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THROUGH THE SCHOLASTIC LOOKING GLASS: THE PEDAGOGICAL POTENTIAL OF
TEXTUAL DEFORMATION FOR POETIC STUDIES

By

TAYLOR DIETRICH

A master's thesis submitted to the Graduate Faculty in Liberal Studies in partial fulfillment of the requirements for the degree of Master of Arts, The City University of New York

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Poetic Studies

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This manuscript has been read and accepted for the Graduate Faculty in Liberal Studies in
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ABSTRACT

Through the Scholastic Looking Glass: The Pedagogical Potential of Textual Deformation for Poetic Studies

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This thesis examines the pedagogical usefulness of the antithetical reading model of textual deformation for the study of poetic works. No formal pedagogical plan exists for the education of students in poetic studies through textual deformation. This thesis does not go as far as structuring one in its entirety. Rather, it surveys the digital humanities landscape, showing a collective affinity within a number of textual studies approaches that advocate for textual deformation as useful for interrogating texts, and aligns the overlapping symmetries within those working methodologies with pedagogical imperatives like those embedded in Ryan Cordell's Kaleidoscopic Pedagogy Laboratory—the intent being an uncommon focus on pedagogy within the digital humanities umbrella, and formal linking of disparate yet complementary methodologies across the disciplines.

In their paper “Deformation and Interpretation,” Lisa Samuels and Jerome McGann—perhaps as an analgesic for traditionalists—argue that *all* interpretation is a deformative act. Through their analysis of antithetical reading models, they come to the conclusion that meaning

is important not as “explanation but as residue.” The authors begin with an analysis of a deformative reading approach inspired by a prose fragment by Emily Dickinson:

Did you ever read one of her Poems backward, because the plunge from the front
overtaken you? I sometimes (often have, many times) have—a Something overtakes the
Mind—

--Emily Dickinson, Prose Fragment 30

Reading a poem backward engenders an intellectual reorientation, one that can be necessary for certain types of analysis. Furthermore, they explain an implicit aspect of the musing in the Dickinson prose fragment that the “rhetorical power of a work of art will ultimately work against itself, dulling our sense of its own freshness.” Through a number of in-depth case studies, this thesis takes this line of thought forward, claiming that all textual deformation is pedagogical. Through reading a poem last line first, the intelligible becomes the consequence of a generative act on the part of the reader, the student of the poetic work. From this vantage, the question the student is asking is no longer, “what does the poem mean?” but “how do we release or expose the poem’s possibilities of meaning?” That being said, all interpretation comes packaged with an intellectual or theoretical agenda. What deliberate textual deformation does is positions the student as a contributor to that agenda in a pedagogically productive fashion.

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“Our minds are still moving, and backward as well as forward; the nearest we get to truth at any given moment is perhaps, only an idea—a dash of truth somewhat flavouring the indeterminate substance of our minds.”

--Laura Riding, “Poetry and Pedagogy”

“There is incumbent upon the educator the duty of instituting: a much more intelligent, and consequently, more difficult, kind of planning.... The planning must be flexible enough to permit free play for individuality of experience and yet firm enough to give direction towards continuous development...”

--John Dewey, “Experience & Education”

“With nothing can one approach a work of art so little as with critical words: they always come down to more or less happy misunderstandings.”

--Rainer Maria Rilke, “Letters to a Young Poet”

“Tell all the truth, but tell it slant.”

--Emily Dickinson

INTRODUCTION

Observed before the widespread introduction of computer technology into learning environments, John Dewey's insight that all miseducative¹ experience has the effect of arresting or distorting the growth of further experience, anchors affective education in the subjective experience of the individual.² This focus on the inherent and essential freedom of the learner for self-referential education³ becomes a counterpoint in the rhetoric of technological utopianism, a movement that assumes technology's position as society's inevitable savior, and the academy's growing infatuation with digital tools for teaching and scholarship. As Randy Bass makes clear in "Engines of Inquiry," the dominant focus in discussions surrounding the possibility of the technological sublime largely leaves out inquiry into the types of learning and research that can be enhanced by digital technologies. It's taken for granted that computers are customarily thought of as machines for increasing productivity, speeding up problem solving, and finding answers, what Stuart Malthrop calls the "game of perfect information."⁴ But does such a game, where information disambiguation is prioritized above all else, guarantee technology's position as a tool for truly educative experiences? How can educators use technology to self-consciously avoid the types of miseducative experiences outlined by John Dewey?

¹ Miseducation, as John Dewey explains, is any experience that has the "effect of arresting or distorting the growth of further experience." (John Dewey, "Experience and Education," (New York NY: Touchstone, 1983).

² Randy Bass, "Engines of Inquiry: Teaching, Technology, and Learner-Centered Approaches to Culture and History," (Washington, DC: American Crossroads Project, 2003).

³ A methodology that focuses on the growth of the individual through self-reflective engagement with their own learning.

⁴ Bass, "Engines of Inquiry," p. 1.

One approach, this paper argues, is by utilizing digital tools for critical engagement with imaginative works through deformative interventions, a reading heuristic that emboldens students by inviting them to deform—disassemble, blow up, break, or reconstitute—the content of a poetic work as a means to a fuller understanding. Digital humanities practitioners use an enormous array of tools in their research. The variety, quality, and class of these tools varies, as does their intended uses. However, they are linked by their common methodological purpose: to ask new and different questions. What questions can and should be asked through the application of digital tools and methods that can't be asked more appropriately through a different approach? And, more specifically, by what means can technology be used in the service of a more individualized approach to learner-centered knowledge making?

Although sub-movements within the digital humanities field adopt counter approaches, information disambiguation remains the dominant paradigm. Textual deformation is an example⁵ of such a counter approach and leans heavily on its playful attitude to scholarly work. It is this critical play that informs the pedagogical methodology advocated in this paper. And it is the intention of this paper to suggest the potential for deformation to situate students in a *generative* relationship to poetic primary sources. As Bass notes, successful learning is often about the assimilation of intricate often disparate ideas and information, about “indirection, ambiguity, complexity, and multiplicity.”⁶ Because of their inherent multi-vocality, poetic works provide a unique and appropriate genre of study for deformative interpretation. Through active engagement, and the play provided by tools typically used for text manipulation, students can

⁵ For another excellent example of a counter movement to this overarching bent within the digital humanities, see Johanna Drucker's excellent work on “Speculative Computing.”

⁶ “...the discussion must recognize something that educators and scholars often take for granted: teaching and learning is not about perfect information, but about *imperfect* information.” Bass, “Engines of Inquiry,” 2.

enliven works of poetry, finding new and interesting ways not only to understand the particular works in active analysis, but also to understand anew the contours of the poetic form. In this pedagogical approach, students are creating for themselves the educational experiences more traditionally associated with normative humanities teaching methods, such as expository writing and classroom lectures. Furthermore, it is through this process that readers discover themselves in active engagement with works no longer static. Even as they orient themselves to familiar and unfamiliar works, the student becomes an active participant in the knowledge-creation process. This approach shares qualities with constructivist student-centered learning and knowledge-making practices. Additionally, it takes inspiration from the educational tenants put into practice by Ryan Cordell in his Kaleidoscopic Pedagogy Laboratory, an innovative tactic for reinvigorating historical 19th-century American Literature.⁷

Throughout this thesis, I'll be using the term "student" to denote the pedagogical subject, as this is to my mind the most universal term available for the varying contexts in discussion. In some cases, student may denote a scholarly vantage, in other instances, a readerly one. Ultimately, my argument depends on a single, unified idea: that all students engaged in critical, digitally enabled deformative interventions are actively and productively engaged in their own learning. For this thesis, I will be drawing on, and making light of, a number of pedagogical frameworks such as those created by Ryan Cordell, Benjamin J. Doyle, and Elizabeth Hopwood. On the whole, and as Stephen Brier points out in his essay, "Where's the Pedagogy? The Role of Teaching and Learning in the Digital Humanities," the rush toward the technological new has tended to concentrate on the academic research and publication aspects of the digital humanities

⁷ Ryan Cordell, Benjamin J. Doyle, and Elizabeth Hopwood. "Kaleidoscopic Pedagogy in the Classroom Laboratory." *Teaching with Digital Humanities: Tools and Methods for Nineteenth-Century American Literature*, (University of Illinois Press, 2018).

while also minimizing and often obscuring the larger implications of DH for how we teach. No formal pedagogical plan exists for the education of students in poetic studies through textual deformance. This thesis does not go as far as structuring one in its entirety. Rather it surveys the digital humanities landscape, showing a collective affinity within a number of textual studies approaches that advocate for textual deformance as useful for interrogating texts, and aligns the overlapping symmetries within those working methodologies with pedagogical imperatives like those embedded in the kaleidoscopic pedagogy laboratory—the intent being an uncommon focus on pedagogy within the digital humanities umbrella, and formal linking of disparate yet complementary methodologies across the disciplines.

ALL INTERPRETATION IS DEFORMATIVE

In their paper “Deformance and Interpretation,” Jerome McGann and Lisa Samuels—perhaps as an analgesic for traditionalists—argue that *all* interpretation is a deformative act. Text deformance has been a focus of a number of high-profile scholars in the DH field for decades. Jerome McGann uses the term “deformative criticism” to describe these working practices. Johanna Drucker and Bethany Nowviskie favor “speculative computing.” And Stephen Ramsay coined the term “algorithmic criticism.” Although there are important, non-trivial variations in approach advocated by each of these various concepts, they are encapsulated by a methodology of reading that is anti-positivistic, and embracing of the humanistic values of ambiguity, ambivalence, and play.⁸ Additionally, all of these examples involve conscious, intentional, interventionist manipulation of the text into different forms.

