Introduction: Comics and the Digital Humanities

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Revision Note

This article has been revised since its original publication. An earlier version incorrectly claimed that Hillary Chute did not mention the work of David Kunzle in her article "Comics as Literature? Reading Graphic Narrative." That passage has been edited to correct the error. The previous version of the article will remain available.

Abstract

This article reviews the difficulties of editing the "Comics as Scholarship" special issue by contextualizing the history of comics studies in English departments and the complexities of incorporating scholarly multimedia into the digital humanities.

In the July 2014 *Critical Inquiry* special issue devoted to "Comics and Media," editors Patrick Jagoda and Hillary Chute discuss their interest in "meticulous attention to the materiality comics instantiates" [Chute and Jagoda 2014, 1–2]. "Comics and Media" combined articles, interviews, and discussions about comics in textual form with several full-color comics by numerous artists like Alison Bechdel, Lynda Barry, Seth, and Phoebe Gloekner, among others. With such a lineup, the editors felt that the issue should also express "its own commitment to the physical object by publishing at a larger size (7x10) and in full color throughout," to distinguish "it from any other issue in the history of *Critical Inquiry*" [Chute and Jagoda 2014]. The issue is a beautiful physical object, with a large fold-out section depicting Chris Ware's poster to Chute's 2012 "Comics Philosophy and Practice," a conference at the University of Chicago that provided much of the material for the issue. Ware's poster, entitled "A CONFERENCE addressing the ART of the EMPATHETIC DOODLE," not only advertises the conference, it uses Ware's typical form of satire in order to describe the process of becoming a comic artist. "Ruin Your Life, Draw Cartoons! and Doom Yourself to Decades of Grinding Isolation, Solipsism, and Utter Social Disregard" [Ware 2014]. With 97 color plates occupying its 272 pages, a great portion of the book is reserved for color illustration. The finished object was so "eye popping" that digital humanities scholar Matt Kirschenbaum published a photo of the piece on Twitter the day he received the issue [Figure 1, [Kirschenbaum 2014]].[1]

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Matthew Kirschenbaum @mkirschenbaum · Aug 14
Special issue of CRITICAL INQUIRY on Comics and Media, edited by Hillary Chute and Patrick Jagoda: eye-popping.

↩   ↻ 4   ★ 15   •••

Figure 1. Matt Kirschenbaum's Tweet. Photograph by Kirschenbaum.

The brilliant physical presentation of "Comics and Media" created several problems for its digital archiving and dissemination. University of Chicago Press lists the price of the physical book at $30.00, while amazon.com sells it for $28.50. For academics looking to access the issue electronically, JSTOR publishes each of the articles and images as PDFs. Additionally, a Kindle version of the journal issue is available for $9.99 and it is also archived on Scribd. Each of these editions proves a poor substitute for the tactile fold-out grasped by Kirschenbaum in his tweet, often handling the images as oversized JPGs or downloadable PDFs. The Kindle version offers a larger scrollable image of the poster, and yet the JPG used in that version is not high resolution and quickly pixelates the smaller print abounding on Ware's strip. JSTOR offers a much better image, but the image also appears on its side when first downloaded and must be rotated. To read Ware's writing, the resolution must be increased to at least 200% of its original size.

In addition, many questions emerge about the long-term archiving of the issue. It is largely impossible to search for Ware's poster by keyword or as a distinct object apart from its placement in the *Critical Inquiry* issue. Whereas, for instance, Ware's panel with Seth, Daniel Clowes, and Charles Burns titled "Graphic Novel Forms Today" is easily accessed on the MLA database with any of a number of subject searches, the poster doesn't even emerge on an author search for "Ware, Chris." The metadata associated with Ware's contributions to the issue cover only three general subject terms: "Subject literature: American Literature," "Period: 1900-2099," and "Genre: Periodicals," in addition to two skimpy topic keywords: "The New Yorker" and "the role of cover illustration." Presumably, most of these keywords refer to Ware's work providing covers for several issues of *The New Yorker*, none of them reflecting the cynicism or the typographic, sequential, and print media brilliance of the fold-out poster. As John Walsh's description of Comic Book Markup Language shows, the complexities of sequential art require a rich language for keyword searches. "A large corpus of digitized comic books, along with encoded transcriptions and descriptive metadata," Walsh argues, "would allow scholars to search the text of comic books, search for keywords related to topics of interest, search for the appearance of particular characters, or search for works by particular writers and artists." And if such a rich vocabulary is fully exploited, Walsh continues, more complex searches would be

possible along with "other forms of computer processing and computational analysis — based upon structural aesthetic, and informational and documentary features peculiar to the genre of comic books" [Walsh 2012].

Such complexities are not critiques of Jagoda and Chute's issue, but they do suggest that however much scholars write about comics and invite authors to discuss comics — a whole set of institutional and technological divisions between the comics industry, digital media, and academia continue to make such collaborations difficult. When we began the process of editing a special issue of *Digital Humanities Quarterly* devoted to "Comics as Scholarship," we believed such difficulties were limited to the traditional scholarly preference for working in written text. But we found that we overestimated the ability of digital technology to bridge those divisions. What follows is a discussion of our three-year process editing this issue as an introduction to the opportunities and complexities of producing comics as scholarship, and the role of the digital humanities in either facilitating or resisting such a project. Along the way, we'll investigate the history of comics studies and its need to justify itself as a literary discourse as symptomatic of the difficulty English departments have in considering multimedia as legitimate either as a form of communication or as an object of scholarship. We argue that these difficulties have a central role in understanding the place of multimedia in the digital humanities, and the future of comics as scholarship.

Multimodality, Comics, and the Digital

It is by no means obvious that a special issue tied to the production of comic books belongs in the journal *Digital Humanities Quarterly*. Despite many commitments by digital humanities scholars to new forms of scholarly communication, Douglas Eyman and Cheryl Ball point out that the digital humanities continues to largely focus on textual markup and digital archival work. Consequently, "no coherent body of scholarship [exists] that offers a sustained analysis of scholarly multimedia and its growing impact on digital scholarship in the humanities" [Eyman and Ball 2015]. In fact the most promising scholarship on the affordances of comics as a form of communication comes from the field of multimodal composition. Dale Jacobs, for instance, explores comics as a unique method for teaching multimodal literacy and draws from the New London Group's suggestion that, in Jacob's words, a "burgeoning variety of text forms associated with information and media technologies" require a broader definition of literacy and writing [Jacobs 2013] [New London Group 1996]. Further, Emily Wierszewski underlines the importance of producing comics for teaching multimodality to students, suggesting that the process develops "a working understanding of commonly used conventions [...] and the attendant values and effects" involved in modalities that use a variety of images to tell a story [Wierszewski 2014]. While both Jacobs and Wierszewski focus on students and media production, they do not apply the practices to the production of scholarship — both of which are written mostly in scholarly prose with few illustrations. Elizabeth Losh, Joshua Alexander, Alexander Canon, and Zander Canon's *Understanding Rhetoric: A Graphic Guide to Writing*, on the other hand, uses the comics form to communicate the basics of rhetoric [Figure 2].
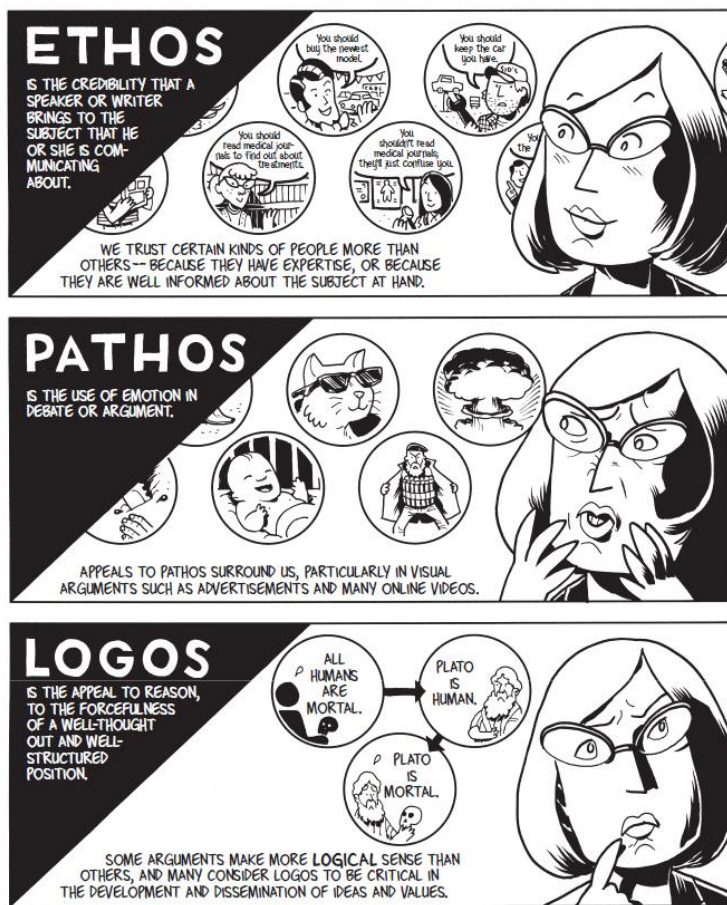
Figure 2. Discussion of Ethos, Pathos, and Logos in Losh, Alexander, and Canon's *Understanding Rhetoric*

The artistic style of *Understanding Rhetoric* is deliberately cartoony, reflecting Zander Canon's work in his long-form serialized comic *Heck* where caricature reveals the creepiness of a descent into Hell underneath an old house. *Understanding Rhetoric* uses overemphasis, for instance, to reflect the character of different rhetorical appeals on the visual representation of Losh's mood. In an interview on the blog *Reading with Pictures*, Alexander discusses how writing the book as a graphic novel caused them to rethink many assumptions they had about scholarly communication. Alexander explains that while "graphic books are often narratively driven through dialogue," he and Losh found themselves "relying heavily on text bubbles that narrated in a 'universal' voice." Instead of using the graphic form to illustrate the rhetorical lessons in the book, they were using "expository communication," consequently "[e]ntire chapters had to be rewritten to recast our exposition into dialogue" [Losh, Alexander, Cannon and Cannon 2013]. While considering the various affordances of different modalities of scholarly communication, these composition scholars have been able to use comics both as a pedagogical aid and as a communicative device for exploring different forms of expression.

