



Bolintineanu, Alexandra, C. E. M. Henderson, Ana Algarvio Alves Wong, Dionysus Cho, Robyn Jane Carino, and Kathy Du. 2022. "A Certain Enemy Robbed Me of My Life": Medieval Riddles, Digital Transformations, and Pandemic Pedagogy." *Digital Medievalist* 15(1): 4, pp. 1-24. DOI: <https://doi.org/10.16995/dm.8177>



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"A Certain Enemy Robbed Me of My Life": Medieval Riddles, Digital Transformations, and Pandemic Pedagogy

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This essay examines a Fall 2020 assignment for a second-year undergraduate "Introduction to Digital Humanities" course as a case study of digital experiential learning during the Covid-19 pandemic. The essay is a collaboration between the course instructor (Bolintineanu) and teaching assistant (Henderson), with our student game creators (Alves, Carino, Cho, Du). We situate the assignment, which invites students to transform a medieval riddle into a Twine game, within Digital Humanities (DH) Inquiry-Based Learning (IBL), at the crossroads of archive-centred learning and critical making; and we examine contributions by four student game creators within the pedagogical poetics of the early medieval riddle tradition.



1 Overview

§1 This essay examines a Fall 2020 assignment for a second-year undergraduate “Introduction to Digital Humanities” course as a case study of digital experiential learning, and is a collaboration between the course instructor (Bolintineanu) and teaching assistant (Henderson). We situate the assignment, which invites students to transform a medieval riddle into a Twine game, within Digital Humanities (DH) Inquiry-Based Learning (IBL), at the crossroads of archive-centred learning and critical making, and examine contributions by four student game creators (Alves, Carino, Cho, Du).

§2 “Introduction to Digital Humanities” is a second-year course, held in Fall term, as the first required course in the Digital Humanities Minor at the University of Toronto. As an introduction to Digital Humanities, the course has both technical and theoretical learning outcomes. On one hand, the course introduces technical DH concepts and methods, such as text encoding, quantitative text analysis, data visualization, and work with digitized books and exhibits. On the other hand, the course teaches the analysis of text technologies—poems, physical books, data, and digital artifacts—through the lenses of literary and book and media studies. The DH minor program’s student population parallels the twofold learning goals. Because the DH minor program is open to any student in the University of Toronto’s Faculty of Arts and Science who has completed the equivalent to one year of full-time classes, and because students may also choose to take the course as an elective, students in this course are highly diverse in terms of prior preparation: some are English literature or history students who have no programming experience and limited experience with digital tools; others are Computer Science students who have limited experience close-reading literary texts or writing university-level essays. The course tailors assignments develop the students’ strengths and skills, both in technology and in literary analysis.

§3 To create a coherent course narrative among potentially disparate topics and methods, the course focuses on the materiality of knowledge transmission, from medieval manuscripts to the digital age. In previous years, students experienced this materiality directly. In the library, they encountered endangered books—medieval manuscripts, censored early print; in the computer lab, they examined digital copies of clandestine Soviet literature; in the classroom, they operated Bolintineanu’s once-illegal typewriter (Bolintineanu and Thirugnanasampanthan 2018). Course assignments were designed to promote learning by doing. For example, one past assignment had students transform a poem using HTML and CSS to emphasize its themes and stylistic strategies. This assignment allowed students to approach both literary analysis and encoding experientially. Another past assignment had students handle early printed books from the Thomas Fisher Rare Book Library, examining these books’ pages and

bindings. Students then used that physical experience to build an Omeka exhibit about banned or otherwise endangered books. However, because of the COVID-19 pandemic, the Fall 2020 class took place entirely online. Students consulted digitized manuscripts and books online—without in-the-flesh contact. To supplement this absence, students engaged with the text used for this assignment, Exeter Riddle 26, a poem about the process of making a parchment codex, using text encoding and basic programming logic to turn it into a work of interactive fiction with the platform Twine. In the students' hands, the assignment took on an additional, unexpectedly situated dimension, as the experience of studying in pandemic uncertainty inflected their interpretations of the poem. The students' work meditates on the materiality and media of knowledge through the themes of time and loss—themes of the riddle poem, yes, but this year also themes of our course, as students engaged with the loss of labs, libraries, and learning structures in a digital classroom unmoored from ordinary academic time.

2 DH pedagogy: Material-based and critical making

§4 Alexandra Bolintineanu designed the “Introduction to Digital Humanities” (DH) course in 2017, centring books at risk: medieval manuscripts damaged by bookworms and collectors' knives, early printed books blackened by fire and censors' brushes, digital datasets endangered by swift technological progress and lossy reproduction. The course aims to show that our technologies of knowledge production and transmission shape and are shaped by the historical, economic, and technical worlds they inhabit. Damage and censorship disrupt and transform these technologies, rendering the systems they inhabit more visible (Bolintineanu and Thirugnanasampanthan 2018). In this way the course imparts not only digital skills, but critical perspective.

