

Chapter 4

History of a Broken Thing: The Multi-Journal Special Issue on Electronic Publication

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It is the aim of microhistory to focus on individuals rather than groups, and to seek accounts that are otherwise hidden or unavailable to traditional historiographic methods (Muir 1994, 619). Rather than focus on individuals, our project traces what might be seen as uncelebrated *texts*—academic work that has not been directly influential, and has not been widely cited (if at all). Some of these texts were missing for several years and had to be recovered; at least one was literally erased. In the print archives of our field's scholarship, it is difficult, if not actually impossible to disappear scholarly work, and because the majority of our scholarship is still produced and housed following a print paradigm, the particular challenges we recount here are certainly not a normal occurrence. But microhistory as method requires a focus on what Muir and Ruggiero (1991) identify as the “normal exception,” wherein “a truly exceptional (and thus statistically infrequent) document can be much more revealing” (8) than a collection of standard documents that are in agreement; in this chapter we are interested not in the everyday successes of scholarly publication in the field but in an instructive, “exceptional” instance that helps us to “[identify] incoherence, discontinuity, contradictions and ruptures” (Boge 2001, 45) in the otherwise standardized view of the operations of journal publication as the main scholarly archive of our field.

Indeed, in this chapter, we are interested in the effects and consequences of instability and erasure that have plagued online publishing in the field of rhetoric/composition. One view of this instability and erasure can be seen in Jeremy Tirrell's (2009, 2012) visualizations of independent, online rhetoric and composition journals, which trace the staff and board members of eight of these journals through time and space, showing how journals move institutional homes across a decade (from 1998 to 2008). *Kairos*, for instance, moved its original operations from Lubbock, Texas, to Michigan, Illinois, and Virginia, where editors were subsequently located. Some of these journals both move *and* disappear from view for years at a time, such as when *Enculturation*'s then-sole editor, Byron Hawk, moved from Texas to Virginia to begin a new tenure-track job. We can see these moves (and hiatuses), and others, visually on Tirrell's maps, but those visualizations don't tell us *why* the moves or hiatuses happened. This is the stuff of journal editor lore, and that's the view we want to unearth and concretize in this chapter—not the story of each of those eight journals, but the story of one multi-journal special issue on digital publishing from 2002.

We begin with three scenarios:

1. An author's article is published in the online version of a reputable print journal with a long institutional history. The issue is part of a multi-journal special issue on electronic publishing, featuring five online journals. Several years later, without warning, the online version of this journal is disappeared from the institution's website and is seemingly wiped from institutional memory. There is no record the author's article ever existed, let alone was published.
2. A reader finds the perfect, multi-journal special issue on electronic publishing to use as a framework for one of her dissertation chapters on digital scholarship.

She cites the work, but when reworking the chapter for publication two years later, she finds that not only are a majority of the dozen articles missing, but three of the five journals are completely offline, with one of those journals having been scrubbed from the Web entirely.

3. An editor spearheads a special issue on electronic publishing, the first of its kind to bring five online journals together to produce a multi-journal collaboration. Five years after its publication, that editor's journal is the only one still consistently publishing.

These scenarios are the ugly truth for what was meant to be one of rhetoric and composition's finer moments in digital history: The Multi-Journal Special Issue on Electronic Publication, co-published in *Kairos*, *Enculturation*, *Academic.Writing*, *The Writing Instructor*, and (the first iteration of) *CCC Online* in the summer of 2002. Of those five journals, *Kairos* is the only journal that has published every year since it was founded (as of this writing in Fall 2014). Every other journal in that issue has either stopped publishing temporarily, usually several years, or has altogether ceased to exist (in the case of *CCC Online*). (Of note: *C&C Online* did not publish from 2000-2004, as it transitioned editorial leadership from University of Texas to Bowling Green State University, so was not included in this special issue.)

Although the individual stories of what happened to these journals is beyond the scope of this microhistory, this essay will explore the repercussions of this multi-journal special issue, and the challenges posed by the fact that of the 12 webtexts published in that special issue, 10 of those webtexts no longer exist at the URLs where they were originally published. The two webtexts that are still accessible at their original URLs are published in *Kairos*. Drawing on Patricia Galloway's (2011) approach to the microhistory of the personal computer, we see our

own memories and experiences as one of the primary sources for our historiographic work; this approach dovetails with Giovanni Levi's (1991) assertion that microhistorians "do not study villages, they study in villages" (96) – that is, there is an element of ethnographic and even autoethnographic method to contemporary microhistory research. From our perspective as *Kairos* editors, we want to document this microhistory, this broken thing, as a way to help the field learn from our mistakes.

