Markup as Behavior toward Risk: Reforming the Metanarratives of Metadata through Susan Howe's Metafictive Poetics

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Markup as Behavior toward Risk: Reforming the Metanarratives of Metadata through Susan Howe's Metafictive Poetics

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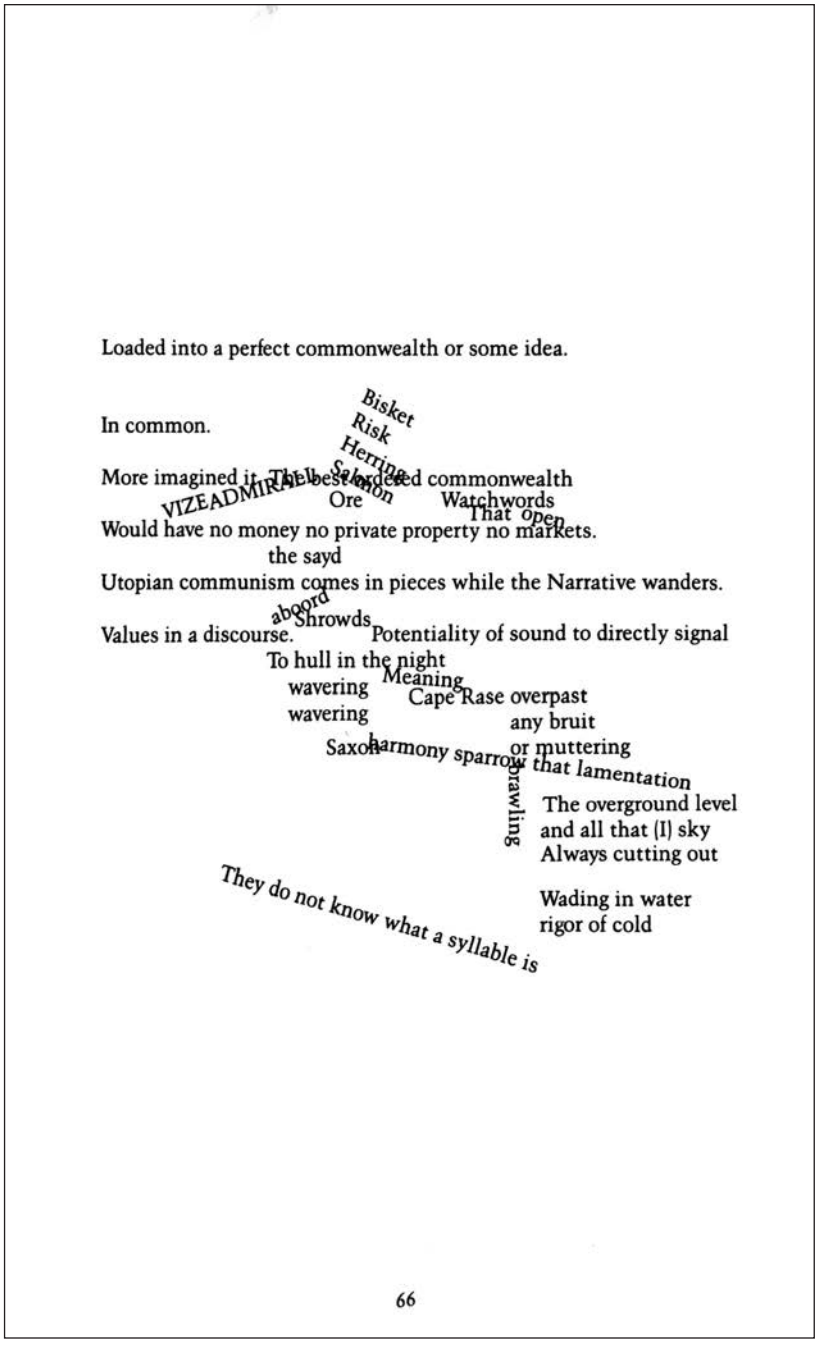
"Rules are guards and fences // In the court of black earth / To be infinite," writes Susan Howe in her 1990 poem "Scattering As Behavior Toward Risk."[1] Expressing both a reaction and a challenge to the limiting and controlling functions of rules, Howe's poetic oeuvre performs the sentiment of these lines by rejecting the rules that order the textual page (fig. 1).[2] Letters do not always resolve into words; words refuse to sit in horizontal lines; lines appear on diagonals, at times crisscrossing each other. In Steven Axelrod, Camille Roman, and Thomas Travisano's words, Howe's poetry "turns the linearity of the ordinary text into a series of unpredictable designs and meanings that must be inferred . . . purposefully scatter[ing] . . . words on the pages as a way to discover new connections."[3] Howe explains in an interview with Edward Foster that rejecting textual rules "has to do with changing order and abolishing categories. It has to do with sounds in silence."[4] Here Howe gestures to the politics animating her work: that of sounding silences, of recovering what is lost or marginalized in acts of ordering. Through the chaos of unpredictable connections, sounded silences, and unexpected meanings, "Howe's poems tell us things we want to know about voices of the past, about the strangeness of the present day, and about the potential to question things we take for granted."[5]

Embracing the ways Howe's poetics challenges our thinking, the present essay uses her poetry as a lens to engage the strangeness of the digital, to question the tools of ordering within the digital sphere, and to imagine expansive, critical possibilities for a contemporary digital humanities. While a great deal of work in new media studies and digital humanities highlights the differences between print and digital media, Howe's poetics points to a particular commonality: a reliance on invisible, naturalized structures of organization and order. In the print text, the rules of capitalization, spelling, typography, and page layout—rules that Howe's poetry rejects—operate as such ordering,


Loaded into a perfect commonwealth or some idea.
In common.
Bisket
Risk
Herring
Salmon
Ore
Watchwords
That open
More imagined it. The best ordered commonwealth
Would have no money no private property no markets.
the sayd
Utopian communism comes in pieces while the Narrative wanders.
aboord
Shrowds
Values in a discourse.
Potentiality of sound to directly signal
To hull in the night
wavering
wavering
Meaning
Cape Rase overpast
any bruit
or muttering
Saxon
harmony sparrow that lamentation
brawling
The overground level
and all that (I) sky
Always cutting out
Wading in water
rigor of cold
They do not know what a syllable is
66

organizing structures. Similarly, in the digital text, it is the encoded mechanisms that define and determine both the system and its operability that order and organize the system. While these mechanisms can take many forms in the digital text—algorithms, source code, and computational languages, for instance—here I focus on one mechanism in particular that is both integral to much of digital humanities work and reflective of ideological concerns that characterize contemporary American studies: the mechanism of metadata.

Metadata are data points that help manage information collections by describing larger data objects. In other words, they are "data about data." Just as the rules of typography, syntax, and page layout bring order to textual information in print, so does metadata bring order to digital information in a database. Moreover, just as the rules governing print operate in the background, largely unnoticed in our experiences of print, Jeffrey Pomerantz notes that "when metadata is doing its job well, it [too] fades into the background, unnoticed and nearly invisible."[6] Where metadata notably differ as an ordering mechanism from that of print, however, is the "truly incredible amount of information [that] can be inferred from 'only' metadata."[7] While metadata alone cannot provide the data object itself, they can certainly provide a detailed facsimile of the object—if not the territory, then certainly the map.