Still, for all of the commitment to the sequentiality and visual rhetoric of comics, scholarship has yet to fully account for the remediation of comics as a digital form. Many digital comics are direct translations of print, but digitizing comics offers the opportunity to embed additional information, a point Jaime Lee Kirtz illustrates in her study of paratextual elements like the image processing that occurs when comics are made using Adobe Photoshop or hyperlinks embedded in Kindle and iBook versions of comics that connect readers to information about characters and creators [Kirtz 2014]. The relationship of comics with digital modalities has primarily been focused on the web as a medium for distribution that allows for niche and independent comics outside of traditional publishing models, taking the zine scene and its direct distribution to the amplified modality of the web. Many comics produced for the web are commonly referred to as "webcomics" thanks to their mode of distribution, but as a medium they only rarely take advantage of what the digital form offers them. Such webcomics typically take their formal constraints either from the daily newspaper (as in Scott Kurtz's *PvP*, Ryan North's *Dinosaur Comics*, Mike Krahulik and Jerry Holkins's *Penny Arcade*, and Nicholas Gurewitch's *Perry Bible Fellowship*), while others use the page

layout of comic books (Brennan Lee Mulligan and Molly Ostertag's *Strong Female Protagonist*, R.K. Milholland's *Something Positive* and Katie Cook's *Gronk*). Scott McCloud famously proposed that comics would abandon the metaphor of the page thanks to digital affordances in 2000, when he suggested that the screen could act as an "infinite canvas" [McCloud 2000]. The continued popularity of comics online that could just as easily be conveyed in print seems to contradict Scott McCloud's vision.

The affordances of the web that have been most readily adapted are, in most cases, less obvious: comics such as *Willis's Shortpacked*, for instance, use mouseover text to add a second punchline to the comic [Willis 2005]. Zach Whalen has noted that many webcomics make use of additional integrated elements of interactivity or animation, like those of the Korean artist Horang, who programs webcomics that take hold "of the browser's scroll function" and move "rapidly through a series of carefully juxtaposed images" in order to startle their viewers [Whalen 2012]. One of the most notable examples of an animated comic that takes advantage of the digital medium is Andrew Hussie's *Homestuck* [Hussie 2009]. The comic has included a range of multimodal aspects (GIFs, chat logs, and Flash games and animations) and has a very strong fan following. The story concerns a video game discovered by a group of teenagers, and a Kickstarter campaign was funded to produce a video game around the comic's narrative. Such successes demonstrate that the addition of the web modality to the comic form can transform the core interaction of the experience. The interactive approach taken by Hussie in *Homestuck* does not much resemble Scott McCloud's prediction of a comics form that would break out of the traditional page: while sections of the comic are experimental and hybrid, the primary approach is still very much a printed comic page. El Santo critiqued Scott McCloud's proposal for the future of comics by suggesting that an infinite canvas or scrollable page provides "too much information at once in a medium that's drowning in it" [El Santo 2009].

Yet despite this criticism there are several examples of scrolling comics, including Emily Carroll's "His Face All Red" (2010), a vertical scrolling comic depicting a wolf hunt; and Drew Weing's "'Pup' Ponders the Heat Death of the Universe" (2003), which employs scrolling in both directions for exploring the scale of the universe. These resemble Scott McCloud's own infinite canvas comics, which include his own meta-series of "Can't Stop Thinking" comics reflecting on the practice itself. Randall Munroe's "xkcd" comics have offered some of the most compelling examples of where these forms might lead. Munroe's "Click and Drag", for instance uses an infinite canvas contained within a single frame [Munroe 2012a]. "Click and Drag" had an explorable panel ranging from space to underground and offering so much content that Florian Wesch's Google Maps adaptation offers the best interface for viewing it in its totality [Figure 3, [Wesch 2005]].
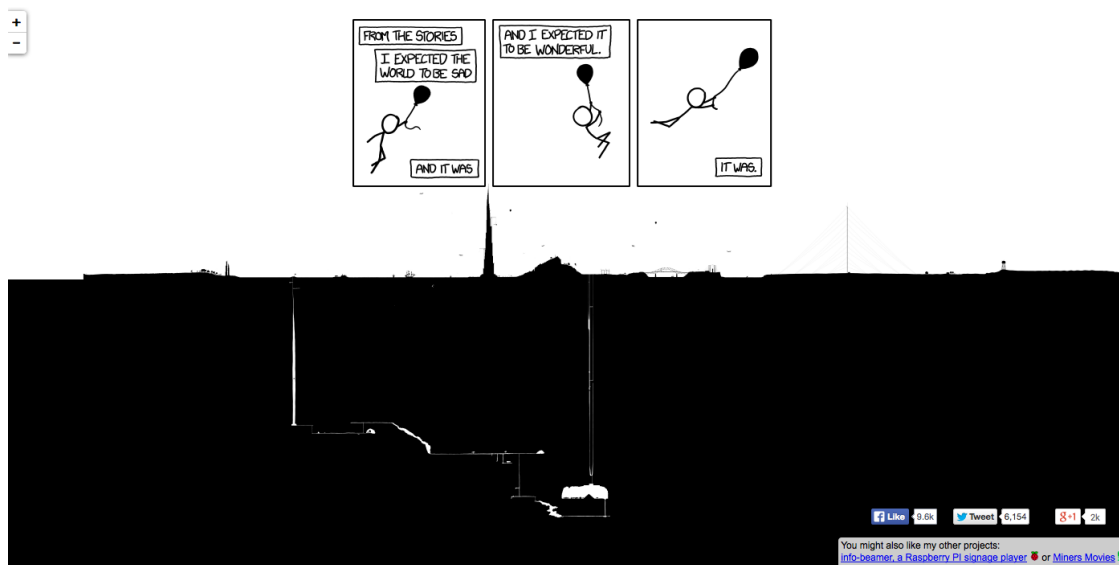

Figure 3. Screenshot of Florian Wesch's Zoomable Map of XKCD's "Click and Drag"

According to Erik McClure, the map is about 165888 pixels wide. He continues that if an average human being were the size of one of the characters on the map, it would take them "1.67 hours to walk from one end of the image to another" and if the author "spent, on average, one hour drawing each frame, it would take him 9.375 days of constant, nonstop work to finish this. If he instead spent an average of 10 minutes per frame, it would take ~37.5 hours, or almost an entire 40-hour work week" [McClure 2012]. "Click and Drag" maps out an entire underground civilization and features references to Mark Z Danielewski's

House of Leaves, Super Mario Bros., H.P. Lovecraft, and geeky programming humor. One frame, for instance, says "If you're fencepost errors I feel bad for you, son — I got 99 problems but somehow solved 101" [Munroe 2012a]. Fencepost problems point to simple errors where intuitive solutions to programming problems might be one or two values off. The comic caused many conversations online, and perhaps the most contested revolved around how Munroe created it. Several readers thought that he simply created a programming script that distinguished the space below and above the horizon, and filled those spaces with black and white respectively. They expected, in other words, that clicking on individual tiles would return a 404 error saying that they did not exist on any server and were spontaneously generated by the script. Luis Montes reports on a Google Plus post that he used HTML 5 canvas to stitch the tiles together and reconstruct the image as a whole. "Firefox and Chrome both barfed on 225 (non-empty) huge tiles," Montes says, "so i had to scale them down first with mogrify to 64x64 to even paint the thing on a 5120x2048 canvas" [Montes 2012].