The multiple broken links and missing journals that we examine in this chapter impinge on our field's ability to archive its own history, to stabilize it and call it a field full of scholarly productivity. Over the years, this history of a broken thing has taught us at *Kairos* many lessons about the sustainability (or lack thereof) of electronic publishing. This essay will outline those lessons by first providing a review of the webtexts that were published in that special issue, as they were thematically addressed to cover key concepts in digital publishing at the time. We scaffold this review with three infrastructural criteria that are paramount to consider when publishing digital scholarship: the scholarly, the social, and the technical (see Eyman and Ball 2014). Technical infrastructure includes the hardware, software, networks, and coding practices and standards that make digital publishing possible. Scholarly infrastructure includes peer-review, genre conventions, and citation practices that allow digital scholarship to be found and used. And, social infrastructure includes both the labor and expertise of editors and the tools that allow digital works to be accessible to all kinds of readers. Using these infrastructures as a framework for looking back at this broken thing, we focus particularly on how the field has overlooked technical infrastructures as a priority in preserving its own scholarship and suggest a few best practices for maintaining this work in our field.

Context for the special issue

In 2001, the debates about the value of digital publication were in full swing. Although both *Kairos* and *Enculturation* had been publishing for a number of years, forwarding examples of rigorous peer-review and editorial quality in the publication of webtexts, the editors still had to regularly defend the scholarliness of the works we published. In conversations at the Conference on College Composition and Communication and at Computers and Writing, Byron Hawk and Doug Eyman came up with the idea of making these arguments for electronic publication more explicit not just in one online journal, but in-and-across all of the major online publication venues of the time. Hawk's plan had initially been to produce a special issue of *Enculturation* that would focus on the issue, but Eyman suggested that the affordances of the network itself could help to make this point more strongly by showing how scholarship across several online journals could be linked—it wouldn't just be an argument forwarded by an individual journal, but by a whole field, as represented through multiple journals.

As noted in the various voices present in the introduction to the multi-journal special issue (which are distinct, rather than interwoven, perhaps an indication that even those of us who were making these arguments had still not fully conceptualized the possibility of web-authoring as a truly collaborative enterprise), the question of whether to publish in electronic journals and how that work would “count” (particularly in terms of tenure and promotion) was a focal conversation both in our field and across academic disciplines. Even in 2001, the economic pressures on academic publishing (which continue to drive questions about the health and viability of the current model of university presses and corporate-controlled journals) were being decried and debated. It seemed that electronic publication, as a response to the exigence of financial challenges to traditional publishing models, would be a natural progression, except that

there were many voices pushing against innovation in publishing due to ideological commitment to print text as the only valid mode of expression in scholarly work (at least, outside fields in the arts, which have long understood that creative productions can themselves be scholarly endeavors). In his portion of the introduction to the special issue, David Blakesley highlights the push against innovation that electronic journals were fighting:

In English Departments across the country, I suspect there are those who have accepted unquestioningly the notion that "anyone can publish electronically" and who would rather evaluate a colleague's scholarship not on its merit, but on a vague or outdated hierarchical system that ranks the quality of the scholarship exclusively by a journal's medium or by name recognition. That attitude, I believe, is more rampant and thus more damaging in the humanities, where electronic publication has thrived, even as its status as valuable scholarship has met with resistance.

In his part of the introduction, Eyman also highlights the challenges inherent in developing new forms of writing scholarly argument that are embedded in larger cultures of production that have their own strongly-rooted traditions and norms:

Since its inception, *Kairos* has been criticized both for being too non-traditional and for being too traditional. The journal has always been engaged in a delicate balancing act: we want our authors to have their submissions recognized as valid peer-reviewed scholarship for purposes of tenure and promotion, and we want to make sure that we aren't simply replicating the kind of scholarship that could just as easily exist in a print journal. The tension between these two goals has led to several compromises, including the development of a production cycle that

publishes "issues" rather than creating a space that is constantly growing, changing, and evolving over time. In a way, too, *Kairos* has served as an initial model upon which other groups have based new online journals to varying degrees, in some cases pushing *against* the compromises we have made.

Byron Hawk took on the role of lead editor on the larger project, one of the goals of which was to show a wide range of approaches to the question, "What can digital scholarship be?" As he notes in his section of the introduction, commenting on the relationship between argument and design,

This particular multi-journal issue is one such experiment in form. I began this project as a special issue of *Enculturation*, but came to realize that such a topic lent it self to experimentation at the journal level, not just the article level (thanks in part to discussions with Doug Eyman of *Kairos*). Print technology does not lend itself to a journal issue that incorporates multiple journals. It is possible, but the articles would remain separated by space/time. The kind of space provided by the web makes a more integrated multi-journal issue possible. . . . What good is a new space if the avenues for communication, collaboration, and community are not followed?

In each participant journal, at least one webtext looks like a more traditional, linear argument and one webtext utilizes the affordances of the medium (through hypertext, linking, multimedia, or interactive Flash interfaces). No one journal takes on the role of innovator at the expense of any other journal, and in that sense, the multi-journal issue does succeed in the goal of representing new publication models while also addressing the challenges (both technical and cultural) that had driven the overall development of each journal's approach.