⁸ Rachel Sagner Buurma and Matthew K. Gold, “Contemporary Proposals about Reading in the Digital Age.” *A Companion to Literary Theory*, (John Wiley & Sons Ltd, 2018), 146.

Stephen Ramsay emphasizes text transformations continuities with earlier, non-computational literary methods, and illuminates how the narrowing constraints of the digital tools computational logic is compatible with an approach to learning that seeks to enhance knowledge creation outside of the rationalized, positivistic assumptions of the scientific method. Although Johanna Drucker argues that speculative computing runs counter to the working methodologies within DH and should not be grouped within its umbrella, she follows a similar line of thinking about textual transformation in her work on digital aesthetics at the University of Virginia's SpecLab. She argues that speculative computing can create imaginary solutions and generative possibilities for meaning, while simultaneously denying "the positivist underpinnings of the Anglo-analytic mode of epistemological inquiry." Drucker shows how her approach is situated within a similar epistemological frame as the Situationist International, and uses the notion of "quantum intervention," among many others, which is based on the insistence that any act of reading, looking, or viewing is by definition a production of a text/image/or work, to hammer home the basic idea, yet somewhat counterintuitive notion, that all reading is changing the text in some way.

However, the argument that all interpretation is already deformative is an idea put forward most forcefully, and perhaps most cogently, by McGann and Samuels. This notion, although somewhat sensational on the surface, upon closer examination, yields to the authors' assertions. The porous relationship between reader, author, and text has been a preoccupation for a number of important writers and theorists, including Jorge Luis Borges.⁹ However, the complex relationship between these essential aspects of the reading calculus is not the primary

focus of McGann and Samuels. Instead, the driving force behind their argument is the unique potential for meaning creation that deformation makes available. And, this potential is reliant on the fact that deformation is less a departure from normative interpretative acts than it is an explicit continuation of those hermeneutic operations. The crux of this argument is that deformation is in keeping with the principles of conventional interpretation, in that all interpretation reformulates the sources under discussion in the act of interpreting them. As Stephen Ramsay has put it, “any reading of a text that is not a recapitulation of that text relies on a heuristic of radical transformation,” in which the critic has “paraphrased, elaborated, selected, truncated, and transduced”¹⁰

The usual object of interpretation is “meaning,” or some established set of ideas or explanations that can be bracketed into a thematic super-structure. These types of traditional meaning systems can be viewed from a number of vantages: treated as if they are “resident in the work,” or evoked through “reader-response,” or “deconstructable through a process that would reinstall a structure of intelligibility at a higher, more critical level.”¹¹ The authors argue that this type of traditional concept-based approach to interpretation is itself best understood as a type of performative and rhetorical operation, a performance or deformation.

Critical and interpretive limits are thus regularly established (and for the most part quite unselfconsciously) at the Masoertic wall of the physical artifact, whose

¹⁰ Sagna Buurma and Gold, “Contemporary Proposals,” 146.

¹¹ McGann, Jerome and Lisa Samuels. “Deformance and Interpretation”. Accessed September 17, 2019, 26. <http://www.jstor.org/stable/20057521>

stability and integrity is taken as inviolable. From an interpretive point of view, this assumption brackets off from attention crucial features of imaginative works, features wherein the elemental forms of meaning are built and elaborated. These forms are so basic and conventionally governed—they are alphabetical and diacritical; they are the rules of character formation, character arrangement, and textual space, as well as for the structural forms of words, phrases, and higher morphemic and phonemic units—that readers tend to treat them as pre-interpretive and pre-critical.¹²

Keeping this in mind, it is not meaning that is primary. Instead it is the questions that deformative acts bring to the surface that are of the utmost importance. McGann and Samuels demonstrate that through the act of making a new poem out of the original, of acting upon the source text, the student is participating in the meaning-making capacity of the reading experience. Importantly, they go on to assert that meaning in imaginative work is a secondary phenomenon, a kind of meta-data, what they consider to be the excess that is left over after the process of deformation.¹³ Through their analysis of a variety of antithetical reading models, they come to the conclusion that meaning is important not as “explanation but as residue.” It is the remainder resulting from reader engagement, what is left after the experience that constitutes the meaning.¹⁴ Furthermore, deformative acts have the potential to offer the student an additional,

¹² McGann and Samuels, “Deformance and Interpretation,” 36.

¹³ “Meaning” is important not as explanation but as residue. It is what is left behind after the experiment has been run. We develop it not to explain the poem but to judge the effectiveness of the experiment we undertook. (McGann and Samuels, “Deformance and Interpretation,” 48).

¹⁴ “The usual object of interpretation is ‘meaning,’ or some set of ideas that can be cast in thematic form. These meanings are sought in different ways: as though resident “in” the work, or evoked through “reader-response,” or deconstructable through a process that would reinstall a

important, and practical way to uncover this residue. For example, the antithetical reading model termed “backward reading” is a critical move that enters these “unvisited precincts” of poetic works, and acts as a paradigm model of a key critical operation within the heuristic of textual deformation. The authors begin their analysis with an examination of this deformative reading approach inspired by a prose fragment by Emily Dickinson:

Did you ever read one of her Poems backward, because the plunge from the front
overtaken you? I sometimes (often have, many times) have—a Something overtakes the
Mind—¹⁵

Reading a poem backward, they argue, engenders an intellectual reorientation, one that can be necessary for certain types of analysis. Importantly, and what characterizes deformative interventions as unique from more normative interpretative deformations, i.e. summary or abstraction, is the active engagement on the part of the student in the explicit, critical rearrangement of the source itself. From this vantage, it’s clear that reading backward is both a deformative and performative program.

Although it’s assumed that when Dickinson writes of reading a poem backwards, she is thinking of recitation, either silent or as oration, it’s the articulation at all which is the crux. And, in this reality, we see that this is inclusive of all conscious, critical reading. She proposes that an

structure of intelligibility at a higher, more critical level.” (McGann and Samuels, “Deformance and Interpretation,” 16).

¹⁵ Emily Dickinson, Prose Fragment 30.

intellectual “overtaking” may come if one recites a poem from end to beginning, last line to first line, or last word to first word, or both. Furthermore, an implicit aspect of the musing in the Dickinson prose fragment, is that the rhetorical power of an imaginative work will ultimately work against itself, dulling our sense of its immediate and stochastic freshness. By altering how a student engages the imaginative work a “Something overtakes the Mind.” I would argue that it is not the poem that is working against itself, but instead, limitations on the part of the cognizing student, or perhaps the meaning-making apparatus itself, that is to blame for this unfortunate overfamiliarity. However, that is not the focus of this thesis.

Importantly, Dickinson’s approach is concerned not with some buried or latent intelligibility, the type of intelligibility that a DH practitioner might go after through the use of large corpus text analysis, but with the myriad possibilities already inherent in the poetic form. Through reading a poem last line first, the intelligible becomes the consequence of a creative action on the part of the student of the poetic work. The act of reading, in this case, becomes an explicit deformative act. From this vantage, the question the student is asking is no longer, “what does the poem mean?” but “how do we release or expose the poem’s possibilities of meaning?” This approach to reading is an active reconstituting of the aesthetic form of the poetic work, as if a “disordering of one’s senses of the work would make us *dwellers in possibility*.” Because there’s an argument to be made that acts of interpretive deformation are exemplified most directly through non-normative readings of established cultural artifacts or canonical works, Emily Dickinson was making a self-aware meta-argument for the deformation of her own work. To understand her unique thinking, and by way of an initial application of the special pedagogical approach advocated by this paper, I think it’s important to put the methodology advocated by the Dickinsonian prose fragment into practice:

Read forward, Dickinson's poem "The Moon is distant from the Sea" is as follows:

The Moon is distant from the Sea –

And yet, with Amber Hands –

She leads Him – docile as a Boy –

Along appointed Sands –

He never misses a Degree –

Obedient to Her eye –

He comes just so far – toward the Town –

Just so far – goes away –

Oh, Signor, Thine, the Amber Hand –

And mine – the distant Sea –

Obedient to the least command

Thine eye impose on me –

Read backward:

Thine eye impose on me –

Obedient to the least command

And mine – the distant Sea –

Oh, Signor, Thine, the Amber Hand –

Just so far – goes away –

He comes just so far – toward the Town –

Obedient to Her eye –

He never misses a Degree –

Along appointed Sands –

She leads Him – docile as a Boy –

And yet, with Amber Hands –

The Moon is distant from the Sea –

It's important, first off, to point out that the poem yields to this deformative act in meaningful ways. Although a close reading of the poem in both its normative and backward readings returns many interesting insights, the point that backward reading provides a new, invigorating hermeneutic that is pedagogically useful can be made clear by comparing only a few lines.

Read forward:

The Moon is distant from the Sea—

And yet, with Amber Hands—

She leads Him—docile as a Boy—

Along appointed Sands—

In this normative reading, although she (the sea) leads him (the moon) he is distant. It is the distance that is the focal point. Distance that prevails, above all. The moon has Amber hands.