The widespread interest from comic fans, programmers, and social media commentators surrounding "Click and Drag" point to the power comics have to reach multiple audiences, particularly when they are enhanced with digital technology. Munroe's "Time" shows yet another possibility, in which he embeds 3,099 images in a single panel that changed every thirty minutes. The comic inspired a devoted community that followed the story as it unfolded from March to July 2013, complete with messages in a writing system called "Beanish" that followers had to decipher. The actions of those readers and their intense study of the comic's embedded texts and backstory are not unlike the labors of a digital humanities project — with the forum conversation surrounding the comic exceeding over 1,300 pages of commentary. An entire conversation emerged on the xkcd forum when the first panel appeared on March 25, with the first poster "rhomboidal" commenting that the comic seemed to communicate the idea "that while time might appear to be a strictly linear phenomenon, its manifestation as life is actually a profoundly open, richly holistic, poly-temporal intercreative experience with many points, narratives, and interpretations as there are participants in it" [rhomboidal 2013]. Such a description, while missing the point of most of the narrative that followed, serves as a powerful commentary on the way digital comics can inspire further creative expression. One fan, James Pryor, was inspired enough to create "Time — at your own pace" in which the panels of the comic could be scrolled through using a mouse-wheel instead of relying on the time-based algorithm of the original comic. Fans also produced a wiki-guide to the comic, a glossary of the world and its inhabitants, and wrote songs relating to its themes [Pryor 2013].

As we continue to consider the place of comics within the digital humanities, it is worth noting that many of the creators working with digital comics are careful to separate such artifacts from animation or other digital media. Comic author Mark Waid, one of the more vocal digital comic enthusiasts, argues that "the only place I stop short is at the addition of voice, music, or anything else that takes the full and total control of time away from the reader," which he feels is an "essential" and "inviolate" element of comic books. Of course, Waid's distinction would rule out comics like xkcd's "Time," and yet even Lara Hudson — commenting on Munroe's comic — argues that the temporality of the piece was "glacially slow for animation, but imbued with a continual sense of motion that felt utterly unique for a comic" [Waid 2012]. It is clear from these comments that comics continue to inhabit a liminal space between readerly narratives and animated features that make them difficult to place for creators, critics, and scholars alike.

When we recall the early publishing history of comics, which were closer to the pulp ephemera of newspapers and cheap penny dreadfuls than to the elite literary publications traditionally celebrated in English departments, it's easy to see this confusion.[2] Donald Ault, who started teaching and researching comics at Berkeley in 1972 and at Vanderbilt in 1978, recalls that "Comics were the 'whacko' kinds of things that the news media expected would be taught at a 'radical' institution like Berkeley, where I had acquired what I considered to be a badge of honor when Stephen Greenblatt proleptically dubbed me 'the Departmental trash man.'" The technological situation at Berkeley also lead to situations in which finding and distributing comics became increasingly difficult:

> Back issues of comics were not yet readily available in quality reprints [...] so I had to put my own copies on reserve in the library. When these photocopies were stolen, I had to resort to putting photocopies on reserve. When the photocopies were stolen, I realized some more secure framework, along the lines of special collections or rare books had to be devised if the course were to be practical at all. [Ault 2003]

[3]

Ault would go on to found *ImageTexT: Interdisciplinary Comics Studies* in 2003 the first online open access journal on comics and cultural theory. It is our contention that — in 2014 — the difficulties surrounding the *composition* of comics in scholarly contexts is less technological and more social. The institutions of scholarly publishing, with some notable exceptions, continue

to favor written prose to the detriment of new technological possibilities that would make comics more favored as a form of communication. As Anastasia, along with Nick Sousanis, Paul Tritter, and Tom Neville recounted in a panel called "Expanded Forms of Scholarly Inquiry" at the *Imagining America: Arts and Scholars in Public Life* 2012 conference in New York City, these assumptions lead to problems like: accessing alternate forms of scholarship in archival spaces, the demands on creators working with expressive and analytic acts in different modalities, and the difficulties of evaluating such forms given the dual demands of scholarly and artistic merit [Salter, Sousanis, Tritter, and Neville 2012]. As we chart the history of this issue, we'll look for inspirations and note specific limitations that resulted in the shape of "Comics in Scholarship."

THATCamp and Experimental Pedagogy

The idea for this issue was born out of a 2012 THATCamp session proposed by Anastasia and attended by Roger entitled "Comic Books + Playing with Scholarship" [Salter 2012]. THATCamp has traditionally been an entry point for many scholars into digital humanities discourse, making it a particularly productive ground for interdisciplinary projects and experimentation. The THATCamp Comic Books session was inspired by existing examples of comics that act as scholarship, a tradition best known through the work of Scott McCloud and exemplified by some of the work in Jagoda and Chute's "Comics and Media" issue. Other examples can be productively drawn from outside of typical academic discourse. Art Spiegelman's *MetaMaus,* and, indeed, the historical and journalistic work of *Maus* itself, is frequently cited as a central text on the Holocaust and the ultimate example of a comic book that transcended genre to be hailed as a canonical text. In a similar vein of intertwining journalism and scholarship, Mary Talbot and Bryan Talbot's *Dotter of her Father's Eyes* examines the life and influence of James Joyce's daughter Lucia. Bryan Talbot is well-known for his graphic epic *Alice in Sunderland*, a work that combines fiction, history, and myth to consider *Alice in Wonderland* as part of a web of literature.

From these initial influences, those of us gathered at the THATCamp "Comic Books + Playing with Scholarship" session discussed a potential moment of convergence for scholars interested in comics as a form for production as well as analysis. First, while journals specializing in scholarly multimedia like *Kairos: A Journal of Rhetoric, Technology, and Pedagogy*, *M/C: Media and Culture*, and *MediaCommons* have existed for some time, the rise of interest in open access and alternative publishing in the humanities that correspond with the needs of DH scholars makes publishing a work in comic form a greater possibility than perhaps ever before. Second, more accessible forms of digital production tools make the act of creating multimedia works easier. For instance, Roopika Risam, Anne Cong-Huyen, and Adeline Koh employed the comic application Bitstrips to produce short, humorous, and rapid postcolonial interventions into the digital humanities community [Figure 4].
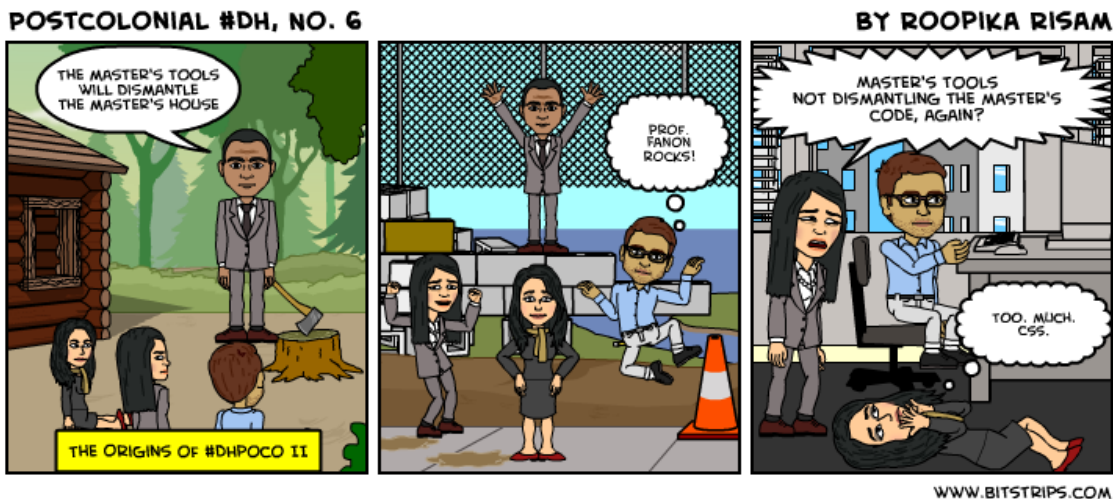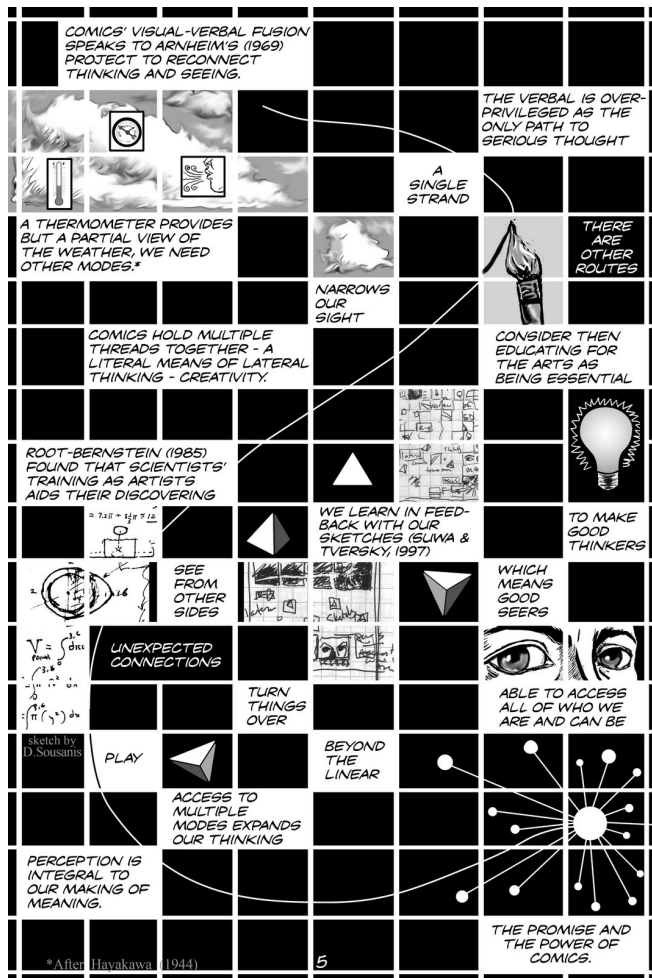
Figure 4. "Postcolonial #DH, No. 6" by Roopika Risam