There was some wrangling over which pieces would appear in which journal. For instance, Mick Doherty and Michael Salvo (who were both founding editors of *Kairos*) initially hoped that their webtext, which was about *Kairos*, would appear in one of the other journals, as locating it within *Kairos* itself felt too self-referential; however, each journal took on a different theme, and it seemed most at home in the “histories of electronic publication” strand. But the final articulation of the multi-journal issue (at least, at the time of its publication) was a coherent set of webtexts that addressed the larger issues and arguments about electronic publication, and all of the editors were proud of the outcome. As Mike Palmquist noted in his section of the introduction, “as we move into publication, I'm pleased to be a part of this special issue not only because it provides a new means of advancing the debate about online publishing, but because of the quality of the articles included in the issue.”

Key Themes in Digital Publishing

In the special issue, the articles were broken down in the following journals and according to the following themes, which mirrored the key themes in digital publishing in 2002 as much as they do still now, in 2014. In this chapter, we will refer to the issue as the “7.x” issue because that is how we decided to enumerate it in the volume-issue structure of *Kairos*. Wanted to acknowledge the year of publication with the volume but indicate that it was special in more than the regular “special issue of a journal” sense, so instead of a numerical issue number we chose “x” to represent the intersections of the five journals that co-created the issue.

Each journal replicated the main table of contents within that journal’s interface, although the order of webtexts was not the same across the journals—each one moved their publications to the top of the list. The original front pages of that issue are still available at their original

URLs at *Enculturation* (http://www.enculturation.net/4_1/toc.html) and *Kairos* (<http://kairos.technorhretoric.net/7.x/index.html>); archival versions, while not at the original location, are still available at *Academic.Writing* (http://wac.colostate.edu/aw/articles/epub_special.htm) and *The Writing Instructor* (<http://www.writinginstructor.com/contents>; scroll down to *TWI* Beta 2.5). The version of *CCC Online* that participated was decommissioned and no longer exists (NCTE, the organization that “published” it also declined to archive it). In addition to the table of contents, *Enculturation* also featured a “splash page” that announced the issue (http://www.enculturation.net/4_1/index.html). The Flash animation that opens the issue is representative of a moment in time in 2002, when Macromedia Flash (as it was still then owned by Macromedia and not Adobe) was one of the few tools for webtext writing that would easily allow authors to create animations and interactive texts, although the level of sophistication was constrained by the limitations of what that program could do then, as well as by the authors’ particular expertise with it. The table of contents for the issue included a series of introductions crafted by the journal editors (“Facing the Future of Electronic Publication”), and links to the articles grouped under the following headings (each journal was responsible for the webtexts grouped under one of these key terms): “Hypertext/Theory” (*Enculturation*), “Archiving/History” (*Kairos*), “Issues/Challenges” (*The Writing Instructor*), “Pedagogy” (*Academic.Writing*), and “Tenure/Review” (*CCC Online*).

Hypertext/Theory

Enculturation published three webtexts related to hypertext theory—two feature-length pieces and one book review. In Collin Brooke’s (2002) “Perspective: Notes Toward the Remediation of Style”, he argues that the visual/spatial elements of hypertext and (more

recently) multimedia encourage us to revalue the canon of style in terms of situatedness. And in “Responding in Kind: Down in the Body in the Undergraduate Poetry Course (Thoughts on Bakhtin, Hypertext, and Cheap Wigs),” Cynthia Nichols (2002) discusses using hypertext to teach poetry as a mode of published response in a way that helps students better understand the genre as utterance and argues that academic hypertexts can be revalued as dialogic. Finally, Byron Hawk (2002) reviewed Elizabeth Loizeaux and Neil Fraistat’s collection *Reimagining Textuality: Textual Studies in the Late Age of Print*. In Hawk’s review, he summarized key concepts that authors and editors writing and editing in a digital age must account for:

- a. The book must be retrospectively understood as a technology in and of itself.
- b. Textuality must be seen both linearly and non-linearly in both print and electronic forms.
- c. The primary text can retain its center or be decentered through ever-growing marginalia and linkage.
- d. Indexes must be conceptualized in terms of searchability, accessibility, interactivity, and storage capacity (memory).
- e. Texts exist in a new relation between hierarchy and complexity (the web often reinforces the former while attempting to deal with the latter).
- f. In addition to visual and design elements, textuality and writing extends to the code and programming that goes behind the text, thus becoming a part of the text (which, as Fraistat and Loizeaux note, creates the possibility for an aesthetics “within the writing of the mediating code itself” [8]).
- g. All of this cutting and pasting, grafting, transplanting, and recombining creates increasingly blurred lines among authors, editors, programmers, producers,

consumers, users, and commentators/critics, not to mention the blurred lines of juridical, institutional, national, and economic interests.

(http://enculturation.net/4_1/hawk/hawk2.html)

Substitute the word *webtext* for *book*, in the first point, and this list becomes not a summary of digital textual editing (in the literary-traditional sense) but a list that summarizes the current considerations for digital journal publishing, then and now. These are all arguments that we, as editors of *Kairos* and as scholars of digital rhetoric, have to make daily for our authors and our own work. And the affordances of hypertextuality have made it possible for the specializations of digital rhetoric, digital media composition, digital writing studies, and other names and intersecting fields, such as postmodern literary studies, media studies, and electronic literature, to contribute new knowledge in writing studies.