Read backward:

Along appointed Sands—

She leads Him—docile as a Boy—

And yet, with Amber Hands—

The Moon is distant from the Sea—

This is not a true backward reading, which would mean reading every word in reverse order. Rather, it's a backward reading of lines in a poem. That's a different proposition because it maintains the meter of the original line, even if the context is backward. In the non-normative, backward reading, she (the sea) leads him *although* he is distant. It is the overcoming of distance, the effort at closeness that these lines articulate. And it is the Sea now with amber hands. From this "discovered syntax of backwardness" the combination of readings is an instantiation of multiple meanings. And these meanings are particular to the poetic form. As Samuels and McCann make clear, all forms of *poesies* are "threatened with prose possession." Reading backward short circuits the cognitive deficit of prose transparency and reinstalls the text—any text, prose or verse—as a performative event, a made thing."¹⁶

¹⁶ McGann and Samuels, "Deformance and Interpretation," 4.

Although the primary source text holds both readings, and many more,¹⁷ the deformation reminds and, in some cases, teaches the student to read the poem anew. Poetical works, even as static objects of study regularly operate as multivocal agents of meaning. As already mentioned, the deformative act itself is a performance of sorts, and indeed, imaginative works like poetry have an elective affinity with performance. Poetry, regardless of its judged putative quality¹⁸ is unique from prose on the surface in this respect, is organized as rhetoric and *poiesis* rather than as exposition and information-transmission and is therefore *prima facie* open to deformative moves. That being said, deformation, once exerted on prose itself, engenders a similar result and *poiesis* within the resulting text. It's important to point out here that deformation does not equal *poiesis*. To deform a poem is not the same as composing a poem. The student learns this through a constructive engagement with the work. It is not taught by an instructor. It is discovered by the reader and absorbed by the student. It is this multivocality within *poiesis* that makes text deformation such a uniquely useful pedagogical approach to its study. It is also this multivocality that comes into friction as poetic works fall into familiarity and, according to Dickinson, lose their vitality.

Many important poets (Shelly among them) have put forth the notion that poems lose their "vital force" when they succumb to familiarization. Contrasting theories concerning the way in which aesthetic experience is muted or otherwise dulled, in this case by over

¹⁷ "One might try reading only the verbs of poems, which helps to isolate the energy or dormancy of the poem's action. One might also try reading only nouns, in order to throw into relief whether they are mostly abstract or concrete, whether the poem is or is not noun-heavy." McGann and Samuels, "Deformance and Interpretation," 10.

¹⁸ "Good, bad, mediocre poems, by whatever measure or judgement: in so far as they are poetically made, they share this special kind of intelligibility. Once a textual *poiesis* is undertaken, then, language is set beyond the order of conceptual and expository categories." McGann and Samuels, "Deformance and Interpretation," 40.

familiarization, have been addressed by other thinkers as well. Wolfgang Schivelbusch in his essay “The Great Railway Journey” focused on both the inherent loss of aesthetic and experiential authenticity in human beings transported over long distances as passengers on steam engines, as well as the spatial-temporal plurality that results from the detachment of remote regions from their original isolation. The technological development of the steam engine in the eighteenth century exemplified the gradual process of industry’s emancipation from nature.¹⁹ Schivelbusch investigates the writings of Constantin Pecqueur, zeroing in on his idea of the “map of the imagination,” a whimsical description of an early virtual map.²⁰ This notion is an internal inversion of Borges’s story about a map whose size is equal to the land it is meant to represent.²¹ The reduction of transport distances (which was actually the reduction of time it took to travel longer distances, and, importantly, the *perception* of the temporal-spatial experience) seemed to create a new, reduced map. However, it did not actually alter the size of the space between the points of departure and arrival. The trip was the same and included everything experienced by the passenger, and more. It’s important to note that this was the case of the old mode of transport as well. What was experienced as being annihilated was actually the space-time continuum that characterized the old transport technology, and therefore the mediated

¹⁹ “Motion was no longer dependent on the conditions of natural space, but on a mechanical power that created its own new spatiality.” Wolfgang Schivelbusch, *The Railway Journey: the Industrialization and Perception of Time and Space*. (Berkeley: University of California Press, 1986,) 10.

²⁰ “...the diminished transport geography of France contained the true geography of France within it in a condensed for: ‘Each bit of terrain, each field on this surface would still remain intact; so would every house in a village, the village itself, or the town; every territory with its village in the center would remain a province; on the map of the imagination all of these would finally be reproduced and reduced down to the infinitely small!’ Schivelbusch, *The Railway Journey*, 35.

²¹ See Borges’ short story "On Exactitude in Science" (“Del rigor en la ciencia”).

consciousness in flux. The familiarity in this case had become altered by the mediating aspects of the locomotive.²²

Schivelbusch uses the term “aura” to describe the phenomena of an authentic aesthetic experience. The term aura was coined by Walter Benjamin in his essay “Art in the Age of Mechanical Reproduction,” to define the unique, aesthetic qualities of works of art in their original contexts. This spatial-temporal singularity is essential, according to Benjamin, for an authentic experience of beauty, and that includes the experience of place. In the context of travel, it is the goods—brought to market over long distances, removed from the place of manufacture, birth, or maturation, and plopped down incongruously in a foreign place—that lose through the journey the aura that gave them their true essence. It is the same for the passenger’s aesthetic experience of landscape; for the destination, removed from its proper place in isolation has been uprooted from its authentic mode of existence.

Addressing the impact of the camera on the experience of art, as well as the moving image, Benjamin also focused on the effect that the act of reproduction has on the experience of the authentic work of art. It is, ultimately, the unique, singular time and place in which the work of art was created that provides the context necessary for it to achieve aura.²³ Just as the experience of travel in 19th century Britain, as it related to the older space-time continuum cognizable by the senses, was diminished by the reduction of travel-time and the disconnect from the spatiality of embeddedness in the physical landscape, so too is the viewer’s experience of the work of art diminished by removal from and connection with its specific spatiotemporal context.

²² Schivelbusch, *The Railway Journey*, 36.

²³ “Even the most perfect reproduction of a work of art is lacking in one element: its presence in time and space, its unique existence at the place where it happens to be.” Walter Benjamin, *The Work of Art in the Age of Mechanical Reproduction*. (London: Penguin Books, 2008,) Section II.

By contrast, and in direct opposition to the notion of aura, it is not the loss of authenticity that results from a mediated disruption of context as described by the Dickinsonian prose fragment, and its alternative reading method, but a re-enlivening of authenticity.

In light of this, Dickinson's approach is considered by McGann and Samuels to be a "proto-modernist strategy of estrangement." However, Dickinson's strategy prioritizes the performativity over the intellectual, situating theory in subordinate relation to practice. This brand of conceptual "reclamation of imaginative works" is fundamental to what and how we learn and teach in our schools. Uncritical works do not "move against the work's original grain."²⁴ That being said, all interpretations come packaged with an intellectual or theoretical agenda. Stephen Ramsay in his monograph "Reading Machines: Toward an Algorithmic Criticism," argues that any and all reading of a text that is not a replica, or at a highly accurate recapitulation of the original text, relies on a "heuristic of radical transformation." Essentially, that all readings are deformations.

The critic who endeavors to put forth a "reading" puts forth not the text, but a new text in which the data has been paraphrased elaborated, selected, truncated, and transduced... In every case what is being read is not the "original" text, but a text transformed and transduced into an alternative vision, in which, as Wittgenstein put it, we "see an aspect" that further enables discussion and debate.²⁵

²⁴ Samuels and McGann, "Deformance and Interpretation," 39.

²⁵ Stephen Ramsay, *Reading Machines: toward an Algorithmic Criticism*. (Urbana, IL: University Illinois Press, 2012,) 16.

He goes on to point out that deformance is more or less an explicit act that mirrors what happens any time a text is interpreted. These types of deformations can include basic scholarly ephemera and artifacts such as abstracts, scholarly editions, or guides. With deformance, the hermeneutics of “what is” becomes enmeshed with the hermeneutics of “how to.”²⁶ As we will see, importantly, for our understanding concerning the implications of digital tools as mediators of student deformative interventions, additionally, the hermeneutic of “deformance” provides a useful critical framework for an examination of conventional criticism as activity dependent upon the notions of procedure and constraint. It is from this vantage that computationally enacted textual transformations, what I’m calling textual deformations, “reveal themselves most clearly as self-consciously extreme forms of those hermeneutical procedures found in all interpretative acts...this reveals the essential deformative nature of critical reading.”²⁷

All of this context is to show that indeed all interpretation, even those interpretations with the highest aspirations of scientific objectivity, which, as an interesting aside, Ramsay doesn’t think is possible, are versions of text deformation, often packaged with a specific argumentative vantage or agenda. What deliberate textual deformation does is positions the student as a contributor to that agenda in a pedagogically productive fashion.

ALL DEFORMANCE IS PEDOGOGICAL

Bass summarizes Diana Laurillard from her monograph *Rethinking University Teaching: A Framework for the Effective Use of Information Technology* in positing that good teaching must be “discursive, adaptive, interactive, reflective, and most critically, intentional.”²⁸ It is the desire

²⁶ McGann and Samuels, “Deformance and Interpretation,” 63.

²⁷ Ibid, xi.

²⁸ Bass, “Engines of Inquiry,” 3.

to heighten student engagement that should motivate an educator's agenda. Students should move beyond what John McClymer and Lucia Knoles call "coping mechanisms." Coping mechanisms, Bass explains, are the set of "acritical techniques" that students develop over time that hinder their ability to engage in acts of "genuine learning." If a student copes with a poem, instead of confidently engaging it, the student "systematically ignores those elements that seem confusing or contradictory." Poetry is written deliberately to hold multiple meanings. In order to fully engage a poetic work, students must construct personal interpretations by discovering those elements that appear most ambiguous and puzzling. Coping, in this case, is directly antithetical to student engagement, and to learning. Through coping, the act of reading becomes miseducative. When this happens, students no longer possess the necessary inquiry to drive the learning process. Bass argues that information technologies can play a key role "in the engines of inquiry that drive learning."

