and analysis through the act of collaborative building, Matt Ratto adopts the term to bridge physical and conceptual means of production (Ratto, 2011, 253) within the context of the digital humanities. A special session at the 2014 Modern Language Association, “Critical Making in the Digital Humanities”, brought together scholars working in and through critical making practice (MLA, 2014). A spring 2015 series of related webinars on critical making in the humanities focused on “speculative design, digital humanities, and media archaeology” (Whitson, 2015). The publication *The Art of Critical Making*, describes the key components of critical making design pedagogy at the Rhode Island School of Design as “hands-on

practice, the processing of enhanced seeing and perception, and contextualized understanding” (Somerson, 2013, p. 19).

Critical making situates studio-based practices as scholarship in ways that augment existing theories of design authorship, production and thinking. Designers engage with audiences through humanistic or scientific inquiry, creating systems of meaning and shaping understanding through innovative processes or collaborations. In the humanities, critical making is a means to assert the value of digital tools in constructing and building toward understanding and analyzing, within the context of well-established conventions of scholarship. Acknowledging distinctions between approaches of “design-oriented research” and “research-oriented design” (Fallman, 2007), we see that scholarly inquiry is, overall, concerned with method and process as much as the final outcome. As a developing framework to integrate activity and artifact, critical making does two things. It provides a means to understand and question the complex relationships between research, scholarship and production. It also places emphasis on the making process itself; the findings that occur within this become the crux of the endeavor and may produce as much knowledge as the polished, finished product. These activities are centered on human experience and continually fluctuate in ways that are practical and theoretical, rhetorical and physical.

The seminal publication *Digital Humanities*, collaboratively written by design scholars and digital humanists, argues for the necessity of design and design principles at the forefront of digital humanities production (Burdick et al, 2012). Design authorship practices, as a form of critical making, may also be pivoted towards ‘new’ humanities-based inquiry. The curators of the exhibition *Graphic Design: Now in Production* note they have “sought out innovative practices that are pushing the discourse of design in new directions, expanding the language of the field by creating new tools, strategies, vocabularies, and content” (Blauvelt and Lupton, 2011, p. 10). Garnet Hertz’s *The Critical Making Zine* uses physical production to publish and distribute a series of essays on technology, society and DIY culture. Intentionally using a DIY zine aesthetic (photocopied pages, stapled binding, manually folded volumes) Hertz challenges the established assumptions for how critical writing and digital humanities scholarship are disseminated. *Library of the Printed Web*, produced by Paul Soulellis, is a participatory, multi-volume book project from artists working in and around the web and interrogates the very nature of publishing through critical making. In these examples, we observe that critical making reverses emphasis on the prevailing disciplinary expectations of what scholarship is, and serves to distinguish these activities from existing research methods.

As a finding tool, this special issue locates where, how and why critical making is emerging, and the ways it exists in published form. In order to acquire a range of submissions, we reached beyond disciplinary boundaries in distributing the call for papers. From the AIGA Design Educators Community website to the H-NET.org listserve, the call for papers was posted in venues and shared on social media by

colleagues situated in design and the digital humanities. The response to the call for papers was overwhelmingly positive, with almost 50 submissions from diverse academic disciplines and geographic locations. It became evident that we were not part of a small group of designers interested in the digital humanities, but rather, we were part of a much larger community working at the edges of our disciplines.

How can critical making cultivate future crossovers between exploratory design practices and the digital humanities? How is critical making approached and evaluated in these disciplinary contexts? As evidenced in this special issue, scholars are critically impacting the ways we read, write, play, imagine and learn. Rather than advocate for each discipline to borrow and build off the other in isolation, this issue serves as a shared space to affect synergistic research, practice and education.

This issue is comprised of two sections. The first section, “Theories and Speculations”, focuses on methods and systems to facilitate critical making. New modes of inquiry and analysis are evidenced in conceptual interfaces, critical mapping and experimental frameworks. These interfaces, maps and frameworks move beyond clarifying and visualizing information to uncover critical making approaches that ask more questions than they answer.