Figure 1.
From Susan Howe, "Scattering As Behavior Toward Risk," in *Singularities* (Middletown, CT: Wesleyan University Press, 1990), 66.

Metadata thus describe a concept and practice familiar to scholars working in the "expanded field" of digital humanities (DH) and to those working in American studies.[8] As a core feature of digitization, metadata have been integral to the development of DH as a field and mark a point of convergence between the fields of DH and of library and information sciences. Consider that many of the earliest projects identified as DH were those that digitized large corpuses of texts with rich metadata markup.[9] As well, in his introduction to the 2012 edition of *Debates in the Digital Humanities*, Matthew Gold provides the following example of a DH project submitted in a dossier for tenure review: "code for a collaboratively built tool that enables other scholars *to add descriptive metadata* to digitized manuscripts."[10] Finally, in conversations about digital (humanities) pedagogy, TEI markup—a method for adding metadata to textual artifacts—is often singled out as a productive way to introduce undergraduates to the concerns and practices of DH.[11] Whether they work in DH or not, many American studies scholars working in the field post (post-)structuralism are familiar with the concept that metadata describe: that invisible systems order,

organize, and control both our access to and our interpretation of information. However, instead of naming such systems "metadata," for these scholars, they are more often called "ideology," "mythology," and "metanarrative." Further, as Louis Althusser, Roland Barthes, and Jean-François Lyotard make clear in their respective theorizations, when these systems "do their job well," they operate just like metadata, per Pomerantz's description above: "fad[ing] into the background, unnoticed and nearly invisible," from which position they control the terms by which we understand information around us.[12]

Importantly, the alignment of metadata structures to mechanisms of cultural control signals a space where the *practice* of metadata markup—a practice that, for the digital humanities, is very much aligned with methods of humanistic interpretation—diverges from the *results* of that practice: the operations of control that metadata make possible in the computational machine. Johanna Drucker has argued that this divergence occurs because computational environments are designed to be "positivistic, strictly quantitative, mechanistic, reductive and literal"—values that are oppositional to the humanities.[13] Moreover, these environments can tolerate so little of the ambiguity, conditionality, or relativity of humanistic interpretation that, Drucker further argues, "putting texts into digital formats with markup that identified content might be an interpretive exercise, but introducing [humanistic] ambiguity at the level of markup [is] untenable, not merely impractical" to computational systems.[14] Many humanists, she notes, often approach the interpretive practice of metadata markup "as relativists" but depart "as positivists," having realized that "critical theory [can] not be sustained in this environment."[15] Drucker thus calls for the digital humanities to turn its attention to creating "computational protocols grounded in humanistic inquiry," which can withstand ambiguity, relativity, and historicism.[16]

In response to Drucker's call, the present essay turns to Howe's poetics to imagine possibilities for nonreductive, historicist, relative, and even ambiguous metadata that can maintain computational functionality alongside humanistic values. That is, by critically engaging metadata through Howe's poetics, as "behavior towards risk," I imagine possibilities for metadata markup that can resist the ahumanistic infrastructures of digital environments. Though ambiguity, relativism, and historicism are valued across the humanities, they are particularly valued in American studies, as it is through their critical and institutional embrace that discourses like race and ethnicity studies, gender and sexuality studies, disability studies, and postcolonialism have become integral parts of the larger field. Moreover, these same values animate both

Howe's poetry and the feminist politics behind her misbehaving text. As I argue throughout, it is in following Howe's disruption of the mechanisms that control print by applying her "behavior towards risk" to the mechanisms that control the digital computer that metadata and practices of markup may resist operating as—even (re-)encoding—Western heteropatriarchal ideologies within our information infrastructures.

The essay unfolds over the following discussions. I begin by engaging metadata as it relates to a specific mechanism of cultural control: metanarrative, a universalizing force that, like ideology or cultural mythology, seeks to totalize the world's information within its singular teleology. I show how metadata operate as a similar mechanism of control for information in a database, mobilizing self-reflexivity to inscribe data objects within a closed, totalizing sphere of interpretation. However, just as the control imposed by metanarrative may be challenged by the self-reflexive poetics of metafiction, so too may metadata's self-reflexivity be newly mobilized to challenge their operability as metanarrative. Here Howe's metafictive poetry comes to the fore. Using "Scattering As Behavior Toward Risk" and other poems in her *Singularities* collection as a guide, I discuss how Howe's poetry disrupts the patriarchal, colonialist metanarratives that (in)form American history by treating language as if it were raw data, building poems that, though page-bound and analog, effectively act as databases. Engaging her poems as databases, I then use Howe's formal poetics as a model from which to imagine a metafictive operability for metadata that is both humanistic and intimately concerned with resisting the metanarratives of American history and culture.

The (Meta)Narratives of (Meta)Data

The metanarrative intimately informs Jean-François Lyotard's theory of postmodernism, a cultural condition that, he writes, is based in a skeptical distrust of the metanarrative.[17] Throughout *The Postmodern Condition*, Lyotard describes the metanarrative as a cultural "master narrative" that rules all other narratives by claiming both the status of universality and the ability to reveal the singular meaning and inherent truth of all others. Bill Readings reiterates and expands Lyotard's point, noting that "the implicit epistemological claim of a metanarrative is to put an end to narrative" by effectively "totalizing the field" as a succession of historical moments that has led to this singular truth.[18] Characterized by closure, completeness, and a reliance on a referential "center," metanarratives "organize and legitimate the narratives of a culture

by positing an origin (as in God) or a telos that gives the rule to narratives."[19] As the "meta-" prefix signals metanarrative's self-reflexivity, it also marks that metanarrative as that which can "organize and legitimate" all other culture narratives, by signaling metanarrative's operation at a higher level of abstraction to other narratives. From this position, metanarrative is able to deny its own condition and operability as narrative.

In metanarrative's operation to order and totalize stories within a culture, it recalls the operability of metadata. Though metadata are often imagined to be a recent, primarily digital phenomenon, the structured information we now call "metadata" can be traced back to the earliest collections in libraries, where its existence emerged from the need to bring systematic order to the chaos of complex stores of data. Today, this ordering system operates through statements that describe a data object's management, identification, preservation, technical behavior, and use(s).[20] In library science, these statements constitute the metadata record, and each record may only apply to a single data object, a rule that the Dublin Core Metadata Standard calls the "one-to-one principle."[21] As in the case of metanarrative, the *meta-* prefix signals that metadata operate at a higher level of abstraction to data than the data themselves, a position from which they constitute "the sum total of what one can say at a given moment about any *information object*."[22] In other words, just as metanarrative totalizes all other narratives from this position of self-reflexive abstraction, so does metadata mobilize a self-reflexive condition of being "meta-" to create conditions for discerning meaning in the contents of a database or other collection.