Although Bass's paper focuses on investigations of historical records in simulated archival environments, and choreography of expert information, his examination of constructivist pedagogies positions the theoretical paradigm he describes in such a way that the salient points he brings to light are applicable to the wider realm of intellectual inquiry. He deems this pedagogical approach the "novice in the archive." The amateur historian in the archive is provided, through *cognitive apprenticeships*,²⁹ experiential access to expert knowledge.

²⁹ "One powerful model for structuring the transfer of intermediate processes is what Allan Collins, John Seely Brown and Ann Holum call 'Cognitive Apprenticeship.'" "In apprenticeship," they explain, "learners can see the process of work." Traditionally, apprenticeship applies to physical, tangible activity, but not to schooling. In apprenticeship, the processes of the activity are visible. In schooling, the processes of thinking are often invisible to both the students and the teacher. Cognitive apprenticeship is a model of instruction that works to make thinking visible." Bass, "Engines of Inquiry," 6.

The expanded space of interactive media enables the visualization and manipulation of objects, as well as the capacity to experiment with textual arrangements, organizations, and arguments. What is potentially “distributed” in interactive media...is the ability to produce and reproduce knowledge.³⁰

Knowledge acquisition of this kind shares qualities with design³¹ processes and cognitive apprenticeships are facilitated by learner engagement in “designing knowledge rather than interpreting or encoding it.” If applied to the use of information technologies as pedagogical tools, digital tools need to be adaptable enough for users to create their own criteria and constraints, and, if necessary, to repurpose the tool for their own needs. The student, in a sense, “performs” the learning process through deformation exercises that reframe their hermeneutic relation to the text. It is incumbent upon the student to consciously select the “deformative” moves, and to decide on the meaning resulting these patterns and discrepancies, a point I will illustrate later in this paper when I put this theory into practice using a number of case studies based on Samuels and McGann’s four primary modes of deformation (reordering, isolating, altering and adding).

And, as mentioned above, McGann and Samuels argue that imaginative works have an affinity with performance making them particularly open to these sorts of pedagogical

³⁰ Ibid, 6.

³¹ that design ... “raises questions about choice, selection, arrangement, and narrative interpretation.” Bass, “Engines of Inquiry,” 15.

interventions on the part of the student.³² But do some poetic works lend themselves to deformance more readily than others? That is probably not the right question to ask. A more appropriate question would be, what types of poems yield most readily to what types of deformance? To answer this, a student needs to expand out from the familiar tools and approaches available within the traditional humanities curriculum. According to Stephen Ramsay and Geoffrey Rockwell in their essay “Developing Things: Notes toward an Epistemology of Building in the Digital Humanities,” writing is:

the technology—or better, the methodology—that lies between model and result in humanistic discourse...Scholars conceive the world and represent it in some altered form. That writing stands as the technical method by which this transformation is made is almost beside the point.³³

Customarily humanities instructors ask students to engage compositionally as a way to establish understanding about a primary text necessary to the advancement of a particular curriculum goal. This is the ground methodology for pedagogy in the humanities.³⁴ Writing is meant to ensure that thinking is taking place. But does the introduction of digital technologies as modes of exploration or engagement with primary sources disrupt the assurances inherent in this writing-as-thinking pedagogical approach? The answer to this question, which I will try to illuminate, is

³² “...it [a poetic work] is organized as rhetoric and poesies rather than as exposition and information transmission. Because this is so, it always lies open to deformative moves.” Samuels and McGann, “Deformance and Interpretation,” 6.

³³ Ramsay and Rockwell, “Developing Things,” 82.

³⁴ “[Prose] has come to appear a genre of transparency, as if it might be made a vehicle of noise-free information transmission or information-representation.” Samuels and McGann, “Deformance and Interpretation,” 4.

that of course, it depends on how and why it is being used. Unless experience leads out into an area of thought that is unfamiliar, then the results are a hindrance to thinking and are therefore a hindrance to intellectual freedom and of scholarly labor. And, as Bass points out, growth depends upon the presence of difficulty to be overcome by the exercise of intelligence. Furthermore, it is not meaning, or result that is to be prized, but the freedom of intelligence which is at stake.

For Ramsay, among others, actual results are less important than the insights gained from the juxtaposition of mechanism and mind, from the interplay of tool, text, and the intellect of the student in free play. And provocatively, he infamously describes his theory of algorithmic criticism as “the quest for meaningful failure.”³⁵ This failure depends on a number of variations from the traditional scientific scheme of hypothesis followed by experiment. Rachel Sagner Burma and Matthew K. Gold, in their essay “Contemporary Proposals about Reading in the Digital Age” contrast deformative reading with the myriad other ways that DH practitioners approach textual analysis by making a similar claim.

[Deformative Reading is] a playful method that aims to deliberately *transform* the texts it engages. Deformative readers explore textual corpora not to unearth facts and patterns but rather to deliberately mangle those very facts and patterns, to interfere consciously with the computational artifact and to replace the imperatives of distance reading—hypothesis and experiment—with a new set of priorities that include alteration, randomness, and play. (146)

³⁵ Ramsay, *Reading Machines*, xi.

I would argue that this is an imperfect explanation and that hypothesis and experimentation are also an aspect of the deformative reading method as well, although not primary. For instance, it does not hinder the learning process if a student consciously chooses a poem they believe to be susceptible to a given deformative move, or for student to select a poem of focus they believe will be aesthetically enlivened by a particular move, only to find out that the outcome of their intervention does or does not adhere to their initial hypothesis. It's important here to make a distinction between text deformation in its broadest sense, and the types of text deformative acts executed by digital interventions. As alluded to in the first section of this thesis, any and all readings can be considered implicitly deformative. Non-traditional readings like the backward reading approach outlined in the Dickinsonian prose fragment can be thought of as explicit instantiations of what is happening any time a student attempts to intelligently mine a poem for meaning. With the introduction of a tool to help facilitate the deformative acts, a mediating force is introduced into the equation. However, although the tool can be considered essential, it is not the tool that is primary.

Ramsay points out that it is entirely reasonable to conceive of tools that can not only change the properties of poems but can also adjudicate questions about the properties of poems. He also points out that machines can change the hermeneutical parameters of human reading experiences. However, tools cannot judge whether a particular interpretation is permissible. This should not be considered a limitation of the machine. The student reads and interprets and is free to urge or persuade others to accept those readings and interpretations. If we ever happened to conceive of and articulate an interpretation of a text that is so unambiguous, so beyond question or qualification that no additional hermeneutical questions follow, we would then be required to

stop calling the activity we're engaged in interpretation and reading.³⁶ Ultimately, it is not the purpose of interpretation to define meaning—but instead to create a frame in which meaning can come about. Whatever deformative move made available and facilitated by the tool, it is incumbent upon the student to meaningfully engage the new poetic artifact. It is not the tool that engaged in an act of deformative intervention, but the student, whom has attempted to understand a poem by changing it, breaking it, exploding it, or erasing aspects of it. The play begins not at the level of the constraining force within the tools software, but at the outset at the level of active conception and conscious action, and certainly during the comparison between the various artifacts resulting from the chosen deformative moves.

Although writing can be helpful to articulate what exactly the implications are for a deformative act, it may not be a necessary attribute for thinking in this context. And, as a result, writing may not be an essential, primary part of the learning experience for the student. This line of thought conjures fears of an artificial intermediary between the subject in contemplation and the object of inquiry. Ramsay and Rockwell resolve this issue by conjuring the well-known grounds behind the Turing test in artificial intelligence research. The test goes, replace the phrase “Can machines think?” with “What happens when a machine takes the part of [a human interlocutor] in this game?” Can you recognize the machine? The authors repurpose the test as, “What happens when building takes the place of writing?” in place of “Is building scholarship?” As Ramsay and Rockwell rightly point out, “if the quality of the interventions that occur as a result of building are as interesting as those that are typically established through writing, then

³⁶ Ramsay, *Reading Machines*, 10.

that activity is, for all intents and purposes, scholarship.”³⁷ And what does this say about the tools themselves? Ramsay and Rockwell consider digital tools as hermeneutical instruments through which we can interpret cultural output as phenomena. Digital artifacts, in this case, text deformance tools, can be considered to operate as “telescopes for the mind³⁸” that reframe familiar phenomena and position them in a new light. The authors suggest that digital tools should be thought of as “theory frameworks” for interpreting texts.

Such analogies, even in their less strident formulations, reinforce the suggestion that digital artifacts like text analysis and visualization tools are theories in the very highest tradition of what it is to theorize in the humanities, because they show us the world differently.³⁹

It is not ultimately the tool that shows itself, nor is it knowledge of the poem as an artifact that is the byproduct of deformative inquiry.⁴⁰ The inevitability of understanding the poem differently when it is reconstituted, seeing it with a fresh perspective from deformance, is clear. And as seen through our application of the backward reading model, it’s important to not

³⁷ Stephen Ramsay and Geoffrey Rockwell, "Developing Things: Notes toward an Epistemology of Building in the Digital Humanities." In *Debates in the Digital Humanities*, edited by Matthew Gold.