§5 The pedagogical approach that underlies the course and this assignment is Inquiry-Based Learning (IBL). Originating in the work of John Dewey in the 1930s and further developed by scholars of teaching and learning from the 1960s to the present day, IBL is a pedagogical approach in which students learn by doing, actively applying the analytical methods of their discipline in order to discover or construct knowledge that is new to them (Dewey 1933; Lee 2012; Pedaste et al. 2015). Depending on educational and disciplinary context, IBL takes many forms. For example, science students practicing IBL “follow methods and practices similar to those of professional scientists in order to construct knowledge”—that is, establish a research question, come up with a hypothesis, design and carry out experiments, collect and analyze data, and revise their hypothesis (Pedaste et al. 2015). Similarly, literature students practicing IBL approach literary texts through “close reading inflected by different theoretical frames” and communicate the new knowledge constructed through their

analysis (Manarin 2016). (For further examples of humanities IBL, see Bass and Linkon 2008, Chick 2013, and Sleeter et al. 2020.) In DH classrooms, IBL encompasses a variety of activities. As summarized in Bolintineanu et al. (2022), DH inquiry-based learning includes digital tool-building (Nowvieskie 2016 and Ramsay and Rockwell 2012); working with gallery, library, and museum (GLAM) collections in material and digital forms (Gold 2012; McClurken 2011; Schlitz and Bodine 2012; Cuenca and Kowaleski 2018; Burma and Tione Levine 2016; Faull and Jakacki 2015; and *The Journal of Interactive Technology and Pedagogy*, Issue 14, 2019); designing and playing games (Belman and Flanagan 2010; McCall 2013; Flanagan and Nissenbaum 2014; Jagoda 2014); and utilizing library makerspaces (Miller et al. 2018). Educators in the sciences (Pedaste et al. 2015) and humanities (Manarin 2016; Costes-Onishi, Baidon, and Aghazadeh 2020) have observed that students' active participation in the discovery and construction of knowledge strengthens their research and interpretive skills.

§6 Following these principles, before the pandemic, students encountered premodern endangered books as experientially as possible, under the guidance of librarians P. J. Carefoote and Tim Perry in the Thomas Fisher Rare Books Library. For example, in 2017 students visited *The Flickering of the Flame*, P. J. Carefoote's exhibition on censorship during the European Reformation (online version of the in-person exhibition: <https://fisherdigitus.library.utoronto.ca/exhibits/show/reformation/introduction>). Under librarian guidance, students handled specific early printed books, examining bindings, printers' marks, and censors' damage. Using the library book scanner, students then photographed and studied salient details of their chosen volume, and produced Omeka exhibits about the books. Students participated in research, with primary sources, in all its authenticity, technical problem-solving, and fruitful messiness. (For a detailed analysis of research skills gained specifically by building scholarly Omeka exhibits about material objects in their historical contexts, see especially Cuenca and Kowaleski 2018.)

§7 This Omeka assignment is an example of a form of IBL we call "archive-centred learning": with the guidance of librarians and archivists, students learn by being invited into special collections, interacting with the material forms of knowledge across history, and becoming involved in the digitization, curation, and analysis of historical material. The term "archive-centred learning" foregrounds the students' hands-on involvement with material cultural heritage artifacts. This involvement is guided and mediated by librarians and GLAM professionals. Since the evocative glamour and theoretical resonance of the term "archives" in humanities scholarship has often come along with an erasure of archivists' and archives studies' contributions (Caswell 2016; Whearty 2018), it is important to make librarians' labour visible not as a footnote

to the term, but as part of its definition. In addition to transmitting scholarly skills and making the research process visible, archive-centred learning projects have important affective and theoretical dimensions. Touching the material past inspires wonder. It also provides a historical and theoretical framework for teaching and learning about digital knowledge production. As Ryan Cordell argues, framing the digital within a study of text technologies across history “helps students understand [text] technology not as something we invented ten years ago (give or take), but as a long continuum of human activity” (Cordell 2016, 467). From medieval manuscript to millennial motherboard, hands-on encounters with material information technology invite students to reflect on knowledge production and knowledge transmission media as cultural artifacts.

§8 But in Toronto, in the fall of 2020, COVID19 had closed the libraries. We could not go and see where censors’ brushes had tried to blot out print, where human collectors had cut out manuscript illuminations, or where bookworms had tasted the pages. Instead, students had to examine books at a digital distance. Both during lectures and in assignments, students extensively used digitized books—manuscript and print—in over a dozen GLAM repositories. But there was one aspect of the book encounter that these digitized resources could not replicate: the immediacy of touch. (For a discussion of digitized manuscripts and the absence of touch, see Nolan 2013; for intriguing counterarguments, see Endres 2014 and Green 2018.) So, rather than physically examining endangered books and their making and unmaking, students were asked to reflect on the material nature of texts in another way: to read an Old English riddle, in modern translation, about making a manuscript book; to transform that riddle into a digital Twine narrative; and to write a reflection describing their stylistic choices and their learning process.

2.1 The assignment

§9 The riddle at the centre of our assignment survives in the Exeter Book. Compiled in what is now England in the second half of the tenth century, the Exeter Book is one of the four major surviving manuscripts of poetry in Old English. Along with dream visions, elegies, and other poems, the Exeter Book contains a series of approximately ninetyverse riddles. These riddles range from religious contemplation to sexual double-entendre, from poignant elegy to learned trolling. Drawing on the Anglo-Latin riddle tradition, Old English riddles build elaborate textual disguises for everyday objects and phenomena. (Wilcox 2005 studies the riddles’ overall poetic *modus operandi*; Bitterli 2009 provides a holistic overview of the riddles and riddle scholarship, and situates the Exeter Book riddles both within modern scholarship and within medieval animatography.) The Old English riddles are constructed as a conversation with an

imagined reader, whose response they cultivate—curiosity, wonder, a habit of inquiry (Dailey 2012; Lockhart 2017).

§10 Our riddle is Riddle 26 (sometimes numbered Riddle 24), one of several that disguise writing instruments and written artifacts (Ramey 2013). Our students engaged with the riddle in modern English translation (Cavell 2014).