From this higher position of abstraction, metadata play an important role in determining if or how a data collection's contents will become informative. In defining metadata, Pomerantz invokes a hierarchy of informativeness that understands data as "the raw stuff . . . collected by instrumentation and machinery" that, until processed, is only "potential information."[23] Like potential energy, potential information "requires work to release it," specifically, the interpretive work of metadata.[24] Pomerantz, thus, ultimately defines metadata as "a statement about a potentially informative object."[25] Besides being more precise than the popular "data about data," Pomerantz's definition suggests that the metadata statement operates in a position of power, relative to the object's ability to be informative—to be understood as not just data but information. To demonstrate the relativity of metadata's power here, I look to examples of two types of data objects: a string of numbers collected as readings from a machine, and a book on a shelf in a library. In the former, metadata allow the string of numbers to be understood as temperature, location coordinates, dates, height or weight, or any number of quantified, measured types of data.

In other words, metadata have the power to shift what may have originally been largely uninformative into meaningful information. The book in the library offers a different reflection of metadata's empowerment, since, unlike a string of numbers, a book is a meaningful and informative data object whether or not it has any formalized metadata. However, metadata's relative power over the book's ability to inform may be illustrated through the role it plays in resource discovery through systems like the card catalog. Here the book's formalized metadata form the entry on the card, noting things like title, author, publication date, and material substrate. These (meta)data data points correspond to locations in the library, so the metadata record on the card effectively allows the user to find the book. Once found, it may become informative to the user; lost on the shelf, the book's informativeness for this user diminishes.

Like the physical library, where metadata play an important role in helping users access resources, in the digital library, metadata constitute "an integral component" that "allows users to access the content through multiple facets, including subject, type, author, etc., and enables both browsing and searching."[26] Arguably, the empowered position that metadata hold is exponentially greater in the digital library than in the physical one, because of both the digital library's virtuality and "the unprecedented quantities of data" that have emerged in the digital age.[27] Unlike the physical library, which enables spatial browsing through physical movement among shelves, discovering resources in the virtual space of the digital library is entirely reliant on processes that are both mediated and enabled by the metadata encoded within the digital infrastructure. At the same time, Paul Stephens has observed that "most current media distribution platforms—[Google,] Amazon, eBay, Facebook, iTunes, Mediafire, Pirate Bay, YouTube, library.nu—operate as gigantic catalogs," with the result that "we have entered into a new age of cataloging and data aggregation at every level of society . . . [that] require metadata to *access*, *classify*, and *prioritize*."[28] The power that metadata wield over information in this environment strengthens their operable connection to metanarrative, given the ways they structure collective comprehension. At the same time, metadata point to an urgency in critically evaluating, and even disrupting, this empowerment.

Although the power dynamics between metadata and their data objects, as both exposed by and related to the operations of metanarrative, may signal a space for concern, the fields of digital humanities and library and information sciences have historically relied on metadata for this very empowerment. In the digital humanities, this reliance is evident in uses of metadata for textual analysis, and its integral role in the rise of "distant reading."[29] In these and other DH methods built on (meta-)data analysis, metadata markup (embed-

ding metadata directly within a text) is done to render text both searchable and analyzable through computation. For distant reading, a governing assumption is that the metadata-driven analysis will reveal patterns of information that contain previously indiscernible insights. Importantly, so do DH projects—such as the Women Writers Project (dir. Julia Flanders), Performing Archive: Curtis + The Vanishing Race (Jacqueline Wernimont et al.), or Lauren Klein's work using digital humanities techniques to visualize James Hemings's archival trace—that use metadata markup and analysis to fulfill anticolonial, feminist, queer, or antiracist goals of articulating silences in archives.[30] These and similar DH projects share a political resonance and practice with Howe's poetics, as they engage mechanisms that order and control information in order to disrupt the accepted narratives about and interpretations of that information. In other words, this DH work relies on metadata's ability to impose a totalized metanarrative on a data set in order to identify the limits of that totality.

For library and information science, an embrace of empowered, totalizing metadata is hardly surprising, as the field's primary purposes lie in providing access to information. Indeed, as of this writing, the most read article in the *Journal of Library Metadata* is Chuttur M. Yasser's "An Analysis of the Problems in Metadata Records."[31] The article's popularity alongside its goal—"to minimize, if not eliminate" the problems of "Incorrect Values, Incorrect Elements, Missing Information, Information Loss, and Inconsistent Value Representation" that most frequently limit the usability of metadata records—points to the field's reliance on totalizing metadata that are empowered to categorically represent their data object(s).[32] Despite this reliance, there is a great deal of emerging work in the field that, like the DH projects cited above, is critical of the kinds of metanarratives that metadata standards may promote. Catelynne Sahadath offers such a critique in an article outlining limitations in classification schemes—a part of descriptive metadata that provides guidelines for grouping items based on topical or other similarities—provided by the Dewey Decimal System (DDS) and the Library of Congress (LC). Sahadath argues that, even though "collections most likely to be underserved by LC and [DDS] are those that contain material by, for, and about" minorities, the systems' "shortcoming are often overshadowed by their ubiquity."[33] Her argument is supported by a number of examples, including the following about DDS classification: "Christianity is covered by 80 percent of the 200-series classification numbers, with all other world religions being classed in the 290 section," an illustration of the ways "subject matter pertaining to diverse groups sits at the back of the classification bus."[34]

Sahadath is hardly alone in her observations that classification schemes can create a metanarrative of metadata that challenges inclusivity. Amber Billey, Emily Drabinski, and K. R. Roberto, for instance, have argued that the interpretation of gender descriptions in Resource Description and Access 9.7 (RDA)—another standard for applying descriptive metadata—is antithetical to queer theory's position that "gender and sex are always negotiated and socially constituted" because it asks catalogers to fix the author's gendered identity within the metadata.[35] Fixing the author's gender within the metadata both treats gender as "part of the project of constructing access points and relationships between bibliographic entities [so that] the gender marker is like format or the number of pages: an objective description of reality" and "reifies contemporary understandings of gender as a binary system with only two acceptable gender markers."[36] Similarly, Melissa Adler's book-length study of the Library of Congress and its cataloging practices argues that marginalizing and rejecting gendered identities that do not conform to a heteropatriarchal view has been a governing value of the Library since its inception.[37] A central claim of her book is that the LC systems of classification "must be understood as tools that have contributed to the construction of a national history and identity of the United States," and that these tools have disciplined subjects "not only . . . in relation to one another, but in relation to an imagined nation and its interests."[38] Her book effectively shows, then, how the metadata produced through LC classification systems have contributed to creating a metanarrative about the United States as a nation and people that espouse heteropatriarchal values at their core.

Recent work in library sciences, such as that described above, points to some of the ways metadata, when allowed to freely operate as metanarrative, can work against values of inclusivity and cultural equity that are central to much of American studies work today. Recall that, when operating as metanarrative, metadata produce a totalized system of interpretation that determines a data set's meaningfulness and informativeness. In other words, metadata as metanarrative operate as a closed, universal, master lens of interpretation—an operability that evokes a discursive connection to colonialist, racist, heteropatriarchal ideologies. As the work above traces the ways metadata schemas in libraries have actually been used—and continue to be used—to support colonialist, racist, heteropatriarchal metanarratives, it moves this evocation out of a space of (mere) discourse, and into a sphere of practice. While the practice of using metadata to support inequitable and uninclusive metanarratives in the physical library is certainly disconcerting, the effects of this practice become increasingly concerning when moved into digital environments.