Risam's strip exploits the ability of Bitstrips to show a wide variety of expressions with a relatively limited amount of character poses and emotive choices. In "Postcolonial #DH, No. 6" Risam uses humor and different forms of technology to enact Audre Lorde's well-known critique of Franz Fanon's optimism regarding the use of "the master's tools" to contest colonialism. As Lorde argues, "the master's tools will never dismantle the master's house. They may allow us temporarily to beat him at his own game, but they will never enable us to bring about genuine change" [Lorde 1984]. The optimism shown by the characters in the strip soon turns to frustration, with Risam rolling on the floor overwhelmed by "too. much. css" [Risam 2013]. Aaron

Kashtan, whose work is featured in this issue, sees Bitstrips enabling his own practice-based experimentation in comic studies and media studies. Connecting its use to a "long tradition of using the comics medium to theorize itself" epitomized by Scott McCloud's *Understanding Comics* and Wil Eisner's *Comics and Sequential Art*, Kashtan says that "my artistic talent is very limited and [...] without tools such as Bitstrips and Comic Life, it would be prohibitively difficult for me to engage in this sort of theoretical exploitation" [Kashtan 2013]. While Kashtan's work suggests that such tools can make the visual and symbolic rhetoric of comics accessible to the "non-artist," it is also a reminder that when the medium theorizes itself it will likely be evaluated on aesthetics alongside scholarship.

Third, graduate students are beginning to ask for different modalities of communication to produce their dissertations. Nick Sousanis wrote his dissertation as a comic and documented the process on his blog *Spin, Weave, and Cut* from 2010-2014. In his article "The Shape of our Thoughts: A Meditation In/On Comics," Sousanis uses the form of a cross-word puzzle to discuss the non-linearity of comics and their power to lead the reader to unexpected insights not available in written prose [Figure 5, [Sousanis 2012].

Figure 5. Nick Sousanis, Page from "The Shape of Our Thoughts: A Meditation In/On Comics." *Visual Arts Research*. 38.1 (Summer 2012), 1-10.

This page eloquently shows how the linear reading of text, signified by the comet slowly floating down the page, breaks up in a myriad of visual and verbal digressions. Each narrative box works modularly to compose different potential readings of the page. We learn that "the verbal is overprivileged as the only path to serious thought" and this could lead to "a single strand" and "narrows our sight," but our eye could also move to "other routes" or any of the scientific studies or images featured on the page. The overall effect points to Theirry Groensteen's argument that comics are defined by "iconic solidarity," which means, "independent images that, participating in a series, present the double characteristic of being separated [...] and which are plastically and semantically over-determined by the fact of their coexistence in presentia" [Groensteen 2007]. In Groensteen's definition, it is the very fact that images are presented together that makes it possible for them to be read sequentially and not, for example, as a mosaic or as a single composition. Sousanis's page plays with the tension between the sequentiality and the

simultaneity of the comic page in order to show how ideas can be splintered apart and then combined into new regions of thought. Sousanis produced a prose discussion of his process for this issue, where he further uncovers the complexities and possibilities of the comic form for scholarship. His dissertation is also now available as the book *Unflattening* from Harvard University Press [Sousanis 2015]. Jason Helms, whose work appears in this issue as well, also wrote a dissertation that employs comics throughout. As a "non-artist," Helms began taking drawing classes in 2008 as part of his research methodology, and defended his dissertation, *Rhiz|comics: the Structure, Sign, and Play of Image and Text*, in 2010. Helms's dissertation is less of a "pure" comic than Sousanis's. It features sections that look and feel like comics, but much of the dissertation consists of text punctuated and interrupted by visual elements (the conclusion, for example, is written entirely as calligrams). However, this is hardly an oversight and reflects his argument for blurring the lines between comics and other media as well as those between image and text. Helms has rewritten his dissertation as a digital monograph for the University of Michigan Press's Sweetland Digital Rhetoric Collaborative imprint, where it is currently under review.

Fourth, we found that writing teachers were experimenting with the comics form as an alternative to traditional essays. Roger, for instance, taught two sections of a comics class in 2011 as a Marion L. Brittain Fellow at Georgia Tech in which he asked his students to create a 22-page comic book. Students spent the semester pitching a title, researching audiences and comic genres, writing, illustration, and finally publishing a comic book that they presented to members of the University community at a campus comics convention.
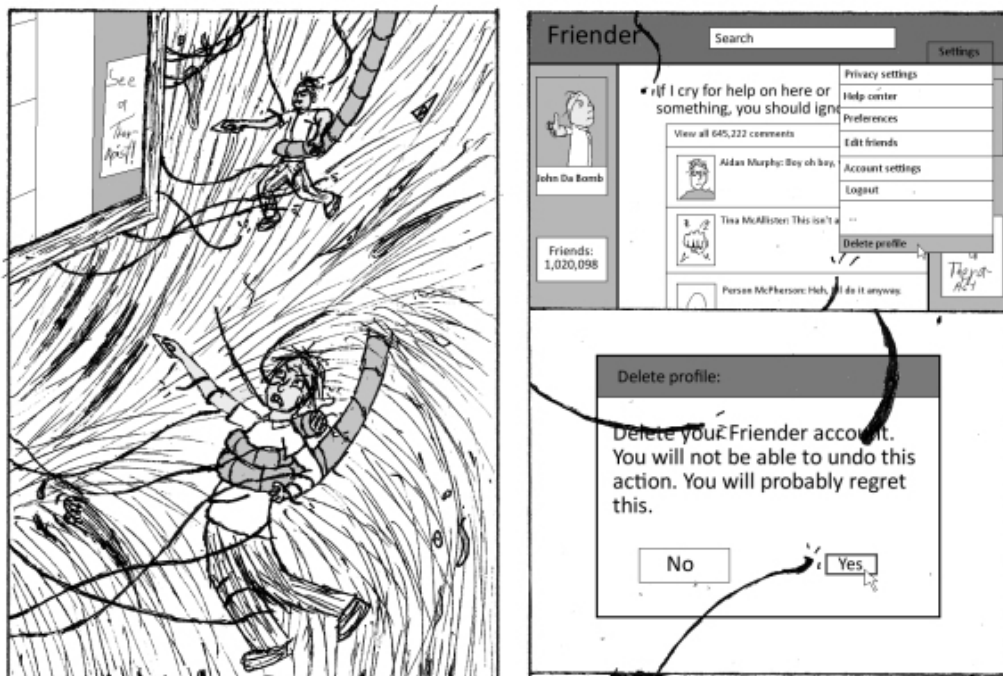
Figure 6. Detail of a page from Mark Price, Jared Kimmel, Ryan Leary, Gerin Williams, Justin Luk, and Matt Hooper's comic *Loser*, completed for Roger Whitson's ENC 1102 Multimodal Composition class Fall 2010 at Georgia Tech.

Roger's students spent a good amount of time considering the various impact of different panel arrangements and — as the example above skillfully shows — the effect of juxtaposing different artistic styles with one another [Figure 6]. Here, we see Mark Price's use of heavy inks and wild composition contrasted with the relatively clean white and grey space of the monitor screen. Fred Johnson discusses a similar project utilizing comics by art-teacher Scott Kolbo in his article "Perspicuous Objects: Reading Comics and Writing Instruction." Kolbo's project had students draw "themselves in two different styles and observ[e] the differences" [Johnson 2014]. Both Johnson and Kolbo found that their students had difficulties with basic aspects of sequential art like the use of images to communicate the sadness of Chris Ware's *Jimmy Corrigan: The Smartest Kid on Earth* or the way particular artistic styles might denote specific emotional states. We'll discuss how some of these difficulties extend to scholars producing their own comics later on.[4]