§11 Riddle 26 renders the creation of a book as a first-person autobiography—or, if you will, an *autonecrography*—followed by a splendid afterlife:

A certain enemy robbed me of my life, / stole my world-strength; afterward he soaked me, / dunked me in water, dragged me out again, / set me in the sun, where I swiftly lost / the hairs that I had. Afterward the hard / edge of a knife, with all unevenness ground away, slashed me; / fingers folded, and the bird's joy / [spread] over me with worthwhile drops, often made tracks, / over the bright border, swallowed tree-dye, / a portion of the stream, stepped again on me, / journeyed, leaving behind a dark track. Afterward a hero / encircled me with protective boards, covered me with hide, / garnished me with gold; therefore the wonderful / work of smiths glitters on me, surrounded by wire. / Now those ornaments and the red dye / and that wondrous dwelling widely worship / the protector of the people, not at all foolish in wisdom. / If the children of men wish to enjoy me, / they will be the more sound and the more victory-fast, / the bolder in heart and the more blithe in mind, / the wiser in spirit, they will have more friends, / dear and near, faithful and good, / upright and true; then their glory and prosperity / will increase with favour and lay down / goodwill and kindness and in the grasp of love / clasp firmly. Find what I am called, / useful to men. My name is famous, / handy to heroes and holy in itself. (Cavell 2014)

The riddle's narrative opens with the speaker's violent death; recounts the violent transformation of the speaker's hide into parchment; moves to the writing of that parchment, its illumination, ornamentation, and binding into a religious book; and, finally, concludes with the book's afterlife, forming communities of reading and prayer across time. The riddle portrays in vivid detail the technology of medieval manuscripts, not only depicting manuscripts' inscribed pages, but considering the violence, costs, and affordances of books as textual objects. The riddle is a double process of transformation: through the manuscript-makers' arts, the medium of animal life is turned into a holy book and then into a transtemporal community of reading and prayer. In Elaine Treharne's words, the book becomes "an edifice of salvific letters" (Treharne 2021, 30; see Treharne 2021, 18–39, for a detailed reflection on the phenomenology of the book in this riddle). Through the riddic form, the animal/book is turned into an enigmatic sufferer, a splendid treasure, and the protagonist of a redemption narrative.

Layered onto these transformations, assignment invites students to carry out one more transformation: to adapt the medieval riddle into a different medium (digital text) and narrative genre (interactive fiction).

§12 Students worked with Twine (<https://twinery.org/>), an open-source, browser-based platform that allows users to create hypertext “choose your own adventure”-style interactive fiction or games. In fact, Twine’s popularity among independent game designers has driven a resurgence in the popularity of interactive fiction more broadly. Especially within the queer indie video game community, Twine has a history of works that engage with the medium and its tropes thoughtfully, critically, and playfully (see Anthropy 2012; Ruberg 2018; Ruberg 2020). This popularity is due at least in part to Twine’s low barriers to entry: in particular, the graphical user interface, with its flexible storyboard structure, promotes experimentation and learning by doing. Since Twine games are cheap to produce, and do not require either agile computers or previous coding experience, readers/players are easily encouraged to become creators themselves.

§13 The building aspect of the assignment was scaffolded: it introduced one component at a time, so at each step students could build on prior knowledge (on scaffolding, see Daniel-Gittens and Calandrino 2015). Students’ work began with self-directed learning. After acquainting themselves with Twine through neongrey’s gently amusing Cat Petting Simulator (<https://neongrey.itch.io/pet-that-cat>), students read Adam Hammond’s brief tutorials (Hammond 2022) and reinforced this knowledge by completing a simple story as part of their weekly classwork. As they built, they sought support from the course’s teaching assistant or instructor; Zoom office hours allowed us to share screens and debug code together. The subsequent lecture built on this material: we reinforced what students had learned, added details about HTML and CSS text effects, and showed students how to find additional documentation online. This approach meant that students went into the assignment having practiced the basics of these technologies, but also had the tools to seek out more sophisticated effects if they wished. In our experience, Twine encourages students to respond more creatively and take more successful risks than they do in assignments that are taught with code editors such as Visual Studio Code, even when the assignment is designed to require the same degree of “handcoding.” Some students (including those with no coding experience) made use of variables or Javascript, which were only briefly gestured at in class.

§14 Alongside introducing basic technical skills, this Introduction to DH class, which attracts students from a broad variety of disciplinary backgrounds, aims to familiarize students with concepts from literary, historical, and media studies. For this assignment, rather than explicitly directing students to make a “Twine game” per se,

we introduced students to the concept of “deformance,” and asked them to make a deformance of the riddle poem in Twine. Coined by Lisa Samuels and Jerome McGann (Samuels and McGann 1999), deformance is a form of reading that invades a text and changes its shape as a way of generating critical insight. Using deformance, Samuels and McGann analyze a poem by, for example, reading only its nouns, or only its verbs, or reading it backwards; then they analyze the patterns of form and meaning left on the page.