In digital environments, the master system of meaning making through metadata is not simply inscribed on but encoded within its data set. Moreover, this encoded system of interpretation processes its data set through the ahumanistic values of reductivism, ahistoricism, quantification, literalism, and positivism that Drucker cites. In digital environments, then, metadata carry an increased risk of encoding colonialist, racist, and heteropatriarchal ideologies more deeply into the technological systems structuring our world. While it has been argued that we can mitigate such a risk by diversifying the software industry, the root of the problem nevertheless remains: these ideologies have been imposed on a data set through its metadata, which operate as a metanarrative to provide totalized mastery of the data. That is, while encoding more inclusive ideologies within the metadata could certainly help resist the encoding of colonialist, racist, or heteropatriarchal metanarratives, the metadata would continue to operate as a metanarrative that creates a limited, totalized view of the data. That the metanarrative of metadata is operable within a computing infrastructure that rejects humanistic values of ambiguity, fluidity, flexibility, historicity, and conditionality simply complicates the problem. We must imagine the potentials for metadata to mobilize self-reflexivity to resist the mastery of metanarrative. To begin this process, I turn to a discussion of another abstracted "meta-" structure that mobilizes its self-reflexivity specifically for this purpose, and is exemplified by Howe's poetics: metafiction.

Metafictive Poetics as (Mis)Behavior toward Risk

Metafiction is a style of literary art-making that illustrates the skeptical incredulity of metanarrative's claim to totalize meaning that, recall from Lyotard, marks the postmodern condition. Linda Hutcheon defines metafiction as "fiction about fiction; or fiction that includes within itself a commentary of its own narrative and/or linguistic identity."[39] The difference between these types of metafiction is one of presentation: in the first case, the text presents itself as narrative; in the second, the text presents itself as language.[40] Metafiction that may be categorized in the first group includes texts like Donald Barthelme's *Snow White*, Joan Didion's *Democracy*, or Vladimir Nabokov's *Pale Fire*, while the second group might include texts like Walter Abish's *Alphabetical Africa* and L=A=N=G=U=A=G=E poetry from poets like Charles Bernstein and Lyn Hejinian. Though not associated with the L=A=N=G=U=A=G=E school, Howe's language-oriented poetry also belongs in this second group.

As metafiction performs a self-reflexive knowledge of its own identity, it uses its condition of being meta in a way that is fundamentally different from that of

metanarrative: rather than use its condition to deny its own status as narrative or language as metanarrative does, metafiction uses its condition to draw attention to its own status as narrative or language. In drawing attention to its own narrative and/or linguistic status, metafiction counters metanarrative by, first, presenting art as invention, rather than as a representation of predetermined knowledge or Truth. According to Lyotard, a shift from art-as-Truth to art-as-invention is precisely the kind of art practice that performs the postmodern condition's resistance to metanarrative. In his words, this shift promotes a discontinuous, fragmentary, "cultural patchwork" of "little narratives," which present themselves, not as The Narrative—the self-presentation of metanarrative—but as A Narrative among an infinite set of possibilities.[41] Bill Readings further articulates Lyotard's "cultural patchwork" as an "expanded field of little narratives," which, he notes, directly results from postmodern art-making that turns away from "mimetic fidelity to a world or to a subjective will," to focus instead on provoking more art, more invention, and more narrative.[42] The expanded field of little narratives is a site of resistance to metanarrative. Thus, as metafiction mobilizes its self-reflexivity to provoke the effects that Readings describes, it participates in both enhancing the expanded field and resisting the power of metanarrative.

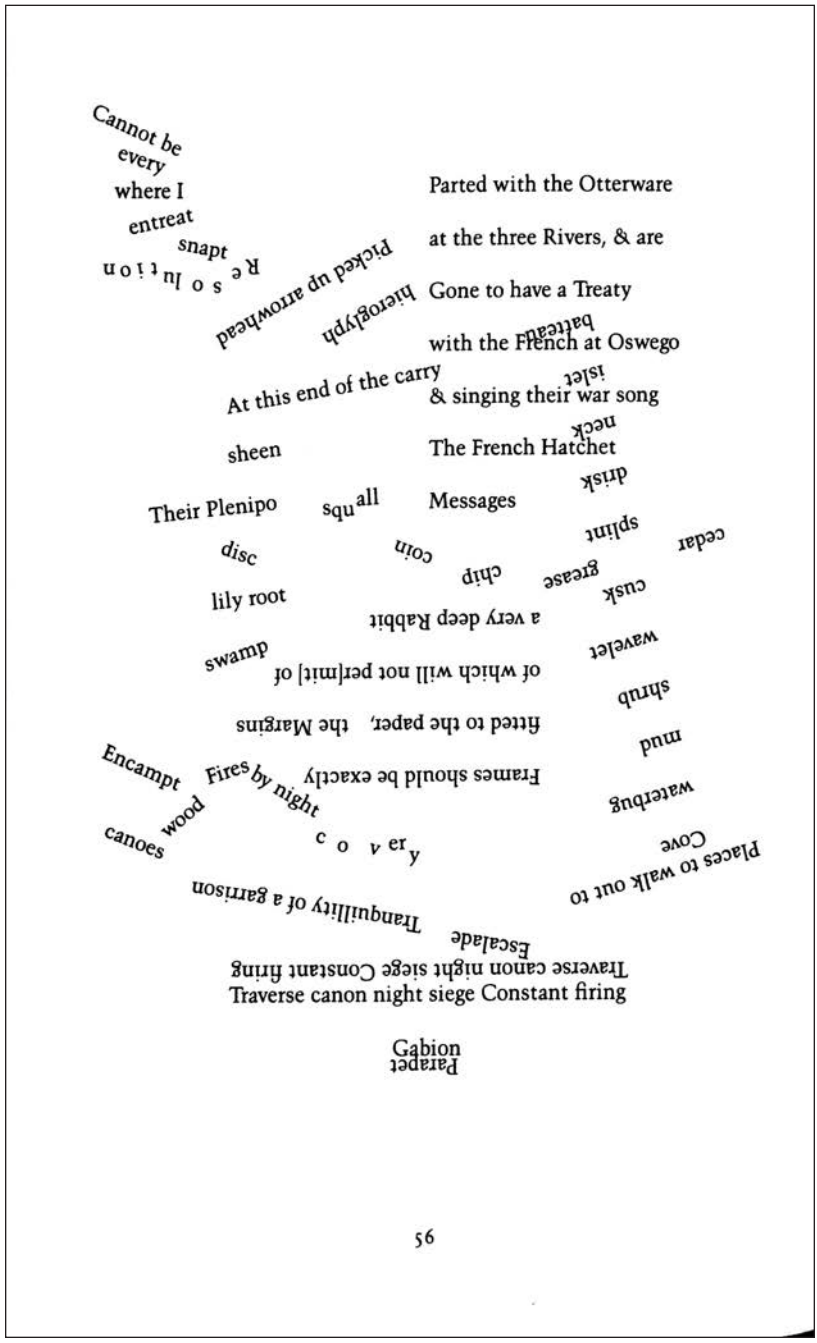
Much of invention and narrative possibility that metafiction provokes stems from the amount of work required to read, access, and make sense of the metafictive text. As Hutcheon explains, reading and engaging a metafictive text requires, first, that readers acknowledge their participation in a diegetic world, and second, that they become actively engaged in the text's cocreation.[43] Metafiction's effective focus on readerly participation and cocreation both illustrates and results from its role as art that provokes more invention and more narrative as it turns away from "mimetic fidelity" to a world. In other words, the work of the reader simultaneously stems from and contributes to metafiction's resistance to metanarrative, both as such, and as tradition that governs how texts work and how textual information is organized. As metafiction disrupts metanarrative's claims to totalize the operation and organization of textual information, it anticipates the certain potential for its alignment with metadata's effects within a database. Recall that just as metafiction's most basic definition is "fiction about fiction," so too is metadata's "data about data." Although for metadata this self-reflexivity is often used in ways that are comparable to metanarrative—as when, for instance, metadata operate in the background to order an otherwise chaotic data set and render that data informative—we can imagine a metadata operability that is more comparable to metafiction. In a metafictive operability, metadata would turn a self-aware