³⁸ *Ibid*, 79.

³⁹ Ramsay and Rockwell, “Developing Things,” 79.

⁴⁰ “Interpreters...do not commonly locate hermeneutic vitality in the documentary features of literary works. Because meaning is assumed to develop as a linguistic event, critical deformance plays itself out in the field of the signifieds.” Samuels and McGann, “Deformance and Interpretation,” 7.

overlook the fact that the poem yields to the deformance in interesting and meaningful ways. And, notably, the changed artifact presents an opportunity for student-centered learning.

Samuels and McGann point out that Wallace Stevens's poetry is particularly appropriate for deformance and play because of its dualistic history as work both philosophically serious and poetically senseless, and so "serves as a grounds for conflict between poetry-as-meaning and poetry-as-style."⁴¹ In deforming for comparative analysis the non-semantic elements in Stevens's poem "So-And-So Reclining on Her Couch" a student is productively, and iteratively brought into the realization that Stevens's attempts at meaning are less a function of ideas than of style. To show how this could be possible, and adopting the headspace of a hypothetical student of Stevens's work, it's helpful to begin first with a normative reading of one of his poems, in this case, "So-And-So Reclining on Her Couch":

So-And-So Reclining on Her Couch

On her side, reclining on her elbow.

This mechanism, this apparition,

Suppose we call it Projection A.

She floats in air at the level of

The eye, completely anonymous,

Born, as she was, at twenty-one,

⁴¹ Samuels and McGann, "Deformance and Interpretation," 37.

Without lineage or language, only
The curving of her hip, as motionless gesture,
Eyes dripping blue, so much to learn.

If just above her head there hung,
Suspended in air, the slightest crown
Of Gothic prong and practick bright

The suspension, as in solid space,
The suspending hand withdrawn, would be,
An invisible gesture. Let this be called

Projection B. To get at the thing
Without gestures is to get at it as
Idea. She floats in the contention, the flux

Between the thing as idea and
The thing as thing, She is half who made her.
This is the final Projection, C.

The arrangement contains the desire of
The artist. But one confides in what has no
Concealed creator. One walks easily

The unpainted shore, accepts the world
As anything but sculpture. Good-bye,
Mrs. Pappadopoulos, and thanks.

Before moving on to a deformed reading in reverse order, let's consider how a student might engage with this text in a normative, conceptual way—in an attempt to figure out the meaning of the poem. The apparition from stanza one is, we can assume from the title, lying horizontally on a couch. This apparition passes through 3 distinct projections, A, B, and C. Projection A is a physical, abstract description of the objective rendering of the “her” from stanza one. At Projection B, the “her” is accompanied by an atmosphere that is at once both gestural and physical, a crown-like ambiance that seems to create an almost religious connotation for the individual rendering of the universal “her,” whom we are shown is without context or language of her own. What is defined in Projection A is provided with context in Projection B, making the “her” both more and less real, and is pushed further into the ephemeral. It is then transformed into an idea in Projection C. This idea is an amalgamation of the physical “her” described in Projection A and B, the gesture-less ideality of that physical rendering as it's metamorphized into the idea of itself. Stevens is describing a nether region, a stalled middle ground between the objective physical and the subjective ideality of a thing. The final 2 stanzas are an exposition on the *arrangement* perhaps of the various projections, but also of the structure of the poem itself—containing the desire of the artist, as well as the poet, and constraining the openness of the context provided in Projection B by attributing it to the creative desire of the artist—commenting self-consciously on a narrative approach that is reflected in both the form

and the content of the poetic work. And, finally, the solidified object, Mrs. Pappadopoulos is revealed.

Read backward:

Mrs. Pappadopoulos, and thanks.

As anything but sculpture. Good-bye,

The unpainted shore, accepts the world

Concealed creator. One walks easily

The artist. But one confides in what has no

The arrangement contains the desire of

This is the final Projection, C.

The thing as thing, She is half who made her.

Between the thing as idea and

Idea. She floats in the contention, the flux

Without gestures is to get at it as

Projection B. To get at the thing

An invisible gesture. Let this be called

The suspending hand withdrawn, would be,

The suspension, as in solid space,

Of Gothic prong and practick bright
Suspended in air, the slightest crown
If just above her head there hung,

Eyes dripping blue, so much to learn.
The curving of her hip, as motionless gesture,
Without lineage or language, only

Born, as she was, at twenty-one,
The eye, completely anonymous,
She floats in air at the level of

Suppose we call it Projection A.
This mechanism, this apparition,
On her side, reclining on her elbow.

The point of this exercise is not only to ensure a student can read the poem as new. The key objective here is to show the student that the poem is open to, and in fact potentially (but not necessarily) yields to their chosen transformation.⁴² The result is far from non-sensical and has

⁴² It's evident as well that reading a line backwards requires a student to reconsider the meaning of lines when read forward: for instance, the difference between "on her side, reclining on her elbow" as first line, where it inaugurates a moment and mood, versus that line at the end of the

much to provide by way of insight into the newly revealed syntax of backwardness. In the deformed reading the Projections are similarly layered and conflated. However, they now move from the physical sturdiness of Mrs. Pappadopoulos to the airy chamber of the artists' idea. This is hinted at from the outset through the line *As anything but sculpture, Goodbye*. Rather than deducing from the transformed *her* in the normative reading, backward to the artists' inspiration in Mrs. Pappadopoulos, we are beginning with the inspiration and traveling alongside the creator with a shared perspective. The student is now reading from the perspective of the artist himself, *Eye dripping blue, so much to learn*. The eye is *completely anonymous*, reminiscent of Thoreau's transparent eyeball, observing the world without changing it, it is situated now in relation to Projection A, which defines its position in space—an apparition reclining on a couch. The same apparition from the first reading is now the end result of the process of transformation outlined through the formal structure of the poem within its layered Projections.

The poem has been newly mapped, but with intention. The backward reading allows the student to reverse time and fuse their perspective with that of the poet himself, who masquerades as an artist rendering, let's suppose, his willing neighbor as he injects her reclining body with the subjective convulsions of his creative impulse. This provides a pedagogical lesson surrounding intellectual authority, self-actualization in independent thought, and the nature of creative work. And, as Ramsay points out, a commonality for digital humanities practitioners actively resides in their prioritizing building and making over reading and critiquing. In textual deformance, the

poem, where it seems to settle the poem in a body, a space, a place. It's a worthwhile exercise, and in the end, it's not really all that different from a typical close reading technique where one asks students to consider how a line could be read differently if one important word was changed in a line.

willing and interested student should find ample opportunities for critically applying all of these techniques (all ultimately deformative) as a means toward a freer, more pedagogically rich engagement with their chosen texts. The process of creation, Ramsay argues in *On Building*, yields insights that are difficult, potentially even impossible to unearth otherwise. The critical point, according to McCann and Samuels, is that meaning is more a dynamic than a discoverable content embedded in a particular reading, or combination of readings of a textual artifact. Referencing Dante's sonnets, McCann and Samuels go on to point out that "we want to remember that the sonnet itself does not pretend to possess its own meaning. Meaning is what it goes in search of."⁴³ So too does the student go.

As noted in a previous section of this thesis, user-focused approaches to learning borrow methodologies from constructivist pedagogies, in Deweyan terms, from the learner's own experiences, built by the learner rather than established by the teacher.

Building knowledge-based objects is a powerful dimension of constructivist pedagogies, sometimes also called constructivism. "Constructivism," as defined by Yasmin Kafai and Michel Resnick, "suggests that learners are particularly likely to make new ideas when they are actively engaged in making some type of external artifact, which they can reflect upon and share with others."⁴⁴

⁴³ McGann and Samuels, "Deformance and Interpretation," 4.

⁴⁴ Bass, "Engines of Inquiry," 13.

There's a continuum between Dewey⁴⁵ and Bass in an affinity for knowledge creation as a byproduct of the pedagogical act. For both there appears to be a crucial change in focus within their theoretical frames from teaching practices to learning practices that shifts importance from the end products of expert cognition to the necessary, iterative, and often invisible steps in the journey towards comprehension taken on by the students themselves. Bass calls these "intermediate cognitive processes"⁴⁶ and provides a long list of features of technology-enhanced environments that can facilitate this type of critical thinking.⁴⁷ One feature particularly essential to this thesis is the necessity of putting tools into students' hands that allow them to manipulate primary materials in light of methodological activities.

This necessity for students to engage their own learning through iterative performative interventions is shared by the typical work ethos within the scientific laboratory setting. A similar technique is productively described by Ryan Cordell in his essay "Kaleidoscopic Pedagogy in the Classroom Laboratory." Integrating a kaleidoscopic framework, his paper argues, productively unsettles student's familiar approach to doing literary and textual studies. Cordell doesn't position the kaleidoscopic approach in opposition to more traditional methods, but, rather, as a complimentary approach enhancing more traditional methods. By complementing reading and interpretation with building, making, and experimentation—often blending digital and analogue materials and techniques—kaleidoscopic pedagogy repositions

⁴⁵ Particularly concerning Dewey's enduring personal belief in the unity of theory and practice in the educative experience of the individual, as well as his notions concerning the experiential continuum.

⁴⁶ "Scientific study leads to and enlarges experience, but this experience is educative only to the degree that it rests upon a continuity of significant knowledge and to the degree that this knowledge modifies or "modulates" the learner's outlook, attitude, and skill." (Bass, "Engines of Inquiry.")

students as integral collaborators in not just their own education, but also in the knowledge-generating activities of the scholarly field.