Each of the examples above illustrates some of the grassroots efforts at understanding comics from broader interdisciplinary

perspectives and for a variety of different purposes: journal articles, social media interventions, dissertations and monographs, and teaching pedagogies. Our discussions at THATCamp included many more of these examples, but we found no systematic consideration of how they fit into the scholarship of our various fields. Our purpose in creating this issue grew out of a desire to contextualize the importance of these visual and verbal experiments for scholarly communication, and also to explore the process necessary for creating, evaluating, and sharing work of this kind. As we considered the possibilities, we created a "call for papers" that acted as a comic itself. As we considered the possibilities, we created a "call for papers" that acted as a comic itself [Figure 7].
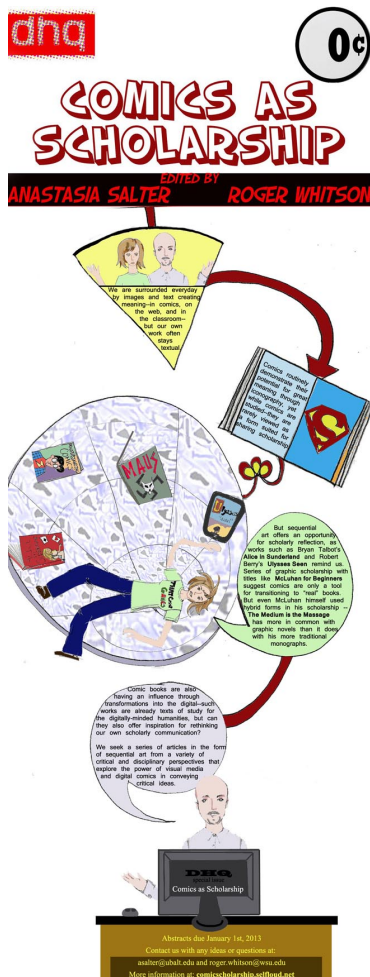
Figure 7. Anastasia Salter and Roger Whitson, "Comics as Scholarship CFP"

The CFP was created with a combination of hand-drawing, GIMP, Photoshop, and HTML 5 coding. Even while noting Anastasia's particular skill at rendering caricatures of both of the editors, the CFP foregrounded some of the complications that would emerge as the issue progressed. First, the banner was created by Roger by copying the *Digital Humanities Quarterly* logo from the site and running it through several filters on Photoshop. The "0 cents" is cropped from the digitized cover of *Detective Comics* #27, which originally sold for 10 cents. Finally the font was chosen directly from Photoshop's font library. Connecting the banner to the images prepared by Anastasia was complicated due to the varying styles and methodologies of both of the editors. It was unclear how hand-drawn images, digitally-processed type fonts, and filters would work together to create a clean, readerly design. Further, as neither Anastasia nor Roger are trained comic artists, we felt some reluctance towards presenting our CFP as sequential art. Thus, we posted the call in two forms: a traditional prose version and the illustrated or sequential CFP. We also wondered if scholars would take the call seriously. Anastasia, therefore, posted a call in traditional prose in addition to the one rendered in sequential art. The text call was easier to distribute in scholarly venues, including email lists and CFP sites, as the rendered version presented both a large file size and difficulties for those mediums. The comic CFP took some time to produce, a lesson we'd integrate into the submission and revision process for the issue [Salter and Whitson 2014].

Submissions, Revisions, Process

One of the difficulties of producing comics in scholarly circles is the labor-intensive process involved in constructing sequential images that produce a narrative. Rob Guillory, artist on the long-running series *Chew* from Image Comics, discusses the time it takes to produce a typical 22-page issue for a monthly book:

> My overall monthly schedule looks like this: The first week and a half of an issue is spent laying out the issue via thumbnails, then penciling the whole thing out. The two weeks after that are spent inking the pages in groups of two. Then, the last week is spent coloring. My color assistant Taylor Wells sends me the flat colors for the issue, and from there I add texture, lighting, shadow and special effects to the page. So, in the end, it always seems to round out to about 5 weeks per issue. [Harper 2014]

Understanding this process and the fact that Guillory is one of the most efficient professional artists in the industry, we knew that we couldn't ask for finished comics as first drafts. First, asking for finished drafts would mean that the potential authors would have to invest a significant amount of time before getting any feedback from the editors. Second, if the author was rejected from the issue after producing finished drafts, we knew that it would be relatively difficult for the work to be accepted elsewhere. In consultation with *DHQ* editor Julia Flanders, we decided to ask for abstracts in the first round, scripts and penciled layouts in the second round (involving outside reviewers), then — if accepted by the reviewers — we would ask for a finished comic book for the final draft.

Even with these failsafes in place, we had numerous complications. Five contributors pulled out the issue at various stages, often citing lack of time as a major concern. While this is a problem throughout academia, it seemed particularly difficult in the context of producing works for this medium. Outside reviewers, meanwhile, had a number of conflicting and confusing responses to the drafts. Some were concerned that the comics were in a less-than-complete state. Others didn't understand how the submissions were contributing to the field of digital humanities. Flimsy research and a lack of a critical lens were often cited problems. One reviewer suggested that using comics to make an argument about research is very similar to the work of Scott McCloud, and that the use of humor to make a scholarly argument may be inappropriate. Reviewers critiqued everything from the exuberance of using too many exclamation points to the lack of an original argument, the use of populist appeals to ground claims, and the lack of a bibliography or Works Cited page. We mention these issues not to critique the review process, which significantly added to the quality of the submissions. Rather, we wish to underscore just how complicated producing comics can be, and the way certain modalities of scholarship can create unexpected — and perhaps unwanted — opportunities for different effects. Is it appropriate to use humor in order to assert a scholarly claim? Can quotations and citations be managed using visual references rather than bibliographical or textual ones? Such questions invigorated but also complicated the process of producing the issue.

For the remainder of the introduction, we'd like to offer brief glimpses of the production of each article for "Comics as Scholarship," with the purpose of showing how the process of review transformed the submissions. **Nick Sousanis**, who contributed an annotated discussion of his dissertation, required the least amount of work. In sum, it was difficult at first for Sousanis to completely contextualize his argument for broader audiences. Given that he produced the piece in a Word document, we were able to use "Track Changes" to add commentary [Figure 8].
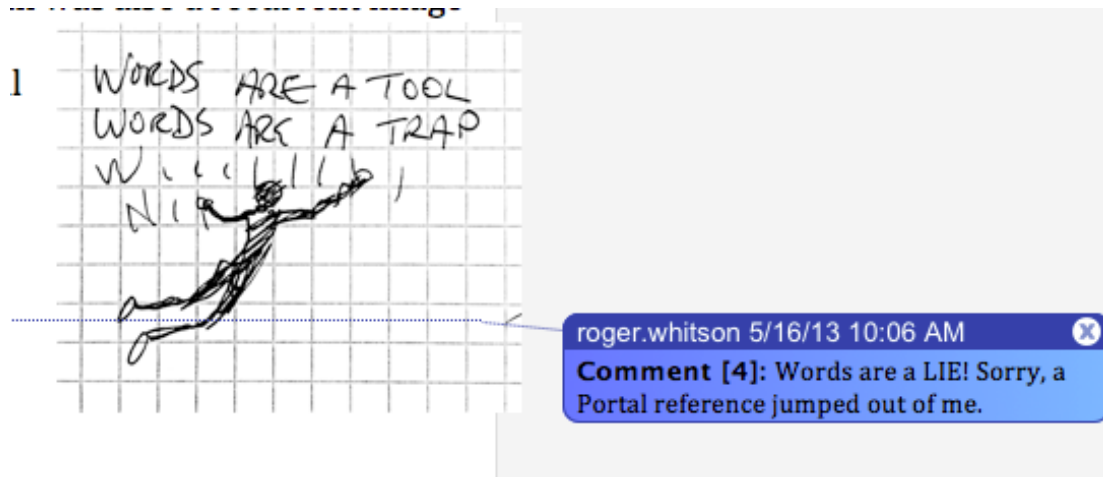
Figure 8. Some of the comments, were, themselves references to other media. Screenshot of Sousanis's first draft, with comments by Roger.

While some of the reviewers expressed hesitation with what they saw as a piece without a central argument, we feel that having Sousanis's discussion of producing the first comic as a dissertation to be a highlight of the issue. Sousanis explores "Chapter 3" of his dissertation, in which he outlines the possibilities of multiple modes of knowledge. One particular point of interest involves Sousanis's self-reflexive discussion of producing a single page of his dissertation. When asked if he produces words or pictures first, he simply replies "yes." Sousanis writes notes and sketches simultaneously, then moves to a script, then a storyboard, then revisions and drawing again. Sousanis's words meld with their images and produce sequential argumentation.

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Jason Helms produced perhaps the most visually unique of our pieces. He uses the comic form to explore the history of comics scholarship, with a special emphasis on the field of rhetoric and composition. His first images included a brilliant recreation of the Bayeux Tapestry, cited by McCloud as one of the first pieces of comic art [McCloud 1993]. Helms beautifully appropriates the texture of the Tapestry to create his modern history [Figure 9].