lens on its own totality to fragment it, thereby provoking a "patchwork" or "expanded field" of interpretation for its data set. Here we can return to Howe's metafictive poetics that, as they disrupt rules governing textual information control, promote imaginative possibilities for articulating a metafictive mode of information organization.

As Howe's "Scattering As Behavior Toward Risk" demonstrates (fig. 1), her work operates as a metafiction performing a self-awareness of its own linguistic identity. Her work closely aligns with certain values of the L=A=N=G=U=A=G=E school, particularly those that resist the narrativity of the lyric tradition to write poetry that is both performatively and topically about the form and materiality of language itself.[44] In Howe's poetry, language becomes material, a textual medium of raw data that may be ordered in any number of ways. By exploring how the sonic, visual, and spatial materialities of language-as-data affect its ability to become meaningful, Howe's poetics disrupt the metanarratives that order text and language. Language itself seems to misbehave in her poetry; it operates less as organized, coherent lines of text than as a randomized bag of (potential) words. At times, these potential-words fall into something entirely chaotic, more visual noise than textual information (fig. 2). At other times, they fall into recognizable patterns conveying textual information through vision, space, and sound (fig. 3). Even in this misbehavior, the language will still coalesce into something meaningful: Howe's project of feminist authority that deforms text to reform American history so that it includes (little) narratives that have been marginalized, erased, or silenced. Indeed, Rachel Back specifically reads "Howe's unconventional language usages" as "her answer to the first conqueror's rejection of language diversity in the New World."[45]

Figure 2.
From Susan Howe, "Thorow," in *Singularities* (Middletown, CT: Wesleyan University Press, 1990), 56.

In addition to a colonialist rejection of language diversity, for Howe the metanarrative of American history is entirely predicated on the gendered practice of standardizing and editing women's texts for preservation and consumption. She traces this practice back to the Antinomian Controversy of 1636–38, and the subsequent banishment of Anne Hutchinson, a religious leader, from Massachusetts Bay.[46] As Howe writes in *The Birth-Mark*, "The issue of editorial control is directly connected to the attempted erasure of antinomianism in our culture. Lawlessness seen as negligence is at first feminized and then restricted or banished."[47] Howe will extend the lawlessness of antinomianism to what she calls Emily Dickinson's "contradiction to the canonical social power," a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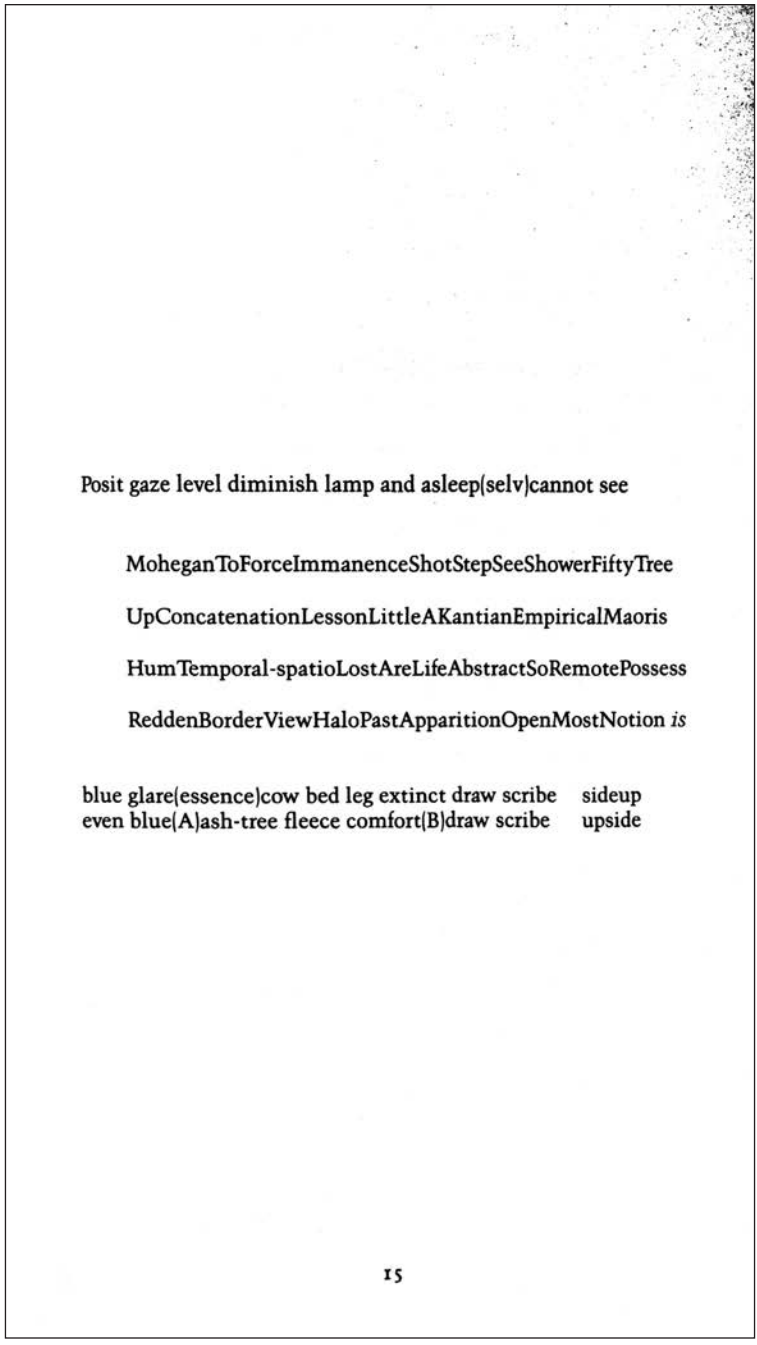

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UpConcatenationLessonLittleAKantianEmpiricalMaoris

HumTemporal-spatioLostAreLifeAbstractSoRemotePossess

ReddenBorderViewHaloPastApparitionOpenMostNotion *is*

blue glare(essence)cow bed leg extinct draw scribe sideup
even blue(A)ash-tree fleece comfort(B)draw scribe upside