In a science laboratory, students might use a microscope to more closely investigate an object of study...By contrast, we draw our central metaphor for the laboratory from a nineteenth-century tool: the kaleidoscope. Whereas the microscope, as both tool and metaphor, enables the researcher to see and know what they could not see or know before, the kaleidoscope fractures an otherwise singular entity into an array of seemingly disparate parts that remain in intimate relation. In standard literature analysis “close reading” equates to the microscopic approach. In the context of this paper, my argument is that text deformation takes its cues from the microscopic, but more directly from the kaleidoscopic approach.⁴⁸

This approach shares an affinity with Ramsay’s hermeneutic of building as scholarship.⁴⁹ As with any pedagogical approach, in order for kaleidoscopic pedagogy to be useful, it must be used critically. And, this, as has been addressed throughout this thesis, is dependent upon the students themselves. In a lab report written by Northeastern University student Lauren Smith, after having attended a workshop at the Museum of Printing in North Andover, Massachusetts she helpfully illustrates the implications of her experiences in her kaleidoscopic lab:

⁴⁸ Cordell, et al., “Kaleidoscopic Pedagogy,” 1.

⁴⁹ Ramsay and Rockwell, “Developing Things.”

A lot of what I learned at the Museum of Printing were things that we had already covered to a certain extent during class, but were really cemented in my mind while we were there, and the implications of them became clearer...[For instance,] the only interaction one has with the ink with modern printing is buying a new cartridge, and then once it's already dry, or mostly so, on the printed page. For this lab I had to roll out the ink on a roller and roll it onto type. Where most errors with a printer would only come from a broken printer or low ink, here, there are more variables. If I missed a spot while rolling the ink, it wouldn't show on the printed version. Some errors in my pieces of type meant that there were some slight imperfections in the printing. The second print of one came out lighter, which implies that not only does the ink have to be reapplied frequently but that it's very unlikely *that any edition of a book is exactly identical* [emphasis mine]. Also, there's much more room for error—I not only decorated my hands with ink, but also my sweatshirt...it's surprising to me that the books we've seen at the Rare Books Room weren't more smudged with ink and makes me wonder if printers were so adept that they didn't get ink on their own hands, didn't get it on the printing, or if there really is no such thing as an identical edition.⁵⁰

It's clear from the above quotation that engaging with the printing techniques of the 19th-century has, beyond the newfound handedness required of learning a new toolset, encouraged this student to think critically about disparate, but related aspects of her literary studies. This methodology aims to foster work that “refracts into analysis, creativity, building, and play.”⁵¹

⁵⁰ Cordell, et al., “Kaleidoscopic Pedagogy,” 6.

⁵¹ *Ibid*, 5.

Although, as Cordell points out, the kaleidoscope itself was, “through the course of the nineteenth century, a scientific instrument, a device for creative provocation, an objet d’art in Victoria parlors, and, just as important, a toy,”⁵² it was a very special type of tool as well. The kaleidoscope has a disorienting mission at its heart. Fundamental to the tool’s design is an engineered order that blends optics and aesthetics with symmetry and surprise. In Cordell’s lab, students are encouraged to “explore unfamiliar technologies” and to “defamiliarize those we think we already know.” Textual deformation functions in a similar way. In a critical deformative approach, it is not just the physicality of the text or the linguistic structure and content that the student scrutinizes through critical interventions, but everything else the student brings to the table as well. In a sense, in text deformation, the student is overcoming the text, understanding it by deforming it, even destroying it, and putting it back together in their understanding. Similar to Dewey’s constructivist tenants and their various attempts at the thwarting of coping mechanisms, by asking students to engage learning material through making and doing, kaleidoscopic pedagogy creates “a kind of productive unease” in the student. This productive unease is essential to textual deformation as well. This unease registers, as Julia Flanders notes of humanities scholars using digital tools⁵³, “as a sense of friction between familiar mental habits and the affordances of the tool, but it’s ideally a provocative friction, an irritation that prompts further thought and engagement.”⁵⁴ There is pedagogical imperative in asking students to engage in close reading in an a way that is unfamiliar and it is up to the student to enact “deformative” decisions, and to make meaning from these patterns and

⁵² Ibid, 5.

⁵³ Flanders, Julia. “The Productive Unease of 21st-Century Digital Scholarship,” *Digital Humanities Quarterly* 3, no. 3 (2009), <https://digitalhumanities.org/dhq/vol/3/3/000055.html>.

⁵⁴ Cordell, et al., “Kaleidoscopic Pedagogy,” 10.

discrepancies. Although the digital itself defamiliarizes and deforms, this is more or less a temporary condition. Much as the innovations in 19th-century technological printing practices went overlooked in familiarity until they were re-engaged hundreds of years later in the kaleidoscopic lab setting, the digital technologies of today will lose their disruptive potential if the student remains passive to their potentials. The student must continue persistent in their educative quest by choosing constraints from which to see a text as unfamiliar, destabilized, and ultimately new. This is the key to educative experience.

CASE STUDIES

Text Mechanic,⁵⁵ it should be made clear, is not a tool designed for instruction, or for digital humanities research. It was created by an information professional to manage and manipulate large, disorganized files with unspecific text strings. The deformation performance that follows, in this case, misuses the Text Mechanic toolset to deliberate effect. Text Mechanic provides a variety of tools for textual manipulation, the tools instrumental to poetic deformation for pedagogical interpretation fall under the Obfuscation Tools, Randomization Tools, and Combination/Permutation Tools headings. There are a variety of tools within the “Reverse Text Generator” portal that would be useful for a different type of poem; for instance, the works of E.E. Cummings, which utilize whitespace for meaningful information sharing. The “Upside Down” button and the “Reverse Each Word’s Lettering” buttons fall into this category. Additionally, there are tools that on the surface seem most useful for artistic performance (“String Randomizer” for instance). While many tools can be used against-the-grain to deform

⁵⁵ <https://textmechanic.co/>

primary texts, there exist a number of competing toolsets expressly designed for this purpose in mind including WordHoard, TAPoR, HyperPo, and MONK.

In Mark Sample's "Notes towards a Deformed Humanities" he describes his project *Hacking the Accident* where he manipulated the 30 essays of *Hacking the Academy* by subjecting them to an N+7 algorithm that replaces every noun with the noun that comes 7 nouns later in the dictionary. This is a highly playful act of scholarship that yields unexpected and worthwhile results. For example, every instance of the word "academy" is replaced with the word "accident."⁵⁶ Various other unexpected transformational result from the N+7 algorithm, for instance, that every instance of the word "print" is now "prison," "instructors" are "insurgents" and "questions" become "quicksand." Ultimately, however, the N+7 tool is only so useful for deformance practice. Would it have been very different if Sample had chosen a +6 or a +8 algorithm? Did the +7 get the most interesting or unexpected results? In order for this approach to be pedagogically useful, the student would have done themselves a disservice if they were to choose a +7 algorithm arbitrarily and not probe the boundaries of that particular constraint. Although this algorithm is complicated and robust, at the same time, it is limited and narrow. For the N+7 tool to be truly useful for students, the algorithm must be able to yield to discoveries born out through the process of deformance. Students require the necessary toolset to deform in specific ways that are iterative and deliberate.

I agree with Mark Sample that the estrangement caused by deformed works is an essential valuable outcome of this methodology. And, perhaps, it is an excellent focus for an experimental project like the N+7 algorithm. However, I believe as well that "deformance" can

be used as a means to bring a fresh or new understanding to/of the text. This is essential if this approach is to be thought of as a viable methodological practice for pedagogy, rather than just an experimental project like the one he describes in his essay. And, there are many other more essential ways that a student can engage a text more iteratively, more deliberately, and more actively so as to expose aspects of a poem's underlying textual structure, as well as its literary and theoretical meaning.

Ed Folsom, in his essay *Database as Genre: The Epic Transformation of Archives* makes an argument for the database as a form of narrative. Examining Walt Whitman's compositional techniques through analysis of his archives—“for him the world was a kind of pre-electronic database”—Folsom describes Whitman's writing as a fractal that pushes us away from universals and into the universality of particulars. Folsom points out that Whitman's notebooks are brimming with “sights and sounds and names and activities,” lists of particulars that would make their way into his final written works. This technique of repetition of particulars is often described as the Indexical form. Whitman would write lines in their entirety as they would eventually appear in his final works and reorder them “endlessly” right up to the point of publication. In this way, the artifacts of poetic impulse become “portable and interchangeable.” The shuffling continued from one edition to another, reordering, rearranging, reconfiguring, and removing as the poems were impacted by the lived experience of the author. This particular approach to poetic authorship is what Paul Jaussen calls “Emergent Poetics.” What makes a poem “emergent” is defined by several features. Most important for our inquiry is that texts of this sort are always only provisionally closed, or temporarily complete, designed specifically for “engagement with the environment and capable of future rearticulating and transformations (provisionally).