Brooke's (2002) webtext, "Perspective: Notes Toward the Remediation of Style," is a fantastic example of hypertextual theory in action, as Brooke creates an exploratory webtext, designed not unlike a StorySpace-built hypertext but this time in Flash. The piece contains two primary reading paths (one linked from the word "Remediation" in the title, and the other linked from "Style"), and within each path is a relatively linear navigation path, wherein each node on the path contains a single word or phrase that signals, through its typeface formatting (usually bold and in a different color), that it is a hyperlink. What the reader of this chapter cannot appreciate from the screenshot in Figure 1 is Brooke's relatively judicious (for the time period) use of animation and sound effects to signal transitions between each content node. That the image of a Greek rhetorician spins out in 360-degree twirls perfectly performs what Bolter and Grusin (2000) dubbed the double logic of remediation: the *hypermediacy* of a spinning Aristotle upon a reader's click creates a sensory impact that overloads the reader, forcing him or her to ask

what the rhetorical point of such spinning might be, while the *immediacy* of that typical genre convention for this multimedia-authoring platform in 2002 reinforces Brooke's point regarding the dissolution of readers' microperceptions by forcing us to reexamine and recover what we've lost—a point that a large portion of his webtext goes on to explore.

Hypertext theory affords us this work: both the recovery of microperceptions (in Brooke's terms, quoting Ihde) and the macroperceptions of theory building. And while we could go on at length articulating this case, it's not really the point of *this* chapter. These ideas about hypertext theory were givens in digital writing studies in 2002, just as they are now. So what is perhaps more important to note here is *how* this knowledge is made in the special issue. In these two examples—Hawk's link-node, or “next”-button, webtext and Brooke's Flash-based exploratory (but really rather linear) webtext—the questions that we editors often find ourselves asking are: Which of these webtexts are easier to cite? Easier to quote? Easier for readers to understand? Is “easy” the metric we want to encourage? Is hypertext in *any* form easy? Is it supposed to be?