15

move that allows her to connect "the excommunication and banishment" of Hutchinson to the "editorial apprehension and domestication of Emily Dickinson."[48] Throughout *The Birth-Mark*, Howe develops this connection further, laying out her compelling argument that the entire history of America—a history that is notably contained in written, preserved, standardized, edited documents—is based on the erasure and marginalization of women's voices under the guise of standardizing, ordering, or otherwise "fixing" their perceived textual lawlessness. This practice of textual disciplining resonates with, even as it does not entirely duplicate, the processes that Adler describes by which the Library of Congress has disciplined sexuality for a national metanarrative. Written within such a disciplinary system, Howe's poetry mobilizes an ethic of disruption as historical and archival recovery. Influenced by Dickinson's poetry and the (in)famous editorial interventions of her manuscripts, Howe's poetics also operate as self- and textual-preservation; her texts are so apparently deformed, so typographically disruptive, so editorially resistant, that to disseminate them at all is to disseminate them without editorial interference, regardless of legibility.[49]

Figure 3.
From Susan Howe, "Articulations of Sound Forms in Time," in *Singularities* (Middletown, CT: Wesleyan University Press, 1990), 15.

The narratives that eventually coalesce in Howe's lawless texts perform her feminist practice of recovery-through-disruption in multiple ways. As the poems collected in *Singularities* illustrate, her feminist recovery may appear in the presence of previously silenced figures from history, as in the collection's opening poem, "Articulations of Sound Forms in Time" about the early Indian encounters of Hope Atherton and Mary Rowlandson.[50] It may also appear as the disruptive re-vision of masculinized, patriarchal texts: the collection's second poem, "Thorow," applies this approach to Henry David Thoreau's *Walden*, while its final poem, "Scattering As Behavior Toward Risk" disrupts and reworks the book of Deuteronomy and Herman Melville's *Billy Budd*.[51] Though these specific texts represent a small portion of her work, Howe's poetic performance throughout *Singularities* is recognizable across her oeuvre, in poetry that performs textual and linguistic lawlessness to disrupt the metanarratives that organize American history. As this disruption operates on both the narrative content of American archives and the mechanisms that provide order to the print record, Howe's poetics become as much a poetics of information recovery as of information management. In her rejection of the naturalized, invisible, mechanisms that control textual information, Howe's poetry enacts a reformed narrative, and a reformed database, of American history.

That Howe's poetry would simultaneously operate as narrative and database highlights a key aspect of her poetic disruption of mechanisms of order and control: her ability to experiment with, and ultimately intertwine, the mechanisms that order both print and digital information. Lev Manovich has argued that narrative and database are fundamentally opposed to each other because of the ways they order information. Where the narrative "creates a cause-and-effect trajectory of seemingly unordered items," the database "represents the world as a list of items" that it "refuses to order."[52] The database's apparent "refusal to order" must be qualified, however, since it is only until metadata are created that the items appear unordered. Though he does not offer this qualification, Manovich does expand on the database's "lack of order" by noting that, as a digital object, the database does not inherently have any "development, thematically, formally, or otherwise that would organize [its] elements into a *sequence*."[53] N. Katherine Hayles has noted that sequential ordering is specific not only to narrative but to the materiality of print—where, she notes, "the order of pages [often] recapitulates the order of time"—and to human memory.[54] In contrast, database, digital materiality, and computer memory are organized through what she describes as "simultaneity." In her words, "where in human memory, events take place in time and therefore constitute sequence," in the "non-Cartesian space of computer memory, all [data] are equidistant," existing in a simultaneous temporality that is always already complete.[55] Effectively, where information within a narrative is ordered through sequence as in human memory, in a database digital information is ordered through simultaneity, as in computer memory.

In Howe's poetry, as in Manovich's database, the (meta)narratives of American history are disrupted and unordered, rendered at the level of their textuality and language as a list of potential narrative information that resists teleological consistency. These data balance in strict tension between the ordering mechanisms of sequentiality and that of synchronicity, as illustrated across the three sections of "Articulations of Sound Forms in Time," the poem that opens Howe's *Singularities* collection. The poem's first section, "The Falls Fight," features text that follows rules of syntax and grammar to recount a sequentially ordered series of events: "Just after King Philip's War, so-called by the English and shortly before King William's War or Governor Dudley's War called the War of the Spanish Succession by Europeans, Deerfield was the northernmost colonial settlement in the Connecticut River Valley."[56] Yet Howe immediately introduces ambiguity in her refusal to provide a singular name by which to call the wars that mark the poem's temporal setting. The poem

continues in this way, setting the scene and context that drive what might be called the "plot" in text that is nearly as readable as standardized prose. Even within such textual order, however, the mastery of the narrative is undermined as Howe continuously introduces ambiguity along the way.

By the poem's second part, "Hope Atherton's Wanderings," sequentiality will become limited to the turning of pages, as both narrative and language lose their recognizable order. In this section, which Rachel Back reads as both "Atherton's discredited account" and "the wild rantings of a madman," the syntactic sequentiality of language disappears alongside any sense of sequential time beyond the turning of pages.[57] The segment opens with text that looks like a series of seven verse-paragraphs, but which reads as almost entirely meaningless linguistic data. Consider the second verse-paragraph, which reads: "Clog nutmeg abt noon / scraping cano muzzell / foot path sand and so / gravel rubbish vandal / horse flesh ryal tabl / sand enemy flood sun / Danielle Warnare Servt / Turner Falls Fight Us / Next wearer April One."[58] Though some sense may be gathered from the language here—the speaker seems to have found some nutmeg around noon and followed terrain that is sandy or gravelly—most of the text appears as just a series of nouns and verbs, linguistic data presented in an un-ordered, asequential, effectively uninforming, list. Back further notes that "through the abridgment of words ('ly,' 'cano,' 'abt') and the discarding of all time adverbs, time is condensed from a spectrum into a spot, as though each moment in this wilderness is both the only moment and every moment."[59] The narrative order of sequentiality gives way to the databased order of simultaneity.

Language and sequentiality will eventually devolve even further, to simultaneous fragments of linguistic data that lack any syntactical or grammatical order. On page 13, for instance, the following text appears: "chaotic architect repudiate line Q confine lie link realm // circle a euclidean curtail theme toll function coda // severity whey crayon so distant grain scalp gnat carol // omen Cur cornice zed primitive shad sac stone fur bray // tub epoch too fun alter rude recess emblem sixty key."[60] Here the only sequence that remains is what results from the materiality of print and conventions of reading texts in English from left to right and top to bottom. Syntax and grammar are completely abandoned, and linguistic data sit on the page conveying (potential) information entirely through the simultaneity of a database. Indeed, Manovich's argument that "there is nothing in the logic of the [database] itself that would foster [narrative's] generation" is as true for the database as it is for language here.[61] Manovich's statement will become even more true in "Thorow" and

"Scattering As Behavior Toward Risk" ("Scattering"), where the sequentiality afforded by the rules of English reading disappear so effectively that the pages can be re-created only through image scans. As figures 2 and 1, respectively, illustrate, the scattered, shattered text gives no indication of the order or sequence (if any) in which it should be read. The logic of sequentiality by which print, linguistic, textual, and narrative data becomes information has given way, entirely, to the logic of synchronicity.