This provisional closure is shaped by way of *feedback* loops with the environment: as the poem interacts with its cultural, social, and historical world, the form of its provisional closure is adapted, and these modifications, in turn, produce new possibilities for engagement or *structural* coupling, whereby the operations of one system are entangled with another.⁵⁷

Emergent poems like *Leaves of Grass* are further characterized by *iteration*, or the use of single, repeatable yet variable, elements and structures, and *recursion*—through which elements are self-referentially used to generate new elements. Whitman would remain prone to, and reserve license to, reorder, change, add and remove, from even his final, widely read and admired works. In an effort to embody Whitman’s approach, and to better understand the implications of the possibility-generating erudition of his writing technique, we enter now into an analysis of a portion of *Leaves of Grass* using the digital-tool set built by Text Mechanic. The first verse of *Song of Myself* provides a useful case study. As we are not particularly concerned for this line of thought with the poem as a whole but with the methodological effects of text deformation and its experiential pedagogical impact, even a small portion of a larger text can yield up interesting insights. Here is the first verse:

I celebrate myself, and sing myself,
And what I assume you shall assume,

⁵⁷ Paul Jaussen, *Writing in Real Time: Emergent Poetics from Whitman to the Digital*. (Cambridge, UK: Cambridge University Press, 2017), 3.

For every atom belonging to me as good belongs to you.

I loafe and invite my soul,

I lean and loafe at my ease observing a spear of summer grass.

My tongue, every atom of my blood, form'd from this soil, this
air,

Born here of parents born here from parents the same, and their
parents the same,

I, now thirty-seven years old in perfect health begin,

Hoping to cease not till death.

Creeds and schools in abeyance,

Retiring back a while sufficed at what they are, but never forgotten,

I harbor for good or bad, I permit to speak at every hazard,

Nature without check with original energy.

Song of Myself is an excellent case study, partly because of its sheer recognizability. As canonical works are often the essential low-hanging fruit of scholastic inquiry they are particularly suitable for pedagogical lessons and provide a ripe opportunity for students to overcome the tiered relationship that is often developed between the authoritative curators of cultural knowledge and the consumers of that knowledge. They are also in a position to reinvigorate tired perspectives on familiar cultural artifacts. Positioning students and their

intellectual practices as transgressive-yet-contributory in this way opens opportunities for students to claim not just agency but proprietorship over their own learning, to assess the implication of their contributions beyond the top-down evaluation hierarchies. And, this self-directed student-centered assessment can and should be critical. For after all, meaning, in this context, remember, is not just a byproduct of a successful hypothesis conceived of in advanced and based on a logical theory, but rather is a byproduct of meaningful failure. It's the engagement that matters, and the varying degrees of cogency attributed to the outcomes resulting from deformation that holds the potential for pedagogical impact. Beyond student engagement, interest, and continued interrogation, the context the instructor questions, as well as the student, is whether or not text deformation has led to a richer, fuller, and more dynamic reading of the poem than the normative reading alone.

For example, by using Text Mechanic to remove all vowels in *Song of Myself*, the "Disemvoweling Tool" does very little to mask the poem's identity. It is still clear to anyone familiar with Whitman's work that we are dealing with this particular poetic text. Because of this, it accomplishes very little if anything either critically or pedagogically. I mention this example to show that critical agency is not a direct result of the use of these toolsets. Some interventions bear no fruit. And, some leave the reader firmly situated in familiarity.

clbrt myslf, nd sng myslf,
nd wht ssm y shll ssm,
Fr vry tm blngng t m s gd blngs t y.

If nd nvt my sl,

In nd lf t my s bsrvng spr f smmr grss.

This insight, although not particularly enlightening, is important to note as a way of anchoring the text in its original canonical form. One way to engage a poetic text in deformation, an approach in alignment with Whitman's creative process, is to utilize Text Mechanic's "Permutation Generator." There are six unique permutations that can be created by combining the lines in the first stanza in different ways. Each permutation, although comprised of the same words, proclaims a unique meaning.⁵⁸

I celebrate myself, and sing myself,/And what I assume you shall assume,/For every atom belonging to me as good belongs to you.

I celebrate myself, and sing myself,/For every atom belonging to me as good belongs to you./And what I assume you shall assume,

And what I assume you shall assume,/I celebrate myself, and sing myself,/For every atom belonging to me as good belongs to you.

And what I assume you shall assume,/For every atom belonging to me as good belongs to you./I celebrate myself, and sing myself,

For every atom belonging to me as good belongs to you./I celebrate myself, and sing myself,/And what I assume you shall assume,

For every atom belonging to me as good belongs to you./And what I assume you shall assume,/I celebrate myself, and sing myself,

The results generated by the permutation patch within TextMechanic expand exponentially. For instance, the Permutation Generator comes up with 720 different versions of the third stanza, of the first verse of *Song of Myself* instantaneously.

The obvious pedagogical lessons here come not from the wisdom, or “knowledge” generated from the content of the text or its varied meanings. It is the multiple meanings generated from a simple rearrangement of lines that is powerful, that a rearrangement can happen productively in this way, which form the core of the pedagogical lesson. That Whitman used a non-digital approach resembling in concept the core aspects of this technique to generate the original work in its historical canonical form adds another dimension to the lesson, one that bridges the temporal and hierarchical divide between the reader and the author. Such shifts compel us to reconsider the role of students in advancing a given scholarly practice and entice us to make clear(er) the available means by which students make small-scale contributions to any given field. This is a notion outlined productively by Cordell:

We see this not as a facile provocation for student agency, and we would not suggest that all student work should be valued as scholarly. Rather, we see that the means (and media) through which students might apply their developing expertise have significantly altered such that their, our, and others’ sense of the value of their work may extend beyond the traditional literary studies course or classroom.⁵⁹

⁵⁹ Cordell, et al., “Kaleidoscopic Pedagogy,” 16.

Making our way back to LoG, in addition to the meaning-generation of permutation gathering, there is an issue of scale that comes into play and illustrates an important lesson about poetic creation in the Whitman fractal universe. The permutations are endless. Take for instance, verse 15 of “Song of Myself,” which is a typical Whitman index beginning:

The quadron girl is sold at the auction-stand, the drunkard nods
by the bar-room stove,
The machinist rolls up his sleeves, the policeman travels his beat,
the gate-keeper marks who pass,
The young fellow drives the express-wagon, (I love him, though
I do not know him;)
The half-breed straps on his light boots to compete in the race,

There are 39 stanzas in this verse. Plugging just the first 10 into Text Mechanic generates 3,628,800 unique permutations of just a single verse. What does this teach about the creative process? What does it say about knowledge and meaning? In a way, generating permutations is a process of pattern examination in deformance. Bass points out that “searching, examining patterns, discovering connections among artifacts” are all closely connected to the “authentic thinking processes of historians and scholars of culture.”⁶⁰ This is a very different process in historical research than it is for deformance of a poem, but the approach can still act as an insightful starting point for the student interested in rumination on the implications of this methodology for the study of poetry. Pattern recognition in many instances when it involves the

⁶⁰ Bass, “Engines of Inquiry,” 5.

creation of alternative textualities serves the familiar purpose of allowing students to establish meaning from what they are reading. The patterns used typically for exposition in the humanities, capsules summaries, paraphrases, or lists for example, serve precisely to select a narrow set of meanings from the infinite field of all possible meanings. What pattern recognition in permutation deformation does, is allows the student to explicitly build out patterns within the source itself, to take ownership over the selection of these patterns to find the residual meaning laid bare. In this way, pattern becomes an important engine for discovery. The tool is necessary for executing this pedagogical act at scale.

Utilized in this way, technology serves as a productive tool contributing to a subtler, more dynamic understanding of poetic texts, which are, in their own right, cultural materials. Also, one hopes, given the participator-level of engagement, tapping into the well springs of inspiration inherent in deformative methods, students come away with a more subjective attachment to the artifacts that are the byproducts of this learner-centered methodology. Although this is an interesting reality, what does this say about authorial intention? Surely Whitman chose verbs and nouns he wanted in the order and arrangement that he wanted in each version of LoG published, as well as versions left out of the scholarly record. It's impossible to know if he expected that those verbs and nouns and adjectives would be randomized by readers. It's impossible to know how he would react. However, as has been addressed throughout this thesis, adhering to the normative reading because of concerns about the primacy of the authorial perspective can be an impediment to student engagement. The pedagogical approach outlined in this thesis uses text deformation to enable the student to overcome the various constraining forces built into the static textual work and the various resulting hierarchical and canonical

implications. Deforming a single poem in a number of deliberate ways⁶¹ can help to illustrate this empowering fact.

“The Force that Through the Green Fuse Drives the Flower”

By Dylan Thomas

Normative Reading:

The force that through the green fuse drives the flower
Drives my green age; that blasts the roots of trees
Is my destroyer.

And I am dumb to tell the crooked rose
My youth is bent by the same wintry fever.

The force that drives the water through the rocks
Drives my red blood; that dries the mouthing streams
Turns mine to wax.

And I am dumb to mouth unto my veins
How at the mountain spring the same mouth sucks.

The hand that whirls the water in the pool
Stirs the quicksand; that ropes the blowing wind

⁶¹ Poetic deformations are organized into 4 distinct types by Samuel and McGann: Reordering, Isolating, Altering, and Adding, (Samuels and McGann, “Deformance and Interpretation,” 36-27.

Hauls my shroud sail.

And I am dumb to tell the hanging man

How of my clay is made the hangman's lime.

The lips of time leech to the fountain head;

Love drips and gathers, but the fallen blood

Shall clam her sores.

And I am dumb to tell a weather's wind

How time has ticked a heaven round the stars.

And I am dumb to tell the lover's tomb

How at my sheet goes the same crooked worm.