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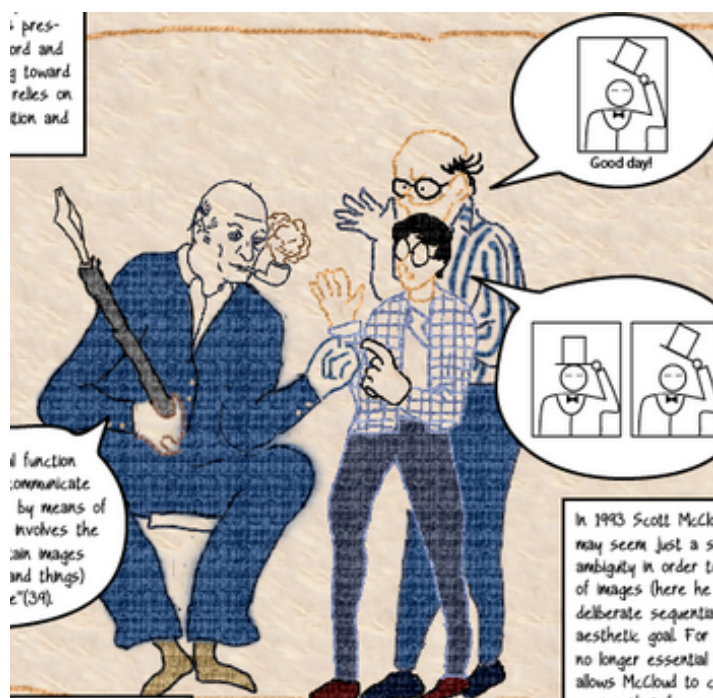
Figure 9. Detail of Helms's Sample Image Featuring a Discussion Between Will Eisner, Scott McCloud, and Robert Harvey

While Helms wanted initially to include full block quotations as well as caricatures from Deleuze and Guattari and media

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theorist Gregory Ulmer, we both decided that streamlining the theoretical sections and highlighting Helms's digital artistry in the tapestry section would produce a better result. The first draft of the sample image, further, featured a less-than-clear serif font. A sans-serif combined with a CSS roll-over images that highlight the dialogue and narrative balloons lead to greater readability.

In all, we felt that Helms's invocation of the Bayeux Tapestry intervened compellingly into the visualization of comics history. Richard Burt has suggested that films appropriating the Tapestry into their opening and closing sequences have used it to simulate the "texture" of the medieval past and that such a simulation can point us to the idea that all histories are mediated by the material modes of their presentation [Burt 2007]. To be sure, the presentation of comics history has a more recent self-reflexive history than the fields of film or literary scholarship. Fred Van Lente and Ryan Dunlavey, for instance, produced a *Comic Book History of Comics* that tells the story in sequential art [Lente and Dunlavey 2012]. Yet, Helms reminds us how often the particular material affordances of comic history can often be overlooked in a world where comics are produced in single issue floppies, trade paperbacks, and digital formats.

Aaron Kashtan's work on comics materiality similarly highlights these affordances. Kashtan was enthusiastic about the project, yet also had anxieties about producing art for a scholarly publication. Most of his project emerged from early experiments with Bitstrips [Figure 10].
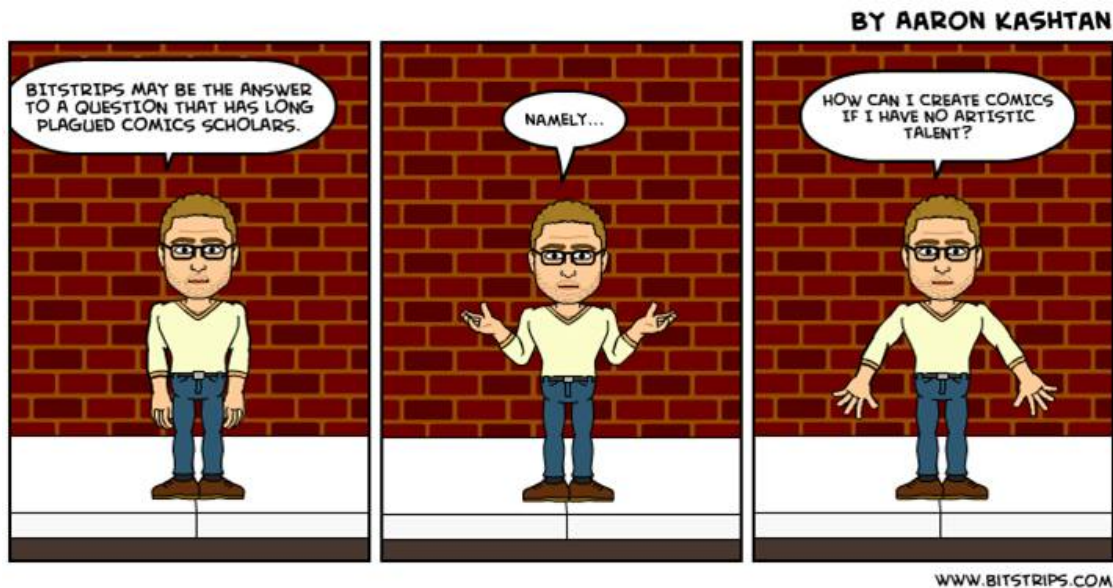

Figure 10. One of Kashtan's first BitStrips Experiments, Created for a Presentation on "Teaching Multimodality with Comics" for DragonCon in 2013

As his style evolved, Kashtan found that his original definition of "artistic talent" was too narrow and layered more sophisticated BitStrips models with photographs, hand-written lettering, filtered images, multiple fonts, paintings, manuscripts, word-clouds, Ebook images, comic panels, and internet memes. While emphasizing the ability of sequential art to highlight different materialities, Kashtan found his style by combining those different modes into a unique collage.

Kashtan also used the form of comics to comment upon theories of materiality from N. Katherine Hayles's notion of a materiality that combines matter with human signifying strategies to Matt Kirschenbaum's distinction of forensic and formal materiality and Jane Bennett's theory of a vibrant matter, in which non-human entities act and communicate without a human mediator [Hayles 1999] [Kirschenbaum 2008] [Bennett 2010]. For us, the value of Kashtan's work lies in showing how comics "forcibly alert the reader to the physicality of the reading experience," in Kashtan's words, asserting that comic books are a vital object of study for anyone interested in the history of the book, philosophy, media studies, or the digital humanities.

The use of multiple styles and fonts to illustrate and cite academic sources is also at work in **Aaron Humphrey**'s multimodal analysis of the "Introducing" and "For Beginners" series of comic book introductions to critical theory. In some instances, photocopied and JPG images of the books mimicked the multimedia production of the books themselves [Figure 11].
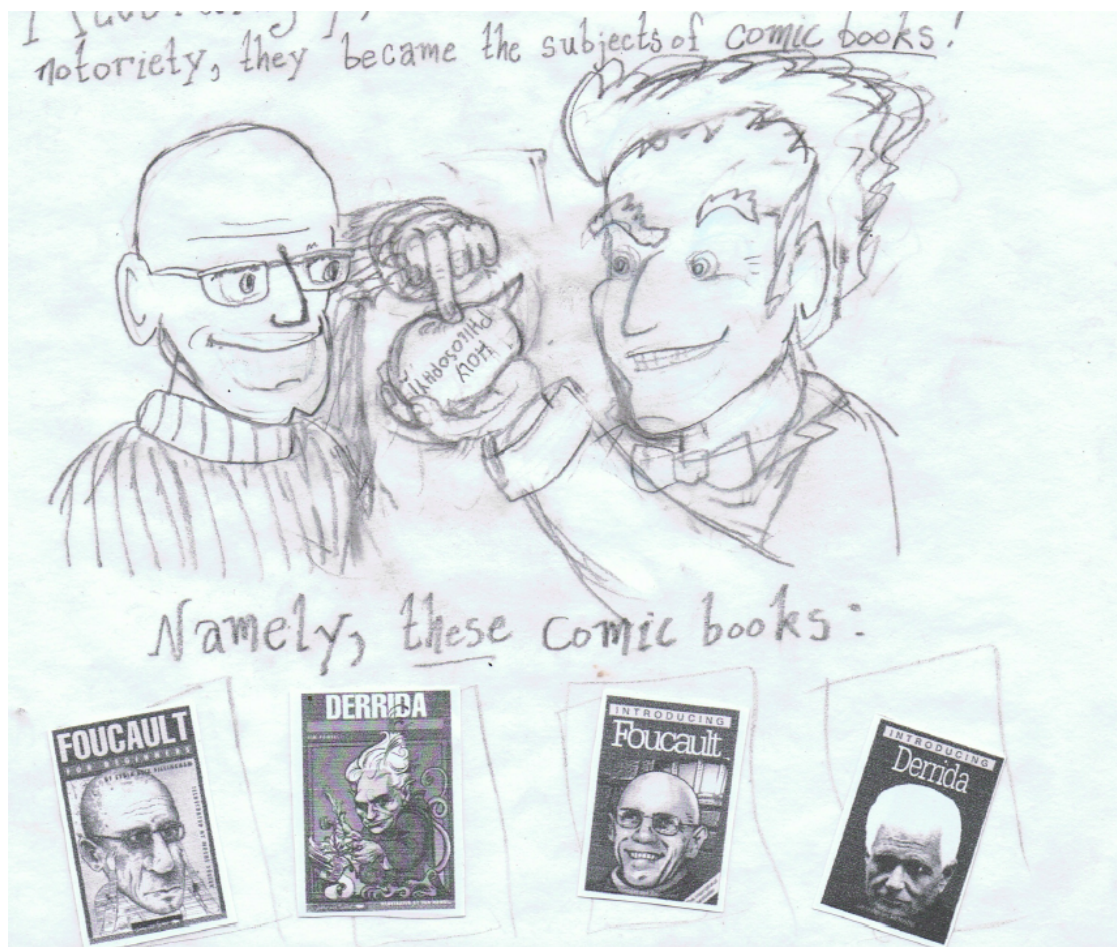
Figure 11. A Panel Featuring Humphrey's Original Sketches and Photocopies of the Derrida and Foucault Books.