As these brief examples from Howe's *Singularities* illustrate, the practice of making sense of and extracting information from her poetry shifts between practices born of sequential narrative and practices born of synchronous database. As a result, any meaning that may be extracted from her poems emerges as the reader learns to navigate the textual database of Howe's poem. As in any database, navigation often requires finding patterns in content that can appear completely random and using these patterns as a model by which to separate the information from the noise. Even with these patterns, however, Howe's texts cannot be grasped in their entirety; whatever information the reader may find, there are always more possibilities for interpretation. There is no totalizing schema of either metadata or metanarrative by which to make absolute, definite sense of Howe's poetic database. Together, her poems maintain the political ethic driving her archival disruption, and rather than offer an alternative metanarrative of American history that simply reinscribes the mastery they sought to disrupt, they offer possible interpretations, information that readers construct through their own navigation of the poem. That meaning may be gleaned from Howe's poems at all demonstrates that there must be some mechanisms of order that are akin to, or operable as, metadata at work in this database. That these meanings are not totalized into a singular, universal metanarrative suggests that these metadata work like Howe's self-reflexive, metafictive texts themselves: it is metadata that mobilize their self-reflexivity to dismantle, rather than reassert, the colonialist, heteropatriarchal metanarratives governing American history. The question that remains is locating these metadata, and determining how they may be used to further embed values of not just humanistic but equitable and inclusive inquiry into digital (humanities) infrastructures.

Toward a Metafictive Practice of Metadata Markup

As described, Howe's metafictive poetics is notable for how it enacts alternative organizational schemes for textual data in order to disrupt the metanarratives governing American history that have emerged from traditional modes of

textual organizations. As with other metafictions, much of her metanarrative disruption stems from her poetry's presentation of textual and linguistic information that maintains a self-reflexive awareness of its own condition as language and text—refusing, in other words, to fade into the background of the page. As such, perhaps the most immediate place where Howe's metafictive poetics can inspire a metafictive mode for metadata is in promoting self-reflexive, self-aware metadata that similarly resist fading into the background of the database system and instead remain visible at the user interface. Remaining visible allows for metadata to provide a commentary on their own meaning-making identity, just as metafiction provides a commentary on its own linguistic and narrative identity. A number of digital humanities projects and library collections already perform a version of this solution. The Orlando Project (directed by Susan Brown, Patricia Clements, and Isobel Grundy), for instance, maintains pages that describe both the tag sets and reasoning behind these sets that the project uses for its metadata.[62] Similarly, the Reciprocal Research Network (RRN) displays both the collection's metadata and the processes by which information professionals standardize the metadata, moves that Brad Lougheed, Ry Moran, and Camille Callison note simultaneously assures users that the records are authentic and instills trust between the users and the information professionals working with the collection.[63] In keeping both the metadata and the processes used to standardize them visible and present for the user, the project also "combat[s] the 'myth of neutrality,'" which casts information professionals as unbiased and objective in their interactions with collections.[64] Challenging assumed neutrality and objectivity through a visible, self-aware presentation of metadata, as these projects do, disrupts the totalizing tendency of metadata operating as metanarrative.

Besides promoting visibly nonneutral, nonmasterful metadata, another place we might look to imagine metafictive metadata is in the shared relationship to "potential information" and "potential meaning" between data and metafiction. In both the database and the metafictive text, an amount of work is required to process "raw" data into something meaningful. In the database, much of this work is done by metadata, as they organize the data. In the metafictive text the work of organizing the textual data transfers to readers, who parse and process the text themselves. In the case of Howe's texts, organizing work may be guided by the rules of narrative or syntactic sequentiality, but it is more often guided by readers' own practices of visual and sonic pattern recognition. Notably, visual and sonic patterns that emerge will likely vary from reader to reader. Consider the page from "Thorow" (fig. 2), where readers may cluster and read words based on their orientation to the page, the angle of the textual

line with relation to the book's binding, or even the kerning of letters. Similarly, when read aloud in search of sound patterns, variations in pronunciation can result in variable readings, as in the lines "velc cello viable toil // quench conch uncannunc," where the many c's may be uttered as the sounds /ch/, /k/, or /s/.[65] These shifts will result in different sonic patterns through a section of a poem whose very name—"Articulations of Sound Forms in Time"—invites the reader to look for sonic patterns as a mode of meaningful discovery. The work of information recovery a reader undertakes may be guided by Howe's metadata-based "clues," but that work is ultimately—indeed, intimately—shared between the author and reader.

In a digital, computational database, the work of data interpretation—the work of metadata markup—may be similarly shared between the author(s) or designer(s) of the database, and its user(s). One way such work could be shared is by embracing and designing systems that use forms of social tagging to create a "folksonomy" or "folk-derived taxonomy."[66] Contrasting the folksonomy to the taxonomy, Susan Cairns notes that where taxonomies "are hierarchical and universalizing"—descriptors that align the taxonomy with the metanarrative—"folksonomies are informal, messy, and responsive. Concurrently personal and social, folksonomies are antithetical to the formal and hegemonic taxonomies that museums have relied on to give objects context."[67] Perhaps the most recognizable models of this shared work of data interpretation are the many commercial databases that rely on user-generated, crowd-sourced tagging, like YouTube, GoodReads, Flickr, and Amazon. Beyond these commercial platforms, a number of libraries and cultural institutions have embraced the folksonomy as a mode of applying ethical, inclusive metadata to collections. The Digital Library North, for instance, uses participatory tagging in developing a digital library of cultural resources for indigenous communities in the Inuvialuit Settlement Region in Canada.[68] Similarly, Canada's Truth and Reconciliation Commission embraces a shared, folksonomic approach to metadata markup in the collections that make up the National Research Centre for Trust and Reconciliation, in order to "create a 'living archive' and facilitate Indigenous participation, collaboration, and ultimately, the process of reconciliation."[69] As both the Digital Library North and the National Research Centre for Truth and Reconciliation highlight, sharing the work of information interpretation through participatory markup not only reflects a metafictive ethic of readerly co-creation, it also resists the integration of Western hegemonic metanarratives into data sets.

Where folksonomic approaches to metadata markup do the ethical and politically necessary work of challenging a collection's hegemony and mastery,

they also introduce challenges to organizing a data set, which, in turn, can limit a database's efficacy in (for instance) resource discovery. Alireza Noruzi cites "plurals, polysemy, synonym, and depth (specificity) of tagging" as the most common problems that folksonomic metadata markup can introduce to collections.[70] Three of these—plurals, polysemy, and synonyms—directly affect resource discovery by introducing conflicting metadata records, so there are often additional modes of control put into place to limit such problems. Two such modes of control are controlled vocabularies and authority files. Pomerantz defines a controlled vocabulary as "a set of rules that dictate how to represent a specific type of data," where "the number of available words has been dramatically limited, all synonyms and antonyms have been eliminated, and the scope of the meanings of those words that remain have been clarified and simplified."[71] Similarly, an authority file "provides a finite set of strings [statements] that may be used to describe a resource."[72] In other words, controlled vocabularies and authority files certainly mitigate the problems of conflict and redundancy that Noruzi cites; they effectively impose a metanarrative on the data set. Thus, to imagine participatory markup practice that rejects the impulse to metanarrative, we must imagine metadata designs that allow the user to not only participate in but actively disrupt metadata's work of providing meaning through order.