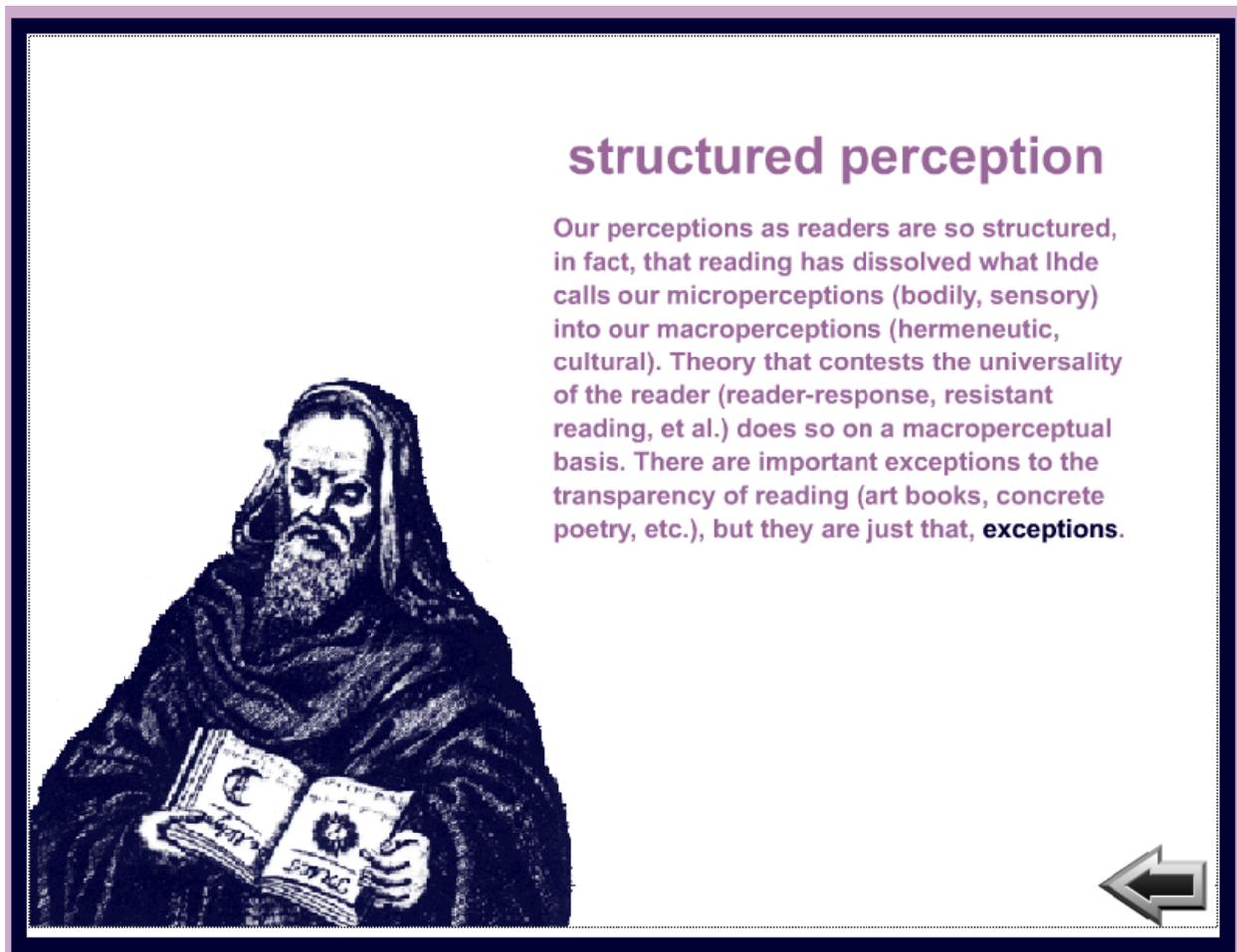


Figure 1. A screenshot from Brooke's (2002) "Perspective: Notes Toward the Remediation of Style," in which the word "exceptions" is in a different color font, to signal that it is clickable.

Brooke's (2002) work makes a clear and compelling argument, but the substance of it has not been taken up by other scholars or researchers. The lack of citation of this work may be due in part to questions of accessibility (you can't cut-and-paste text from the Flash container and the lack of navigation elements makes it difficult to move around in the text without retracing one's path). In terms of scholarly infrastructure, *Enculturation* does at least provide a model citation on the entry page for each article. But as an artefact of digital publishing, this work aptly embodies

the tension between dominant modes of scholarly reading and writing and the affordances of interactivity in earlier versions of Flash. Perhaps this is an example of trading innovation and experimentation for scholarly visibility and circulation.

Archiving/History

The special issue portion of the multi-journal issue that discussed the history and archivability of electronic publishing was found in *Kairos*. That section started with George Pullman's (2002) descriptive title, "A Brief History and Technical Overview of the Current State of *JAC Online*, with a Few Observations about How the Internet Is Influencing (or Failing to Influence) Scholarship: Or, Who Says You Can't Find *JAC Online*?" In this piece, Pullman discussed the development of the (original) *JAC* website in terms of technical and theoretical concerns and the relationship between a print journal and its online archive. The *JAC* website was, as it is now (at a different location and under different leadership), an archive for the print journal. In "*Kairos*: Past, Present and Future(s)," Michael J. Salvo and Mick Doherty (2002) examined the development of *Kairos* in both theoretical and personal terms and speculated about the future of electronic publishing.

Concerns about accessibility and archivability are a key issue for the technical infrastructures of digital publishing, but these issues are also connected to the requirements that scholarship be presented in stable venues that are both findable and usable. Pullman's (2002) article addresses the question of information architecture, which is a critical consideration for online journals and for the online interfaces that grant access to digitized print articles. Pullman notes that

While creating clean and consistent HTML copies proved incredibly time-consuming, designing the information architecture proved surprisingly simple. I chose to use folders labeled to reflect the volume and issue numbers, with subdirectories called Articles, Reviews, and Reviews Reviewed. So, `jac/1/Articles/1.htm` refers to the first article in the first volume while `jac/10/Articles/2.htm` refers to the second article in the 10th volume. The obviousness of this structure makes it portable (whoever inherits the archive will be able to find their way around easily enough, and savvy browsers can easily figure out how to climb up and down the tree).

This invocation of portability also highlights one of the issues that isn't applicable to print scholarship: because online journals reside on servers that may change ownership or require updates or repairs, it is likely that digital journals will at some time need to be moved from one server to another. For instance, *Kairos* has moved from its original server at Texas Tech to a server at Michigan State, and recently shifted away from institutional hosting altogether and now uses a cloud-based virtual server from a reputable hosting company. *Enculturation* has also moved servers from its original location. Such moves mean that following best practices in terms of naming files and directories can prevent unwanted chaos when moving across servers (which may also mean changing base operating systems, which will impact, for instance, whether or not it is permissible to place spaces in filenames).

Salvo and Doherty's (2002) piece also focuses on the social infrastructures of online publishing, including the need for collaboration between webtext authors and designers (on both aesthetic and technical grounds) and in terms of the collaborative possibilities for peer-review in

digital networks of production. Their webtext also speaks to the tension between stability and experimentation that is a hallmark of online publishing. As Salvo notes,

As I write this narrative, I am simultaneously embarrassed by some of the things I used to believe about the potential power of the World Wide Web and of hypertext, and amazed that Kairos continues to exist at all. It has indeed outlived the original occasion of its invention ...

(<http://kairos.technorhretoric.net/7.x/kairos/salvo3.htm>) *Kairos*, the journal, changes those who have worked on it and written for it. And there are also many histories of the journal that can be written from these individuals' many perspectives. I like to think (need to think?) it has changed the field. So while *Kairos* changes, kairos changes, and the people have themselves changed. This opportunity will not come again, but new opportunities will emerge and indeed, be created by others. (<http://kairos.technorhretoric.net/7.x/kairos/salvo20.htm>)

Issues/Challenges

The texts published in *The Writing Instructor* similarly take up questions of technical and scholarly infrastructure under the heading of “Issues/Challenges.” Both *The Writing Instructor* and *Enculturation* faced infrastructural challenges as they transitioned from collections of static HTML (the format still used by *Kairos*) to a content management system that would assist with the editorial workflow (using Drupal in both cases).