Anne Burdick argues that modes of iterative design processes are vital to the development of new humanities tool building. The notion of interface design for criticality is put to the test within an exploratory approach involving graduate students, and concludes with the development of a speculative design brief for theorizing computational environments for humanities inquiry.

Donato Ricci, Robin de Mourat, Christophe Leclercq and Bruno Latour call into question notions of collaboration through the development of AIME, a multimodal framework that challenges preconceived ideas surrounding digital humanities projects and their impact. Interface becomes a methodology for exploring close-reading and as well as a self-reflective digital artifact.

Holly Willis employs cinematic humanities as a way of analyzing critical writing and screen typography in the history of film, video and motion design. Willis offers four modes to critical visual analysis to implicate critical making and digital humanities practices beyond cinematic studies.

Tania Allen and Sara Queen discuss the ways maps reflect more than reality, and move from the map as an object to also include the critical activity of map-making. Using a foundation of landscape and mapping theories, they connect iterative design processes with humanistic concerns.

In the second section, “Forms and Objects”, iterative processes such as prototyping and hacking play roles in critical making, as do expanded notions of publishing. Prototyping practices, whether pragmatic or speculative, are critical products in themselves, and aim to communicate through a merging of form and content. Hacking plays a significant role in building maker culture in various cultural and geographic contexts. Publishing practices are investigated through interactive and visual platforms. The forms of these arguments within this issue – from designed artifact, to a digital interface or tactile experience – draw from rich traditions and alternative forms of scholarship, publishing, and making.

Stephen Boyd Davis and Florian Kräutli investigate chronographics by designing iterative visualizations of museum collections. In dealing with aspects of curation, uncertainty, and time, they discuss their co-research effort with museum professionals.

Steve Anderson questions the role of material making as it relates to transformative scholarly practice, and how publishing platforms connect with the making itself. His born-digital article, written in Scalar and translated to print, argues that the development of technological tools play a pivotal role in critical making.

Padmini Ray Murray and Chris Hand examine differences between the Global South and the West in regard to hacking, making/DIY culture, and local circumstances. Their work specifically addresses the roles of specificity and local context in shaping digital humanities practices in India.

Jentery Sayers discusses rapid prototyping and its role in shaping media history scholarship. Through this process of making, obsolete or dead technologies are given a different life. He argues for this as an alternative means in speculating objects’ original functions and uses.

Steven McCarthy proposes a visual, collage-based format for publishing a book review, wherein the materials used to visually ‘write’ the critique are repurposed from the book being reviewed. Sample spreads from the book review are interspersed with an essay about the project itself, and readers are invited to access the book as a material object or digital download.

Collectively, these articles present critical making as a framework for understanding and analyzing practices that challenge the sometimes arbitrary boundaries of the disciplines. The contributions show that critical making may also point toward the emerging field of knowledge design. As an extension / hybrid / convergence of critical making practices, knowledge design triangulates between design, technology and “digitally-inflected scholarly practice” (Schnapp, 2011, p. 3) to engage in “post-print” inquiry. Knowledge design moves beyond the utilization of digital tools in order to consider “the more profound questions of ways media produce knowledge” that allow practitioners “to think in and through digital media” (Drucker, 2014, p. 82). Impacted by the convergences between design and the digital humanities, knowledge design benefits from the discourses surrounding critical making practices, and vice versa.

As part of the design of this issue on critical making, we performed a qualitative textual analysis of word frequencies within the nine articles. Our goal was to discover commonalities among the contributions. To do this, we utilized Voyant (Sinclair and Rockwell, 2015), a popular text-mining tool for digital texts and Raw (Caviglia et al., 2014), an open-source web application for creating custom vector data visualizations. Each article was parsed in Voyant to create a database of the 44 most frequently used words in the articles. This data was run through Voyant a second time to establish the words common across two or more articles in the issue. Imagining the issue contents as a complex network in itself, an alluvial diagram created in Raw shows the structural connections between and among the articles. The resulting data visualization is shown on pages 4–5. Extractions of this work, specific to the contents of each article, are featured on respective title spreads. Not only does this lend insight to content, it may also help to better understand the language used to communicate the concept of critical making.

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