Related to the practice of sharing, and even disrupting, interpretation is an additional possibility presented by Howe's work: metadata markup that is detotalized, partial, or indefinite, or the creation of metadata that denies their purpose to produce "*the sum total*" of what one may say, and instead produce just *some* of what one may say.[73] In their partiality, the metadata would both perform and carry within them the ambiguity that is lost in the binary of a computer's digital infrastructure. Howe provides a model for this type of markup in her poetic blend of sequential and synchronous ordering mechanisms, and in the moments of textual information processing required by her spelling, syntax, grammar, and page layout, for example, when the familiar ordering of verse paragraphs is placed beside a page that follows only sporadic spatial or syntactical ordering mechanisms. Consider, for instance, the page from "Scattering" (fig. 1), or the inclusion of familiar words within a list of chaotic fragments from "Articulations": "scow aback din // flicker skaeg ne // barge quagg peat // ~~sieve catacomb~~ // stint chisel sect."[74] Within these lines, moments of recognition where information is easily processed through the ordering mechanisms of the English language can be read as moments of complete markup following standardized models. Moments of chaos, on the other hand, may be read as moments of partial markup, or markup that

rejects standardized models or recommended practices. As in the production of user-generated metadata, embracing a practice of partial markup presents risks. For instance, even as they critique the practice of fixing gender into a stable metadata category, Billey et al. note that removing fields such as gender from the record, thereby engaging in a form of partial markup, limits the ability to search based on those terms.[75] Yet it is precisely the rendering of textual information as illegible, uninformative, and effectively unusable that articulates the core of Howe's feminist intervention into the patriarchal metanarratives of American history.

Complementing the practice of partial markup, is the practice of nonstandardized metadata markup that Howe mobilizes. Indeed, it is as much by rejecting the preset standards of linguistic information management, as by following these standards only partially, that Howe maintains her feminist and anticolonialist commitment to embedded ambiguity. Her commitment to ambiguity becomes particularly acute in moments where Howe's text follows expected standards of sequentiality only to undermine the certainty and definition that these standards apparently provide. Recall the opening of "The Falls Fight," which includes within it the ambiguity of naming historical wars: "King Philip's War, so-called by the English," and "King William's War or Governor Dudley's War called the War of Spanish Succession by Europeans."[76] Howe's refusal to provide us a definite name by which to identify these wars requires that her reader acknowledge both the multiplicity of meaning and the cultural bias at work in naming at all.

Thinking in terms of metadata markup, we see Howe's use of multiple names for the same events disrupting metadata standards such as controlled vocabularies and name authority files (a specific kind of authority file that provides a preferred or master name for any resource).[77] As noted, while arguably necessary for resource and information management, controlled vocabularies and (name) authority files—ordering mechanisms that are necessarily culturally inflected and ideologically biased—impose a metanarrative onto a data set, as they control the language of data interpretation. Extending Howe's resistant practice, illustrated in the example above, to database design in the digital humanities, we could imagine metadata markup that similarly resists encoding and enacting discourses of mastery and control by disrupting controlled vocabularies, questioning (name) authority files, or designing schemas that allow for multiplicity, rather than authoritative hierarchy, of naming. This latter practice is one that several collections of indigenous artifacts employ. The Digital Library North project, for instance, employs a markup practice that

includes indigenous place-names alongside their Europeanized equivalents, and people's Christian names alongside their traditional ones.[78] Besides allowing for naming inclusion, providing indigenous alongside Europeanized names actually aids in resource discovery, since it creates more metadata points for the searching or browsing features to pick up.[79]

A final place where Howe's poetics provides models for shifting metadata's self-reflexive operation away from that of metanarrative and toward that of metafiction is in the choice of metadata schema—essentially, the choice of ordering mechanism. A metadata schema defines the rules used for structuring data according to type or intended purpose, and, because of the diversity of data models, there are quite a few to choose from. Some metadata initiatives such as Dublin Core aim to provide standards and schemas that may be applicable for all types of resources.[80] Others, like the Text Encoding Initiative (TEI) or the Visual Resource Association (VRA), create standards that are more focused to data objects in specific media, here for textual and visual resources, respectively.[81] As they provide rules and guidelines for ordering data-based resources, initiatives like these and the metadata schemas they create operate very much like the guidelines and best practices for presenting textual information in print—practices like margin justification, text size, and font, for instance, and the style manuals that govern them. In other words, they operate like those rules for textuality that Howe's poetry resists. Notably, Howe's resistance is not based in the outright rejection of all schemas for textual information organization; rather, her resistance is based in schematic replacement, a move we have already seen in her use of digital, simultaneous organization for print, sequential media. Besides her use of simultaneity in sequential media, her pages often resist the rules for organizing *textual* information, by replacing such rules with those that organize *visual* information. As the figures throughout this essay illustrate, there is a clear visual organization to Howe's textual page, even as there is an apparent lack of textual organization. Her pages, in other words, are organized more as images to be looked at than as pages to be read. Translating this practice for the digital humanities, we might imagine treating a text as an image and marking it up following standards set by VRA, treating an image as text and marking it up following standards set by TEI, or applying any other standards (or combination) to a resource of an apparently contradictory medium. While applying a contradictory metadata scheme to an object may run the risk of producing nonsense and noninformation, it would have the benefit of revealing and challenging our own biases and metanarratives that have been built into our metadata standards and resource categorization.

Each scenario above uses Howe's textually misbehaving poetry as inspiration for imagining possibilities by which metadata may enact a metafictive poetics—articulating themselves while maintaining a commentary on the role they play in organizing and interpreting data. As asserted throughout this essay, through metafictive self-articulation, metadata may resist acting on data as metanarrative acts on narrative; that is, they may resist enclosing a data set within a closed, totalized sphere of interpretation. The fields of digital humanities and library and information sciences alike have shown some of the ways metadata can organize a data set so that they promote (however inadvertently) colonialist, racist, heteropatriarchal metanarratives within that data set. Moving these data sets into the digital realm that is hostile to ambiguity, relativism, and historicism simply strengthens the power of such metanarratives. Howe sees a similar power in the archives of American history that, she argues, is directly tied to practices of textual order and organization. Her poetry thus reforms and revises the metanarratives of American history by rejecting rules of textual order. In this move, her metafictive poetry becomes a productive place from which to imagine a metafictive poetics for metadata. Just as in Howe's poetry, very often metafictive metadata appear as metadata that misbehave: their markup is only partial, they follow schematic rules set for different media, or they embrace the chaos of participatory folksonomies. However, it is precisely within this apparent misbehavior that these models for metafictive metadata may resist the imposition of metanarrative on a data set, and so allow for the inclusion of humanistic values of ambiguity, historicism, and relativism into hostile computational infrastructures. Though the problem of building computational infrastructures that embrace these humanistic values remains, mobilizing a metafictive metadata marks a productive way forward for a critically engaged digital practice integrated with many of the values of contemporary American studies.

Notes

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