In “eBooks: A Battle for Standards,” Paul Cesarini (2002) details the battle over eBook standards that was taking place at the time of publication (which pre-dates the Kindle and Apple eBook formats). Cesarini discusses the economic issues surrounding various platforms and the

attempts to create reader/user friendly texts both via hardware eBook readers and software applications. The article as a whole now reads like a microhistory of a moment in time when the idea of eBooks was being extolled in technology and education circles, but the implementation was confounded by competing visions and a mix of proprietary standards. The messiness of the many attempts to develop eBooks highlights the importance of open standards and the value of restricting the works we publish to non-proprietary standards whenever possible. Long-term sustainability and archivability require knowledge of the appropriate standards and putting in place mechanisms for porting or upgrading works that become inaccessible as their formats are no longer supported.

The other two articles in *The Writing Instructor* both focus on the relationship between new digital publication practices and traditional scholarly apparatus: in “Writing and Publishing in the Boundaries: Academic Writing in/through the Virtual Age,” Patricia Webb-Peterson (2002) develops a set of criteria for comparing online journals and print journals by examining their histories, and cataloguing rhetorical differences in the texts/writing and differences in journal design, using *Computers and Composition* (print) and *Kairos* (online) as comparative cases. Janice McIntire-Strasburg (2002), in “Modern Chivalry and the Case for Electronic Texts,” argues for standards in the scholarly editing of online texts (specifically classics and out of print books/material) to ensure their usefulness for scholarship; she traces her own editorial decisions in the production of her online edition of *Modern Chivalry*, Hugh Henry Brackenridge's 18th century novel, which has been made available through the Crossroads project, part of the University of Virginia's Electronic Text Center.

The articles in the special multi-journal issue published in *Academic Writing* focus on how we teach and assess digital writing practices—and particularly how we may begin to teach online editing and publishing in advanced composition courses. The classroom focus joins the infrastructures of scholarly practices and social elements of digital production (the authors of this chapter would encourage the addition of technical infrastructure as well, but it is yet a rare occurrence for all three forms of infrastructure to be addressed in composition courses). In “World Wide Words: A Rationale and Preliminary Report on a Publishing Project for an Advanced Writing Workshop,” Peter Sands (2002) discusses an advanced composition course project that required students to send their writing to online publishing venues and the anxiety those student writers experienced. Several of the challenges facing the students are quite familiar to publishers of online journals—writing for online venues requires more time and time management than traditional class-based essay assignments; there aren't enough quality online publishing venues; and “even upper-division English and English Education majors in the class self-reported ignorance of publishing conventions.” These students' experiences echo the concerns we hear from potential authors who experience their own anxieties about crafting scholarly work for online publication.

While Sands's (2002) article takes the form of a more traditional, linear work (also available as a PDF download), Carl Whithaus (2002) provides a more designed and linked webtext in “Think Different/Think Differently: A Tale of Green Squiggly Lines, or Evaluating Student Writing in Computer-Mediated Environments.” Whithaus argues that we should not construct elaborate systems of electronic writing assessment based on portfolio models without confronting the material conditions of students' new technological publishing environments.

The history of *Academic.Writing*, like the webtexts of this multi-journal special issue, also foregrounds the scholarly and social infrastructures of digital publishing. In 2003, *Academic.Writing* completed a transition from a more loose affiliation of articles about communication across the curriculum to a full-fledged academic journal when it merged with *Language and Learning Across the Disciplines* (a more traditional, print journal established in 1994) to form *Across the Disciplines*. This merger shifted the location of many of the original works published in *Academic.Writing*, thus breaking the links in the original multi-journal issue's table of contents; that unintended consequence demonstrates the ways in which the scholarly and social elements can impact the technical infrastructure as much as changes to technical infrastructures (which may cause extended periods of non-publication) can impact the scholarly and social infrastructures.

Tenure/Review

While the articles in *Academic.Writing* moved, and those in *The Writing Instructor* and *Enculturation* were unavailable for an extended period of time, the final article in the issue, Steve Krause's "Where Do I List This on My CV? Considering the Values of Self-Published Web Sites" vanished altogether as the first version of *CCC Online* ceased to exist. Ironically, the only journal in the collection whose infrastructure and backing were provided by a large institution (NCTE), was also the only journal that did not work diligently to produce accessible, archivable issues. Despite its experience with print journals, NCTE's approach broke all three forms of infrastructure—the technical (as it decommissioned the journal but did not archive the works published therein), the scholarly (by granting its imprimatur to what should have been a

strong venue for digital publication in the discipline), and the social (by not following through with its obligations to its editors and authors).

The original article is now no longer available even at the author's site; there is a copy in the archive.org database, but that copy cannot be relied on as stable: If NCTE ever adds a robots.txt file requesting that the part of the site that had hosted the article not be indexed by search engines, it will be removed from archive.org as well (https://web.archive.org/web/20021021040043/http://www.ncte.org/ccc/www/2/54.1/krause_copy.html). This is a known problem with archive.org, which renders it unreliable for archival research purposes.