§15 This interpretive approach builds a transformed text. Mark Sample (2012) takes a step further, moving from deformance—which takes us away from the text and back again—to downright destruction as a mode of learning:

I want to propose a theory and practice of a Deformed Humanities. A humanities born of broken, twisted things. And what is broken and twisted is also beautiful, and a bearer of knowledge. [...] In my vision of the Deformed Humanities, there is little need to go back to the original. [...] Mashups, remixes, fan fiction, they are all made by breaking things, with little regard for preserving the original whole. (Sample 2012)

However, as Anna Wilson notes, these reworkings can function more akin to deformance than destruction: “fanfiction makes its source texts richer for its loving readers. It amplifies allusions and hidden currents, pulls out notes of characterization and subtleties of plot, and spends time with them. After reading fanfiction, I return to texts I love with a new eye—sometimes a more critical one” (2016). But what deformance, transformative works, and “deformed humanities” share is that they all privilege making over analysis. For instance, Sample invites students to understand a video game and communicate their insights not by writing an essay but by building a visualization of their insight:

In my video game studies class, I asked students to design an abstract visualization of a Nintendo Entertainment System (NES) video game, a kind of model that would capture some of the game’s complexity and reveal underlying patterns to the way actions, space, and time unfold in the game. One student “mapped” *Sid Meier’s Pirates!* (1991) onto a piece of driftwood. This “captain’s log,” covered with screenshots and overlaid with axes measuring time and action, evokes the static nature of the game more than words ever can. (Sample 2009)

The process of building is a pedagogical tool: it teaches students to form insights and to express them, not necessarily in academic prose, but in artifacts of their own. As students used CSS and HTML with Twine to mimic scribes’ actions of copying and

illuminating text, they turned a riddle that begins with an ultimate loss of agency on its object's part into what can best be described as interactive stories. As Anastasia Salter (2018) notes:

Interactive stories sit at the intersection of many fields and forms, including games, comics, electronic literature, hypertext, and interactive fiction. An interactive story is any narrative-driven experience in which the reader becomes a user or player by becoming a participant in the work, usually through clicking, choosing, or exploring. (Salter 2018, abstract)

This participatory quality of interactive stories blurs author-reader boundaries. Even when the reader's choices are limited or predetermined, these choices build up to a narrative collaboration between author and reader (Restrepo Acevedo 2018). A genre that presupposes a collaboration between author and reader is particularly appropriate to the literary text under scrutiny; like interactive stories, the Exeter Book riddles—including the riddle of the book's making—demand the reader's or listener's collaboration, as object after object explicitly invites the reader to figure out the object's identity.

2.2 How students responded

§16 In the section that follows, we discuss how our four undergraduate co-authors—Ana Algarvio Alves Wong, Robin Carino, Dionysus Cho, and Kathy Du—approached the assignment and illustrated its possibilities. Though their adaptations took very different forms, they shared a common affective and thematic foundation: they engaged with the riddle's poetics and the materiality of the medieval book by digitally enacting the themes of time and loss.

§17 Broadly speaking, students' approaches fell into two categories. Those in the first category maintain the original wording of the riddle but give visual form to the riddle's thematic concerns and poetic effects. They hew more closely to McGann and Samuels' deformance concept (Samuels and McGann 1999), leaving the user outside the poem; the viewer's only invited action is to navigate from one passage to another—turning pages, as it were. Their use of Twine mimics the form of the codex. By contrast, work in the second category adapts and rewrites the wording of the riddle, taking up the invitation implied by the platform to “gamify” the poem and make the user a participant in the book's story. In these games, a new narrative voice emerges—either a reworking of the original “protagonist” of the riddle, or a wholly new narrator character—which draws the reader into a personal relationship with the book.

2.2.1 Encircled with protective boards: Maintaining the text

§18 In the first category is Ana Algarvio Alves Wong and Dionysus Cho's work. Of our three examples, Cho's is the adaptation that most closely follows the original text. He maintains the original wording of the riddle, but uses text effects such as colour, spacing, and movement to visualize the violent acts suffered by the original animal/future book. For example, when the animal is bereft of life, breath, and hair, the words for what it loses gradually vanish from the screen. When the animal's hide is stretched to turn it into parchment, the words themselves are dragged out. Through these effects, Cho emphasizes not only these losses, but their temporal dimension. Noting "the gradual fading of 'loss' items as [they are] slowly stolen," he deliberately styles that loss to occur not suddenly, but gradually:

The "lost" and "loss" elements I wanted to make permanent—instead of the hover technique we used in class (which is controlled by the user's cursor), the "loss" is an inevitable action—once the "enemy" begins to take action to "rob" or "steal," the subsequent targets will fade forever until they become "lost." This styling draws on the idea of permanence—the transformation that the subject of the riddle takes is gruesome and permanent, but it is part of the process.

In this way, Cho emphasizes loss and its temporality—its occurrence over time; its extension into perpetuity (see Cho's video, **Figure 1**). In Cho's adaptation, the player has a single choice on each screen; exercising that choice reveals more of the riddle's text. Even though Cho renders the words, "Find out what I am called," he deliberately provides no input box or other option for the reader to input their answer. The reader/player remains firmly outside the book. In effect, Cho's transformations allow

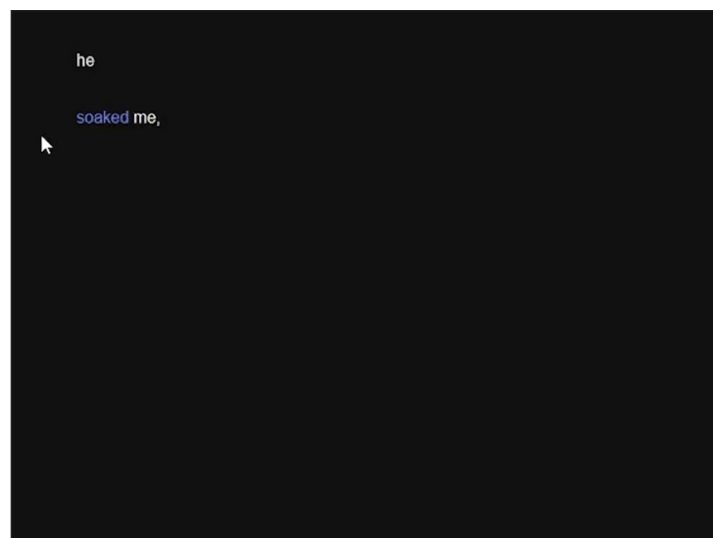


Figure 1: Cho's video.

the poem to write its own creation and transformation, taking the prosopopoeia at the heart of the riddle and giving it digital shape.