Humphrey's style was already established before he started work on the issue. Much of his work explores the intersection between visual literacy, comics, and education. He argues that his process of hand-lettering was much more time-consuming and labor intensive than typing an article on a word processor, but he wanted to give the sense that the lettering was inseparable from the images he produced. The result is a piece in which words are also objects that Humphrey places in different parts of the page for different visual effects.

The initial stages of his work proposed to read the books on their own terms, neglecting the powerful rhetorical possibilities inherent in the comic as a multimodal form. As he explored the work of Gunther Kress and the New London group for later revisions, Humphrey crafted a powerful piece comparing the inseparability of different modalities of communication in comics to a division of labor that demands different experts work on each part. He also underlined his point by having his images and text respond to one another, and by asking how such divisions might work to challenge the educational hegemony that sees printed texts as more learned [Kress 2001] [New London Group 1996]. 34

Robert Watkins and Thomas Lindsley expand the emphasis of educational comics in pedagogy and the digital humanities by beginning their work with Gene Luen-Yang's *American Born Chinese,* which Cheryl Gnomes has lauded as being particularly useful for students with learning disabilities [Luen-Yang 2006]. Yet they also situate their discussion of multimodality within the frame of ancient rhetoric and critical pedagogy [Figure 12]. 35

Figure 12. Early Storyboard Sketch from Watkins and Lindsley

Watkins began working by himself, but eventually added Thomas Lindsley as a collaborator to do the art, coding, and web design. As they revised their piece, Watkins and Lindsley also added a more diverse set of examples to back up their claims about rhetoric and comics. Watkins and Lindsley also translated their earlier drawings to HTML5. For us, the piece exemplifies a different aspect of comics history and analysis than the other submissions because it highlights the work of ancient rhetoric in contextualizing and shaping comics history.

Watkins and Lindsley's work also shows that teachers can demonstrate the pedagogical effectiveness of the comic form by exploring sequential art similar to their contribution, which visualizes collaborative practices accessible to students as an alternative to the visual flattening of voices in the written essay. This multimodal approach takes advantage of existing tools as well as a grounding in rhetorical theory to explore sequential art as a method for communicating both the process and results of a scholarly act.

One of the more provocative yet also fascinating pieces came from Religious Studies scholar **B.J. Parker**, who traces some of the intersections between gender and Judaism in Ezekiel. Unlike many of the other contributors, Parker wanted to construct a fictional narrative out of scholarly sources. The ambition of the piece was matched by early images that were clearly polished and showed a degree of artistic skill [Figure 13].

Figure 13. Detail of an Early Sequence from B.J. Parker

Parker integrates scholarly debates around Ezekiel directly into the narrative. Parker's initial proposal focused on exploring sexual objectification in Ezekiel 16 through comics. Parker's initial proposal focused on exploring sexual objectification in Ezekiel 16 through multimodal presentations, including this development of sequential art. Given that focus, B.J. Parker's was one of the most difficult pieces for our reviewers to grapple with. The piece deals with subject matter that we don't always engage with in digital humanities, and some of the reactions to the early stages of the piece focused on apprehending and responding to the disturbing subject matter. However, these responses and the difficulties the piece poses are essential to Parker's intentions, as Parker's work demands we engage with elements of the text that have otherwise often been erased.

This concept of a scholarly retelling thus resembles the work of creating an annotated edition, with Parker's annotations expressed both through the editing of the text and the juxtaposition of original imagery. Comic retellings are often thought of as simplifications of the original text, an impression that holds within it an underlying bias towards sequential art as a mode of narrative expression. *The Classic Illustrated* series, which Parker's work of adaptation evokes, was often dismissed despite its value. As William B. Jones, Jr. describes in his survey of the series, between 1941 and 1962 *Classic Illustrated* made "the realms of the literary and historical imagination accessible and immediate" [Jones 2011]. Parker's work likewise makes the original text, and the debates and cultural discourse it evokes, accessible in a way that highlights and recontextualizes its place in religious discourse. ₃₈

Conclusion

As you explore the diverse works included in this collection, we invite you particularly to consider the scholarly process that is on display and the opportunities we have in the digital humanities to embrace and refine these processes. Each work represents the different strengths of its author(s) in modality, use of original and remixed imagery, and textual methods. These works only display a small section of what is possible in the broad realm that can be analyzed as sequential art or comics. The history of humanities computing, broadly construed, is filled with multimodal works: however, we are still at our infancy in truly building spaces that are receptive to new methods, with systems of peer review that encourage innovation and

experimentation. The challenges we faced in constructing this issue are a reminder that while the academic essay and monograph are entrenched structures with strong institutional support, the scholarly multimedia text is still emerging.

The practice of critiquing and understanding a mode of expression better through working within its medium is not new, and we are not suggesting that comics are a new method for the digital humanities or even that multimodal texts aren't already embraced in a number of spaces, such as the fields of digital rhetoric and multimedia composition. However, there is a chasm between what is possible in sequential art as an act of scholarship and what is supported and institutionalized. We showcase these works as a provocation for building new scholarly spaces and experimenting with multimedia research within the digital humanities. We also suggest that these experiments form one part of Johanna Drucker's call in *Graphesis: Visual Forms of Knowledge Production* for an approach towards digital technology that acknowledges the complex research in the humanities surrounding perspective and point-of-view [Drucker 2014]. As scholars consider the various ways the culturally-rich forms of knowledge from the humanities can nuance claims made by computational methodologies like big data visualization, it helps to realize that all sorts of experiments with visual perception already exist in the form of sequential art. Apart from simply communicating with comics, "Comics as Scholarship" also points to a possible future for the digital humanities where data analysis is made even richer by modifying temporal sequence, shifting points of view, or varying the style in which visualizations are presented. More generally, such experiments can suggest that studying comics may prove to be a fundamental part of understanding the digital humanities in the future.

Notes

[1] Kirschenbaum's affective response parallels Alvaro Aleman's observation that comic book publishers have historically constructed a variety of packaging strategies in order to lure customers into their shops, including "plastic sealed issues, glossy, foiled and three dimensional covers, commemorative editions, etc" [Aleman 2005]. This, for Aleman, is a "revirginizing" experience in which a capitalist subject is confronted by the "'yielding' of the comic book to sensual experience" as a form of consumption offering private control of the otherwise chaotic modernist experience of temporality.

[2] The American cultural alignment of comics with children's literature inspires many articles that declare comics are finally coming into their own, growing up, or otherwise being accepted as literature. An example is Peter Schjeldahl's 2005 article in The New Yorker, where he uses the work of Chris Ware to declare "Graphic Novels Come of Age", [Schjeldahl 2005]. The question of the "literariness" of comics is particularly interesting since the word in question has nothing to do with the technological affordances of the literary medium, and everything to do with what Rocco Versaci identifies in his students as a sensibility defined by works "whose importance is beyond question" [Versaci 2007].

[3] Several of the comics stolen from the library were from the collection of Carl Barks, whom Ault befriended and collaborated with for decades before Barks's death in 2000. As he recounts, "This theft led to Carl Barks stamping the covers of all of his comic books with this message: 'This is the personal file copy of Carl Barks. Anyone else possessing the book has stolen it" [Ault 2003].

[4] The study of comics as an art form is popular amongst various community organizations like Gainesville, Florida's Sequential Artists Workshop where courses on the history of comics taught by scholar John Ronan are combined with workshops led by local artists Justine Maria Anderson, Tom Hart, and Kurt Wolfgang. In an article about SAW in the magazine *Gainesville Today*, Hart describes students learning in a variety of media to understand sequential art including musical compositions, literature, opera and theater, and visual art. "Learning certain techniques will allow you to break those rules later," Hart says. "Our main goal in this medium is clarity above all else at least at this stage of their learning" [Fields 2014].

Works Cited

Aleman 2005 Aleman, A. Paraliterary Immersion and the Puzzleform: An Essay in Social Restitution. ImageTexT: Interdisciplinary Comics Studies 2. Available at:http://www.english.ufl.edu/imagetext/archives/v2_1/aleman/ [Accessed 30 April 2015].

Ault 2003 Ault D. In the Trenches, Taking the Heat: The Confessions of a Comics Professor. International Journal of Comic Art 5, 241–260.

Bennett 2010 Bennett, J. Vibrant matter: a political ecology of things. Duke University Press, Durham (2010).

Burt 2007 Burt, R. Re-embroidering the Bayeux Tapestry in Film and Media: The Flip Side of History in Opening and End Title Sequences. Exemplaria: Medieval, Early Modern, Theory 19, 2, 327-350.