In 2007, *Kairos* published an updated version of Krause's article, including commentary on the fate of the original, which had disappeared in the intervening five years. For some time, a copy was available at the site of *CCCO*, which was a re-envisioning of *CCC Online* as a database of metadata about *CCC* (print) rather than as an electronic journal per se—that endeavor was abruptly abandoned by NCTE in 2008 as they attempted to create a new version of *CCC Online* as a digital journal. This new version begins with issue 1.1, effectively erasing the history of all prior versions, thus hitting the triple-play of failure of the technical, scholarly, and social infrastructures. In the revised and updated version that appears in *Kairos*, Krause (2007) notes the importance of archiving for digital publishing (an issue to which fairly little attention had been paid prior to the disappearance of the original *CCC Online*):

I think the experiences I and other disappeared writers had represent yet another example of why the future of all electronic publishing should involve co/self/simultaneous web publishing. This experience has taught me that in the future, I should make every effort to simultaneously publish in academic

publications, be they electronic or print, *and* to self-publish my work and make it available via a web site I manage.

We conclude the thematic review of the 7.x issue by noting, again with irony, that Krause's webtext about the positionality and legitimacy of online publishing, which appeared in the tenure/review theme of the multi-journal special issue, was no longer available for readers—including T&P reviewers—in its original, peer-reviewed publication venue.

Fixing Broken Things: Infrastructures of Electronic Scholarly Publishing

Although *Kairos* has published more consistently than the other journals that participated in the special issue, we have also had challenges with technical infrastructure. In the summer of 2014, a networking issue took *Kairos* offline for nearly a month. In the troubleshooting process, it became clear that we needed a new server and that we needed to have more direct control over the networking features. Technical infrastructure is in some ways both simpler (because there are known best practices) and more challenging for digital publishing in the humanities (because fewer journal editors have the technical expertise to run servers and networks). In our field in particular (where academics are highly mobile), the social and technical infrastructures interact as editors and publishers move from one institution to another, sometimes bringing their journals with them and sometimes leaving them behind.

We make knowledge and disseminate it in our field via books, edited collections, and journals (both print and digital). As the economics of publishing further erodes the capacity to produce and mail out new print texts, there is a gradual shift to more online venues: from the excellent library of rhetoric/composition books available for download from the WAC Clearinghouse (wac.colostate.edu) to online long-form “book” publishing produced by the

Computers and Composition Digital Press (ccdigitalpress.org) and the University of Michigan's Sweetland series and new Digital Rhetoric series to databases that provide access to the entire history of our key print journals to the development of new electronic journals. As the landscape of knowledge production becomes increasingly a digital, networked endeavor, it is incumbent upon us to make sure that our scholarship is consistently findable, usable, and sustainable. And, we would argue, this attention to the infrastructures of electronic publication should begin to infuse general writing curricula as we prepare students for writing contexts that begin with "born-digital" as a standard approach rather than an innovation that only technorhetoricians may engage.

It may seem like one outcome of the narrative of the special multi-journal issue may be that one should avoid publishing in digital venues because they may not be as stable as print journals. But many of the journals in this history, we are pleased to report, are once again publishing—and often are better positioned after changes in technical and social infrastructure: *Academic Writing* is now *Across the Disciplines*, which has been publishing continuously since 2004; *Enculturation* returned after a several-year hiatus but is now once again in the forefront of digital publishing in our field (and recent technical updates have been put in place to keep the technical infrastructure on a sound footing); *The Writing Instructor* also returned after a hiatus and is also publishing regularly; and of course *Kairos* has, with a brief exception in the summer of 2014, always been available. Of the five original journals, only the original *CCC Online* is completely defunct. NCTE is once again trying to develop a new version, but that organization has not traditionally given much consideration to all of the necessary forms of infrastructure needed to build a successful scholarly journal (and to our knowledge, they have never consulted those of us who have experience and expertise in this area).

So rather than argue against publishing in digital venues, we would rather encourage the development of new journals—but we also hope that editors and publishers can learn from this microhistory and make conscious decisions about the three critical forms of infrastructure that support any scholarly enterprise. And to be clear, we aren't advocating that new journals replicate the approach of *Kairos*—indeed, in the four remaining journals from the multi-journal special issue represent a range of approaches, from the publication of more print-centric works to fully multimedia and from regular issue publication to ongoing, publish-as-works-are-ready models, among other considerations. And as the appearance of newer journals, like *Harlot of the Arts*, *Present Tense*, *Technoculture*, *Hybrid Pedagogy*, and *Literacy in Composition Studies*, bear out our contention that more online publishing venues will be forming, we hope to help our colleagues as they wrestle with the questions of best practices in editing and publishing.