§19 By contrast, Alves also uses the riddle's original wording, but reverses its narrative. The game begins with the riddle's final passage and a hand-drawn image of a closed book. Each passage contains a single clickable word. As the player exercises that single choice, a new passage is revealed—a passage that appears earlier in the original poem. As the player moves backwards through the riddle, the book is unmade: the text grows increasingly transparent and illegible, and the image grows increasingly damaged. In contrast to Cho's approach, Alves's adaptation portrays not the making but the unmaking of the book (see Alves's video, **Figure 2**). Alves writes:

[T]his riddle and poem, with the creation of a book as its main theme, was turned into a Twine game that showcases the opposite: the death of the written word. This [...] was inspired by the poem itself, which shows in the first lines that a natural life is taken to create a new one made of knowledge in a continuous circle of material life. [...] The last passage connects with the initial one creating a loop of life, death, and material repurposing in a new medium of knowledge.

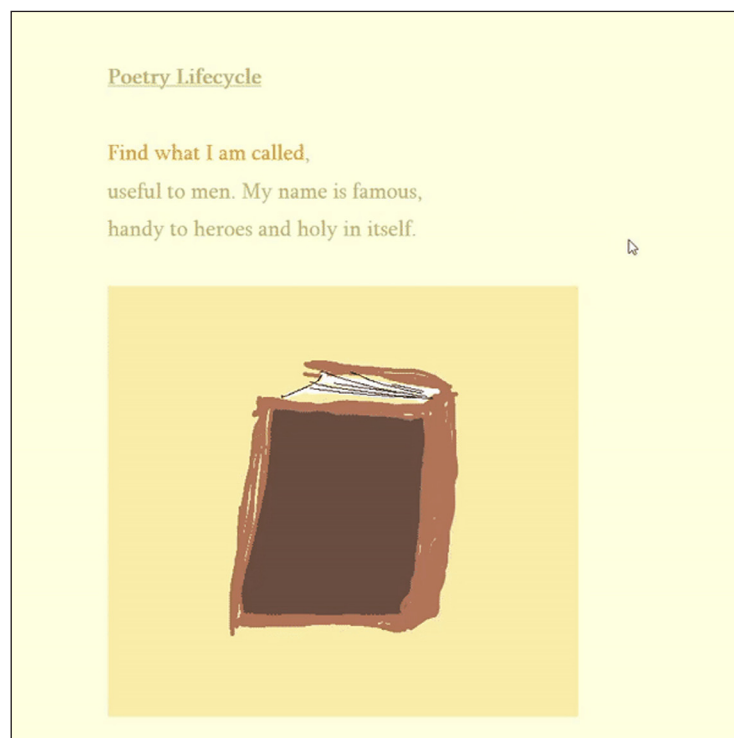


Figure 2: Alves's video.

Alves's approach invites the reader, in Alves's words, "to understand the poem's temporal instability." The approach is especially powerful given that the Exeter Book,

the only manuscript where this poem survives, is itself heavily damaged by its journey through time, rendering some riddles almost illegible or even absent. The placement of damage on Alves's hand-drawn book recalls the scars of the manuscript. Like Cho, Alves lends digital emphasis to time and loss. She does so by reversing the riddle's timeline, showing the book growing increasingly damaged, until it is lost altogether into the grey fog of the darkening background.

2.2.2 The hard edge of a knife: Remaking the text

§20 Unlike Alves and Cho, who reproduce the riddle text, Carino and Du change it substantially, re-scripting the riddle as a conversation between first-person narrator and second-person user. Yet the two Twine games have very different emotional atmospheres.

§21 Du's game opens with a basic social interaction, greeting the user, asking for their name, and giving them a pre-scripted, hyperlinked option to ask for the riddle narrator's name in return. The tone is casual ("oh hello there") and friendly ("dear reader," "what a lovely name"). Conversation continues between the first-person narrator, who claims, "I wasn't always like *this*," and the user, who advances from clue to clue by selecting either hyperlinked riddle words or pre-scripted lines of dialogue. Within this dialogue, the reader's lines ("I'm listening"; "Oh no!"; "That's terrifying!"; "*gasp*") suggest friendliness, even empathy, with the narrator and the narrator's sufferings (see Du's video, **Figure 3**). At the same time as it uses dialogue to