Chute 2008 Chute, Hillary J. Comics as Literature? Reading Graphic Narrative. PMLA 123, 452–465.

Chute and Jagoda 2014 Chute, H. and Jagoda, P. Comics and Media. Critical Inquiry 40, 1–10.

Drucker 2014 Drucker, J. Graphesis: visual forms of knowledge production. Harvard University Press, Cambridge (2014).

El Santo 2009 El Santo. Looking back at Scott McCloud's ten webcomic tips. The webcomic overlook. Available at http://webcomicoverlook.com/2009/08/05/looking-back-at-scott-mcclouds-ten-webcomic-tips/ [Accessed 30 April 2015].

Eyman and Ball 2015 Eyman, D., Ball, C.E. Digital Humanities Scholarship and Electronic Publication, in: Ridolfo, J., Hart-Davidson, W. (Eds.), Rhetoric And the Digital Humanities. U of Chicago Press, Chicago (2015), pp. 65–79.

Fields 2014 Fields, S. Comic Relief. Gainesville Today 19, 1–10. Available at http://gainesvilletoday.com/comic-relief/ [Accessed 30 April 2015].

Groensteen 2007 Groensteen, T. The system of comics. University Press of Mississippi, Jackson (2007).

Harper 2014 Harper, D. The Life and Times of the Modern Comic Book Artist. Multiversity Comics. Available at: http://multiversitycomics.com/longform/the-life-and-times-of-the-modern-comic-book-artist/ [Accessed 30 April 2015].

Hayles 1999 Hayles, K. How we became posthuman: virtual bodies in cybernetics, literature, and informatics. University of Chicago Press, Chicago (1999).

Hussie 2009 Homestuck. MS Paint Adventures. Available at: http://www.mspaintadventures.com/ [Accessed 30 April 2015].

Jacobs 2013 Jacobs, D. Graphic encounters: comics and the sponsorship of multimodal literacy. Bloomsbury Academic, London (2013).

Johnson 2014 Johnson, F. Perspicuous Objects: Reading Comics and Writing Instruction. Kairos: A Journal of Rhetoric, Technology, and Pedagogy 19, 1–10. Available at: http://kairos.technorhetoric.net/19.1/topoi/johnson/ [Accessed 30 April 2015].

Jones 2011 Jones, W.B. Classics illustrated: a cultural history. McFarland & Co., Jefferson (2011).

Kashtan 2013 Kashtan, A. DH and Practice-Based Media Research. Media Commons: A Digital Scholarly Network. Available at: http://mediacommons.futureofthebook.org/question/what-are-differentiations-and-intersections-media-studies-and-digital-humanities/response-4 [Accessed 30 April 2015].

Kirschenbaum 2008 Kirschenbaum, M. Mechanisms: new media and the forensic imagination. MIT Press, Cambridge (2008).

Kirschenbaum 2014 Kirschenbaum, M. Special Issue of CRITICAL INQUIRY on Comics and Media, edited by Hillary Chute and Patrick Jagoda: eye-popping. Twitter 14 August 2014. Available at: https://twitter.com/mkirschenbaum/status/500071116623200256 [Accessed 30 April 2015].

Kirtz 2014 Kirtz, J.L. Computers, Comics, and Cult Status: A Forensics of Digital Graphic Novels. Digital Humanities Quarterly 8, 65–79. Available at: http://www.digitalhumanities.org/dhq/vol/8/3/000185/000185.html [Accessed 30 April 2015].

Kress 2001 Kress, G.R. Multimodal discourse: the modes and media of contemporary communication. Arnold, London (2001).

Kunzle 1973 Kunzle, D. History of the comic strip. University of California Press, Berkeley (1973).

Lente and Dunlavey 2012 Lente, F.V., Dunlavey, R. The comic book history of comics. IDW, San Diego (2012).

Lorde 1984 Lorde, A. The Master's Tools Will Never Dismantle the Master's House, in: Sister Outsider: Essays And Speeches. Crossing Press, Berkeley (1984), pp. 110–113.

Losh, Alexander, Cannon and Cannon 2013 Losh, E.M., Alexander, J., Cannon, K., Cannon, Z. Understanding rhetoric: a graphic guide to writing. Bedford/St. Martin's, New York (2013).

Luen-Yang 2006 Luen-Yang, G., Pien, L. American-Born Chinese. First Second, New York (2006).

McCloud 1993 McCloud, S. Understanding Comics: The Invisible Art. Perennial, New York (1993).

McCloud 2000 McCloud. Reinventing comics: How Imagination and Technology Are Revolutionizing an Art Form. Perennial, New York (2000).

McClure 2012 McClure, E. Analyzing XKCD: Click and Drag. Available at: http://blackhole12.blogspot.com/2012/09/analyzing-xkcd-click-and-drag.html [Accessed 30 April 2015].

Monroe 2012b Munroe, R., 2012. Time. XKCD. Available at: https://xkcd.com/1190/ [Accessed 30 April 2015].

Montes 2012 Montes, L. So instead of sleeping. Google Plus. Available at: https://plus.google.com/117691741996190751499/posts/3c7MBd2FBgV [Accessed 30 April 2015].

Munroe 2012a Munroe, R. Click and Drag. XKCD. Available at https://xkcd.com/1110/ [Accessed 30 April 2015].

New London Group 1996 New London Group. A Pedagogy of Multiliteracies: Designing Social Futures. Harvard Educational Review, 66, 1. Available at:

http://wwwstatic.kern.org/filer/blogWrite44ManilaWebsite/paul/articles/A_Pedagogy_of_Multiliteracies_Designing_Social_Futures.htm. [Accessed 30 April 2015].

Pryor 2013 Time – at your own pace. Geekwagon.net. Available at: http://geekwagon.net/projects/xkcd1190/. [Accessed 30 April 2015].

Risam 2013 Risam, R. Postcolonial DH #6. #DHPoco: Postcolonial Digital Humanities. Available at: http://dhpoco.tumblr.com/tagged/comics/page/5 [Accessed 30 April 2015].

Salter 2012 Salter, A. THATCamp CHNM Session Proposal: Comic Books + Playing with Scholarship. selfloud.net. Available at: http://selfloud.net/thatcamp-chnm-session-proposal-comic-books-playing-with-scholarship/ [Accessed 30 April 2015].

Salter and Whitson 2014 Salter, A., Whitson, R. Comics as Scholarship: Digital Humanities Quarterly Special Issue. Available at: http://comicscholarship.selfloud.net/textcfp.html [Accessed 30 April 2015].

Salter, Sousanis, Tritter, and Neville 2012 Salter, A., Sousanis, N., Tritter, P., Neville, T., 2012. Expanding Scholarship. Expanding Forms of Scholarly Inquiry within the Academy. Available at: http://expandscholarship.selfloud.net/

Schjeldahl 2005 Schjeldahl, P. Words and Pictures: Graphic Novels Come of Age. *The New Yorker*. 17 October 2005. Available at: http://www.newyorker.com/magazine/2005/10/17/words-and-pictures [Accessed 30 April 2015].

Sousanis 2012 Sousanis, N., The Shape of Our Thoughts: A Meditation In/On Comics. Visual Arts Research 1, 1–10.

Sousanis 2015 Sousanis, N. Unflattening. Harvard UP, Cambridge (2005).

Versaci 2007 Versaci, R. This book contains graphic language: comics as literature. Continuum, New York (2007).

Waid 2012 Waid, M. Truly Digital Comics. In Media Res. Available at: http://mediacommons.futureofthebook.org/imr/2012/02/21/truly-digital-comics [Accessed 30 April 2015].

Walsh 2012 Walsh, J. Comic Book Markup Language: An Introduction and Rationale. Digital Humanities Quarterly 6. Available at: http://www.digitalhumanities.org/dhq/vol/6/1/000117/000117.html [Accessed 30 April 2013].

Ware 2014 Ware, C. Conference poster, "Comics: Philosophy and Practice," May 2012. Critical Inquiry 40, Foldout-10.

Wesch 2005 Wesch, F. A zoomable visualization of xkcd - Click and Drag. Available at: https://xkcd-map.rent-a-geek.de/#10/1.1000/0.2000 [Accessed 30 April 2015].

Whalen 2012 Whalen, Z. It Moves. Media Commons: A Digital Scholarly Network. Available at: http://mediacommons.futureofthebook.org/imr/2012/02/23/it-moves [Accessed 30 April 2015].

Wierszewski 2014 Wierszewski, E. Creating Graphic Nonfiction in the Postsecondary English Classroom to Develop Multimodal Literacies. ImageTexT: Interdisciplinary Comics Studies 7, 65–79. Available at: http://www.english.ufl.edu/imagetext/archives/v7_3/wierszewski/ [Accessed 30 April 2015].

Willis 2005 Willis, D. Shortpacked! Available at: http://www.shortpacked.com/ [Accessed 30 April 2015].

rhomboidal 2013 rhomboidal. 1190: Time. XKCD Forum. Available at: http://forums.xkcd.com/viewtopic.php?t=101043 [Accessed 30 April 2015].