And this is how we fix broken things: we encourage editors and publishers to carefully consider all three forms of infrastructure, and to reach out to those of us who have histories and experiences that we are happy to share. As most editors have a strong sense of the scholarly infrastructure (peer-review, placement in appropriate directories and bibliographies, the apparatus that authors need for tenure and promotion), and the social infrastructure will be specific to each journal's institutional context and mission, we end our chapter with a brief series of technical infrastructure recommendations based on our own history and reflections as editors of *Kairos*. It has been our experience that the Rhetoric/Composition field tends to overlook the technical as not a core element of writing practices (partly rooted in the anti-computer movement in the 1980s), and we aim to correct that, at least in terms of digital scholarship and electronic publication.

Online Journals in Rhetoric/Composition: Best Practices

In a way, we are constantly performing microhistories of our own experiences and practices at *Kairos*—paying attention to and recording the training arc of our assistant editors and periodically looking back to interrogate our decisions about all our choices with regard to technical infrastructure, scholarly expectations, and the social capital that serves as the economic engine for our particular journal. While a full overview of what we have learned is far beyond the scope of this chapter, we provide here a series of best practices that address some of the key failings highlighted in the microhistory of the multi-journal special issue.

These best practices focus on the technical infrastructure needed to support three key aspects of online publication: accessibility, usability, and sustainability. Accessibility needs to be supported in order to reach the widest possible audience. While originally shaped by a focus on users who rely on adaptive technologies, the techniques that provide greater access benefit all users. And we have found that accessibility also includes consideration of the user's access to bandwidth and the constraints that come with limited access per se (our logs show visitors to *Kairos* from over 180 countries, many of whom are connected via slow modem connections or through cellphones). An accessible text is not necessarily a usable text (but addressing accessibility concerns does tend to increase usability). Usability includes navigational schema and the apparatus that helps the reader use the text. In some ways, usability intersects with scholarly infrastructure as we strive to make webtexts more easily used for research purposes by adding metadata, making sure the text is open to copying and re-mix, and providing ways to easily cite the works we publish. Usability also applies to the editorial functions; thus, some of the usability requirements listed below are intended to support the efficiency of the editorial workflow (which we have refined over the years based on encounters with badly organized and

non-standardly coded submissions). Finally, sustainability relates to maintaining a stable archive and provide means for users to find past iterations in the event that a journal moves or changes its primary URL.

While the lists below are specific to *Kairos* (these are our actual requirements for authors of webtexts), and elaborate upon typical web-design guidelines promoted by the W3C, many of the elements are applicable to any online publication. Some of these best practices are supported (or subverted) by the use content management systems; we recommend that editors attempt to accommodate or code these practices into the CMS itself where possible.

Accessibility

- Use alt-tags with every image and embedded media element to provide a clear and concise description of the image and improve accessibility; alt tags should describe the image, title tags should explain the rhetorical use of the image.
- All submissions that include audio or video multimedia files must also include transcripts.
- Screenshots that primarily contain text should not be placed as images in a webtext (transcribe the text and style it with CSS).
- If using proprietary presentation software (e.g., Flash, Quicktime, .wav, PDFs, etc.), please provide alternate versions of your text as external XML and/or multimodal transcripts to increase readability and accessibility of your webtext. In addition, you may be asked to submit the editable version (.fla, .doc, .aup, etc.) for editing by the staff once a piece has been accepted for publication.

- Use WAVE (<http://wave.webaim.org/>) to review your webtext for accessibility issues, including code requirements and design considerations such as making sure text elements are presented with sufficient background-foreground contrast.
- Upon acceptance, any text files or transcripts (usually Word or PDF files) that are linked to the webtext must be supplied for archiving on our server.

Usability

- All submissions require an HTML page (e.g. for a video or audio text, there must be an HTML page container for the media elements); this container also includes the metadata for the multimedia elements and for the work itself.
- The home page for all webtexts should be "index.html"
- All HTML-based filenames and folders must be lowercase and include no spaces or non-Web characters.
- All webpages should have titles that follow *Kairos's* page-title conventions (e.g. Authorlastname, Short Webtext Title - PageTitle). See current issue for examples.
- Double-check to make sure all internal and external links work.
- All images should reside in an /images/ folder (or /media/ folder, as appropriate).
- HTML-based webtexts should demonstrate cross-browser compatibility (i.e., Internet Explorer 6+, Firefox 1.0+, Safari 1.0+, Opera 8+) and degrade gracefully when elements such as JavaScript are not enabled by a user's browser or when images/CSS fail to load.

Sustainability

- We need to be able to archive everything we publish, so we cannot accept webtexts hosted on third-party sites (like WIX and Weebly).
- We strongly encourage authors to use standard, non-proprietary formats (HTML 5, CSS, etc.) rather than Flash or other embedded proprietary media or template engines.
- Upon acceptance, we will need copies of all embedded media files, and all 3rd-party sites that host files must be shared with the journal in order to facilitate editing and archiving.

If you are currently editing an online journal, or plan to begin one in the future, we encourage you to carefully consider the lessons learned from this microhistory about the importance of addressing the technical, social, and scholarly infrastructures. We also welcome queries and would be happy to provide assistance and support to any new publishing venues in our field.

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