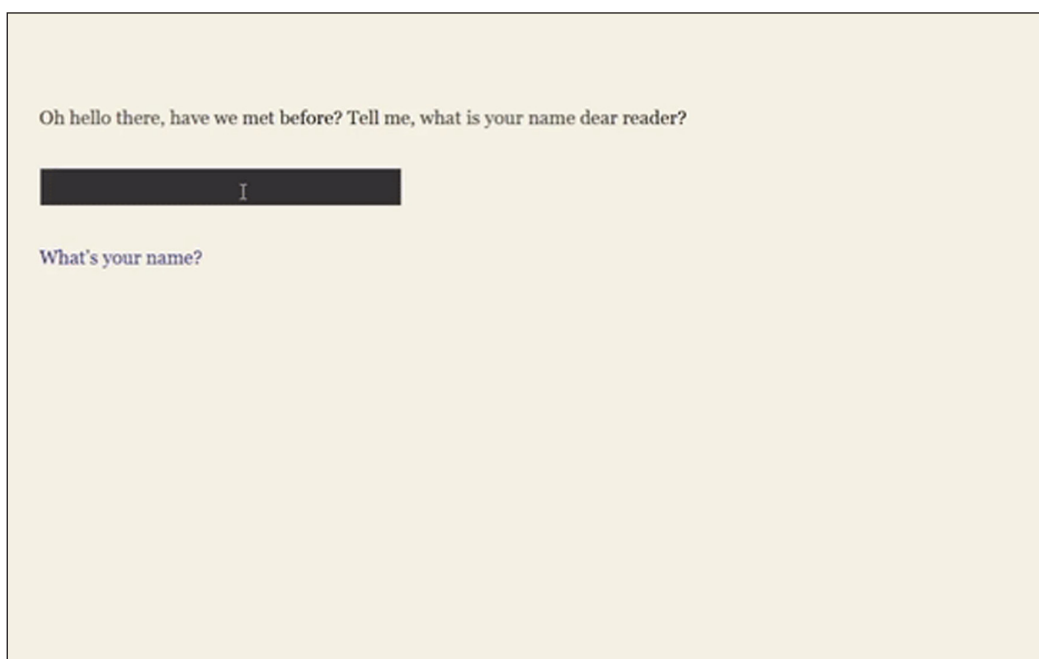


Figure 3: Du's video.

emphasize damage and loss, the digital narrative uses visuals to emphasize time. In Du's words:

The visual changes in the background as well as details that take longer to appear, such as the disappearing line or the water drop splashing on the screen, implore players to sit with the words they are presented.

Towards the end of the riddle, as the narrator's predicament transforms from slaughter to splendour, the reader's dialogue transforms too. The narrative branches. The reader can either remain empathetic and curious ("I am interested in knowing more about your protection") or become bored and snide ("Farewell, I am uninterested in your drivel"). The snide reader is allowed a chance to apologize and return to the narrative; the *committed* snide reader is dragged back to friendliness through the promises of the second half of the riddle ("If the children of men wish to enjoy me [...] they will have more friends [...] their glory and prosperity will increase with favour [...]") and deposited with the empathetic and the apologetic readers at an invitation to guess the object's identity. The reader invariably receives a "not bad!" comment on their guess, before the riddle object reveals itself as "The Holy Bible." The friendly stance of Du's adaptation fulfills the riddle's promise of a community of friends for the book's readers: the dialogue depicts a growing friendship between the reader and the book.

§22 Like Du's, Carino's game is shaped as a conversation and begins by asking for the player's name. But unlike Du's game or the original riddle, Carino changes the narrative's point of view. The riddle tells the story in first person, from the animal's point of view; Carino's game tells the story in the second person, from the human artisan's point of view. In doing so, Carino focuses on the riddle's initial violence and the costs of book creation:

While the original riddle personifies the animal being brutally killed, I use my game to instead view the riddle from the point of view of the animal's "enemy," who the animal claims stole its life. By removing the animal's narrative role, I'm forcing the player to view the riddle from a different angle and confront their own humanity and complacency in the animal's death—a viewpoint that isn't as emphasized in the riddle but present, nonetheless. Notably, the riddle uses a lot of violent imagery as it comes from the animal's perspective. In the Twine passage shown below where the calf is being slaughtered by the player, I use HTML styling to make the text vigorously shake and rumble in order to visually translate the animal's brutal death. The game emphasizes the riddle's inevitable need for the animal's death to create an ornate bible.

In keeping with this focus, the tone and aesthetics are neither friendly nor inviting; they are ominous and uncomfortable. The player is addressed as "the reaper" and

invited to kill a calf. All player choices are immediately revealed as illusory; if the reader says no to the invitation, that no leads right back to killing. Once the player kills the calf, the game forces the player to watch the blood spatter and the image shake; the riddle's poetics of violence are remediated into a digital form and onto the human player's own person. The experience is visually uncomfortable. What is more, no hyperlink to the next page appears until the trembling text, which appears in individual sections after timed delays, reaches its end. Carino uses play time—time without choices, time spent in uncomfortable, powerless contemplation of the animal's death—to emphasize the loss and violence that begin the book's creation. Alongside the riddle, the game meditates on the costs and afterlives of knowledge (see Carino's video, **Figure 4**). Carino transforms the first-person, animal-perspective riddle narrative into a second-person, human-perspective Twine narrative. Through the use of visually uncomfortable digital effects—choices that deliberately go nowhere; shaking, bleeding text that made at least two readers dizzy and motion-sick—Carino remediates the riddle's poetics of violence into a digital form and onto the human player's own person.

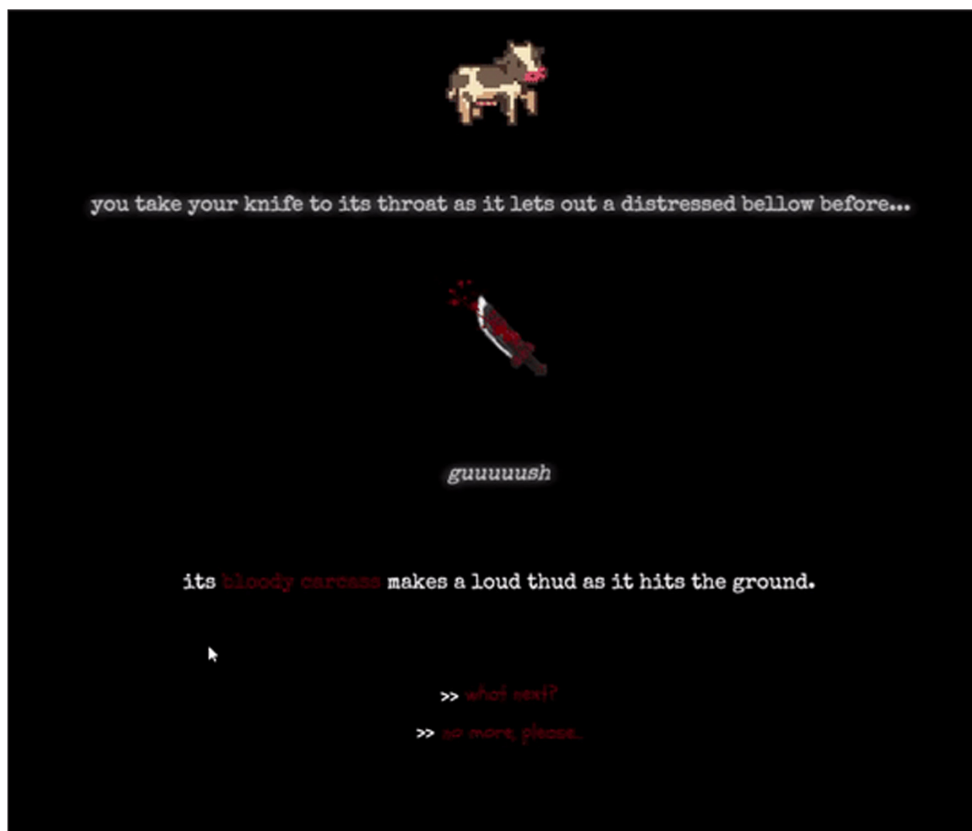


Figure 4: Carino's video.

§23 The assignments exhibited above demonstrate the students' differing approaches to re-mediating the riddle: using markup and styling to turn the poem's imagery into interactive text effects; using conditional logic to reconfigure the narrative in time and space; and using the game format itself to make the reader/player complicit with the riddle's verbal disguises and thematic concerns, its meditation of books' costs, consequences, and afterlives. Students' adaptations gave digital form to the themes of time and loss. Their Twine pieces foregrounded themes resonant in the riddle, and also in our shared historical moment. With our class physically displaced, we lost the undigitizable touch of parchment, and its tactile reminders of the animals it was made from and the people who made use of it. We lost, too, our hold on ordinary academic space and time. Instead, every week, each in our own homes around the world, living with the anxiety, grief, and isolation of the pandemic, we took part in hybrid learning. Some of us met synchronously, in live weekly webinars, in which we "spoke" via text chat and did not see one another's faces; others joined asynchronously, from other time zones, by viewing recordings and by Slack-messaging and emailing colleagues and teaching staff. While some praise pandemic-driven remote learning's "anytime, anywhere" independence from academic time and space, and cite it as an advantage over in-person learning (Alhadreti 2020), many students and instructors have perceived pandemic-time "Zoom learning" as an experience of disorientation, isolation, and loss (Fawaz and Samaha 2021; Chaturvedi, Vishwakarma, and Singh 2021; Cesare Schotzko 2020).

§24 In a matryoshka doll of metatextuality, students took a medieval riddle about making textual objects—the precarity of the first animal life, the endurance of reading communities—and brought it into conversation, across a thousand years, with digital textuality in the historical context of a global pandemic.

§25 That transhistorical conversation is incited by the riddle itself. Riddle 26 (or 24) closes with an invitation to readers or listeners: "find what I am called." The verb in the original Old English, "fricgan," means "to ask, inquire, question, or learn" (*Dictionary of Old English: A to I Online* 2018). It implies an active, purposeful seeking after knowledge, much like the "active participation and learner's responsibility for discovering knowledge that is new to the learner" that characterizes inquiry-based learning (Pedaste et al. 2015). This challenge is a common motif of the Exeter Book riddles: more than half include an exhortation that readers and listeners actively interpret the verbal play and uncover the solution. Sometimes this exhortation is oral: audience members are asked to "saga hwæt ic hatte," say what I (the object) am called. At other times, the challenges are textual: several riddles use text encoding (writing words backwards and/or in the runic alphabet) to disguise their solutions (see Bitterli 2009, 114–32).

§26 The similarities between the rhetoric of riddles and that of IBL point to a deeper parallel: medieval riddles were an instrument of learning, using verbal transformations of the world to invite their readers to inquire and reflect. In early medieval England, the Exeter Book riddles have as their most prominent precursors the poetic or playful riddles of scholars such as Aldhelm and Alcuin. The riddles of Aldhelm and Alcuin were teaching texts (for Aldhelm, see Lendinara 1991 and Stork 1990; for Alcuin, see Fox 2005, 222). Through riddles and puzzles, Aldhelm and Alcuin teach Latin poetic form and meter and transmit an encyclopedic knowledge of nature and history (Howe 1985, Salvador-Bello 2015). Aldhelm and Alcuin also use the riddic form to cultivate wonder (Dailey 2012; Lockhart 2017, 56) and to teach readers how to read and interpret literary and religious texts (Weaver 2019).

§27 As Jessica Lockhart observes, teaching through inquiry is central to riddle poetics. Through poetic transformations of objects and ideas, riddles defamiliarize the everyday and inspire wonder. In turn, wonder “act[s] as a ‘lure’ for engaging the processes of riddle-solving and thereby exposing (and training) the responses of the would-be solver” (Lockhart 2017, 124, paraphrasing Dailey 2012, 468–469). In this process, riddles make visible not only the qualities of the objects they disguise, but the thought process by which riddle-solvers interpret the poetic texts, engage with their enigmas, and create new knowledge. This precise dynamic underlies humanities IBL: from defamiliarization of a subject, to learning about that subject, to learning about the process of learning itself. Karen Manarin uses this dynamic to describe her own pedagogical initiative:

I highlight aspects of student learning often obscured in the research paper and make claims about how learning may work in this context, and perhaps in other contexts. As my students explored a less familiar genre, disciplinary processes of knowledge creation were defamiliarized and made visible. (Manarin 2016, 57)

Manarin proceeds to trace this verbal motif of learning or thoughts “made visible” through the scholarship of teaching and learning, demonstrating the importance in IBL of this phenomenological progression from defamiliarization to discovery and learning and hence to metacognition.

§28 Metacognition is especially emphasized, both in the Exeter Book riddles and in DH pedagogy, through focus on text technologies. As we noted above, in DH pedagogy, the focus on the materiality of knowledge invites us to consider knowledge creation and knowledge transmission as cultural artifacts. Similarly, in the Exeter Book riddles, metacognition emerges especially strongly in riddles about books and writing instruments, so-called “scriptorium riddles” (Shook 1974). As these riddles

meditate on physical books, quills, or letters, they necessarily contemplate knowledge production and knowledge transmission, as both individual and cultural processes. The book- and writing-riddles situate themselves in a cultural zone in which orality and literacy coexist and complicate each other: Katherine O'Brien O'Keeffe observes "the use of mouthless speakers, dead lifegivers, clipped pinions—all metaphors of loss" as a reflection of the gap between speech and writing, the hybrid encounter zone between orality and literacy (O'Keeffe 1990, 54). Meanwhile, Peter Ramey argues that the book and writing riddles represent "writing technology, through the lens of an oral poetics, as a material form of speech" (Ramey 2013). Turning from technology to metacognition, Dietrich Bitterli discusses the riddles' metacognitive and metatextual play, their invitation "to think about the very act of riddle-making and riddle-solving, of writing and reading" (Bitterli 2009, Chapter 7, "Silent Speech," 135–150). (For other reflections on the materiality and metatextuality of the riddles, see Shook 1974, Lerer 1991, Bitterli 2009, Symons 2017, and Weaver 2019.)

§29 Jessica J. Lockhart sees another one of the writing technology riddles, the Bookmoth riddle, in its meditation on books, reading, and memory, as "a model of reception for the [riddle] tradition as a whole" (Lockhart 2017, 133–135). As we, in our turn, focus on text technologies and knowledge productions, our adaptations of the riddle engage in the kinds of reading procedures that the riddles suggest: transformation, defamiliarization, and disguise; what Lockhart calls "affective attention," a close reading absorbed in the details and their significance; an examination of writing technology as a pathway to metacognition (Lockhart 2017, 60, 65, 77). Our adaptations are, in Bruno Latour and Adam Lowe's terms, re-performances (Latour and Lowe 2011). We engage with the poem through transformative reading procedures that the poem itself encodes. The students' work illustrates Sarah Whitcomb Laiola's argument in favor of teaching e-literature through remediation and critical making:

Engaging the text in this way allows users not only to physically experience the kinetics and aesthetics of the augmented reality text, but also to engage the materiality and interaction poetics at the heart of the piece—precisely those poetics that are lost when the only available access to a text is a recording to be consumed. (Laiola 2020)

Laiola is writing about making e-literature as a way of studying and preserving e-literature. Our project is a little different: we made the riddle into e-literature as a way of participating in riddle poetics, a way of taking up the riddle's closing invitation to inquire into its naming and its nature. By creating their adaptations, students experience not a medieval book, but a medieval poetics of learning within the riddle genre.

3 Conclusion

§30 Asked to navigate themes of materiality in a world that had suddenly become digital, students used games to draw out Riddle 26's concern with loss and time—a concern just as present in our own historical moment, our own learning context, as we confronted pandemic-driven disconnections: from our families, our friends, and our colleagues; from our library; from ordinary academic time. Twine is an easy tool to learn with: its interface and syntax are simple, its online documentation ample; students can incorporate encoding and visual effects according to their comfort level and creative goals. In 2021, Henderson taught the course and set the same assignment; this time, some students—those less constrained by COVID-19 considerations—were able to visit medieval manuscripts at the Thomas Fisher Rare Books Library. For these students, the assignment became a supplement rather than a replacement, reinforcing what they learned by touch and reflecting that learning in playful digital artifacts. In future offerings of the course, Bolinteanu plans to continue using this assignment in concert with physical library visits and examinations of digitized manuscripts in GLAM repositories, especially the digitized Exeter Book in which this riddle survives. The three manifestations of medieval manuscripts—parchment, digitized images, and born-digital interactive texts—will continue to invite students into a thousand-year-old conversation about the lives of books across history and medium.

Supplementary material

<https://doi.org/10.5281/zenodo.6784403>

Competing interests

The authors have no competing interests to declare.

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