As we have shown before, an initial normative reading is pedagogically useful for the student in their attempts at making meaning from the poem. In this normative reading of Dylan Thomas' poem, a few initial things stand out; first the repetition of the phrase "I am dumb to" at key points in each stanza (line 4 for the first 4 stanza's and the first line of the last stanza, which has been shortened by 3 lines). Importantly, the first line of the poem repeats and emphasizes the poem's title, establishing the force that drives the flower as the initial universal subject. This emphasis helps establish a potent and positive forward movement in the cadences of the lines, and in the narrative focus: life in its infancy and universality, birth and rebirth. As the poem progresses, that same force is gradually linked up with the author, following a circuitous path to death, which shares the same universality with the author and is indicated by the death shroud of the last line

and crooked worm that passes through it. Throughout the author is frustrated by his inability to make a verbal claim to the universality shared by the life to death cycle. And this frustration is punctuated by the only periods in the poem.

I am dumb to tell the crooked rose/My youth is bent by the same wintry fever.

I am dumb to mouth unto my veins/How at the mountain stream my same mouth sucks.

I am dumb to tell the hanging man/How of my clay is made the hangman's lime.

I am dumb to tell a weather's wind/How time has ticked a heaven round the stars.

I am dumb to tell the lover's tomb/How at my sheet goes the same crooked worm.

Ultimately, it is a poem that culminates in death, a narrative thrust that mimics the life death cycle in its natural temporal linearity. The crooked rose, the authors own veins, the man sentenced to die, the very natural course taken by the climate in motion, and the loved one who has passed on are all provided with an attempt at commiseration, and emphatic empathy that ranges across a variety of parasitic verbal props: wintry fever, mouth that sucks, the hangman's lime, time itself, and the same crooked worm.

Reading Backward (last line first):

How at my sheet goes the same crooked worm.

And I am dumb to tell the lover's tomb

How time has ticked a heaven round the stars.

And I am dumb to tell a weather's wind

Shall clam her sores.

Love drips and gathers, but the fallen blood

The lips of time leech to the fountain head;

How of my clay is made the hangman's lime.

And I am dumb to tell the hanging man

Hauls my shroud sail.

Stirs the quicksand; that ropes the blowing wind

The hand that whirls the water in the pool

How at the mountain spring the same mouth sucks

And I am dumb to mouth unto my veins

Turns mine to wax.

Drives my red blood; that dries the mouthing streams

The force that drives the water through the rocks

My youth is bent by the same wintry fever.

And I am dumb to tell the crooked rose

Is my destroyer.

Drives my green age; that blasts the roots of trees

The force that through the green fuse drives the flower

In the deformed, backward reading, death is the initial subject – in contradistinction from the positive universal life force expressed by the poem’s title. Although the student may expect that a deformative reading of this sort would result in a disruption of the poem’s structural symmetry, in this reading, the poem is brought into even clearer alignment with the repetition of the author’s frustrated muteness, (*I am dumb to*) forced into alignment at the second line of all 5 stanzas. The author is facing death’s shroud from the outset, working backward from there to the positivity of life in balance manifest in the title’s green fuse. With the same universal force inhabited by the worm that eats the body, the student makes their way along a journey that resembles the forward flight of the normative reading but diverges from it in important ways. The lover’s tomb is now aligned with time’s flight, wind with sores, the hanging man with the shroud sail, the author’s veins with wax, and the crooked rose, the narrator’s destroyer. The implications are manifold, however, the clear insinuation here is that the author is writing from beyond the grave, from within the lover’s tomb, and his dumbness registers now less as an inability to articulate the ephemeral than as a physical limitation resulting from his corporeal death.

And I am dumb to tell the lover’s tomb/How time has ticked a heaven round the stars

And I am dumb to tell a weather’s wind/Shall clam her sores

And I am dumb to tell the hanging man/Hauls my shroud sail

And I am dumb to mouth unto my veins/Turns mine to wax

And I am dumb to tell the crooked rose/Is my destroyer

With the poem's title as the last line, the sequence described in the backward reading is emphasized and realized in the cyclical and endless reading now made cogent to the student. The last line is also the title, after the title comes the first line again, and ever will it be so. The student is encouraged now to ready themselves for an endless reading. The normative reading has an end. The deformed reading does not, read backward the poem starts again at completion to be read as before, to go through the death to life journey once more, and once more again, ad infinitum.

c) Backward reading (last word first)

.worm crooked same the goes sheet my at how

tomb s'lover the tell to dumb am i and

.stars the round heaven a ticked has time how

wind s'weather a tell to dumb am i and

.sores her clam shall

blood fallen the but, gathers and drips love

;head fountain the to leech time of lips the

.lime s'hangman the made is clay my of how

man hanging the tell to dumb am i and

.sail shroud my hauls

wind blowing the ropes that ;quicksand the stirs

pool the in water the whirls that hand the

.sucks mouth same the spring mountain the at how
veins my unto mouth to dumb am i and
.wax to mine turns
streams mouthing the dries that ;blood red my drives
rocks the through water the drives that force the

.fever wintry same the by bent is youth My
Rose crooked the tell to dumb am I And
.destroyer my Is
Trees of roots the blasts that ;age green my Drives
Flower the drives fuse green the through that force The

Out of the three readings of Thomas' poem addressed thus far, this version is the least sensical on the surface. However, there are important aspects of the poem that are manifest in this reading as well. The first line of each stanza is punctuated by a period. The end, the stop, is marked throughout. The next phase of the poem's reading begins with a reminder of the end. And, this awkward use of punctuation forces a discontinuity between the stanzas, just as the newly found absence of a period at the end of each last line ushers the reader forward into the break. The phrase repetition that was so important in the first two readings is transformed, and situated midline, embodying the notion put forward through the first two readings in their various connotations, that the author is dumb to describe the universality of his plight.

tomb s'lover the tell to dumb am i and/.stars the round heaven a ticked has time how
wind s'weather a tell to dumb am i and/.sores her clam shall
man hanging the tell to dumb am i and/.sail shroud my hauls
veins my unto mouth to dumb am i and/.wax to mine turns
Rose crooked the tell to dumb am I And/.destroyer my Is

In this reading, the narrator's dumbness is explicit, and the student shares in this experience, in the frustrations had in making sense of the author's lines, as if he were experiencing not his speaking from the tomb, but his untranslated thoughts—with an impressionistic language glimmering from the ethereal plane. It's the confused language of a dream-state, an awareness grappling with a reality that is without symbolic language adequate for the basic mapping of not human experience, but the knowledge of a single life force in conflict with itself in suicidal self-preservation. And, this the student might expect, is an explicit rendering of that force's inadequate language. It is the universal articulated from nowhere. And it is its own destroyer (.destroyer my Is).

c)Reordered Deformance:

The force that through the green fuse drives the flower (1)

How at my sheet goes the same crooked worm. (22)

Drives my green age; that blasts the roots of trees (2)

And I am dumb to tell the lover's tomb (21)

Is my destroyer.(3)

How time has ticked a heaven round the stars. (20)

And I am dumb to tell the crooked rose (4)

And I am dumb to tell a weather's wind (19)

My youth is bent by the same wintry fever. (5)

Shall clam her sores. (18)

The force that drives the water through the rocks (6)

Love drips and gathers, but the fallen blood (17)

Drives my red blood; that dries the mouthing streams (7)

The lips of time leech to the fountain head; (16)

Turns mine to wax. (8)

How of my clay is made the hangman's lime. (15)

And I am dumb to mouth unto my veins (9)

And I am dumb to tell the hanging man (14)

How at the mountain spring the same mouth sucks. (10)

Hauls my shroud sail. (13)

The hand that whirls the water in the pool (11)

Stirs the quicksand; that ropes the blowing wind (12)

The above non-linear reordered deformance, wherein the student reads the first line followed by the last, working their way toward the middle at lines 11 and 12 in the final stanzas,

deforms the poem fruitfully as well. In this reading the repetition of the now familiar *And I am dumb to* is concentrated in pockets of emphasis. Two instances are grouped into couplets,

And I am dumb to tell the crooked rose(4)/And I am dumb to tell a weather's wind(19)

And I am dumb to mouth unto my veins(9)/And I am dumb to tell the hanging man(14)

Interestingly, the 4th line and the 19th line are united in a naturalistic symbology with the rose and the wind in alignment. Lines 9 and 14 (also a numeric inversion) are addressed human symbols of the life-death continuum—veins and the hanging man. The only singular instance is in the first stanza: *And I am dumb to tell the lover's tomb (21)/Is my destroyer.(3)* with no instance at all of dumbness in the final stanza. It seems that to read the beginning and the end simultaneously creates a rippling effect that has a symmetrical symbolic order resulting in the disappearance of dumbness as the student progresses toward the end of their reading.

I list the remaining deformations without analysis, simply to show the various and manifold options available through the use of a simple tool like TextMechanic:

Isolating Deformance: all nouns and verbs

force			fuse drives	flower
Drives	age	blasts	roots	trees
Is	destroyer			
I am	tell		rose	
youth is bent			fever	

force drives water through rocks
Drives blood dries streams

Turns wax

I to mouth veins
mountain spring mouth sucks

hand whirls water pool
Stirs quicksand ropes wind

Hauls sail

I am tell man
clay is made lime

lips time leech fountain head
Love drips gathers blood

clam sores

I am tell wind

time ticked heaven stars

I am tell tomb
sheet goes worm

e) Isolating Deformance: all words other than nouns and verbs (plus punctuation)

The that through the green the

my green ; that the of
my .
And dumb to the crooked
My by the same wintry .
The that the through the
my red ; that the mouthing
mine to .
And dumb unto my
How at the the same
The that the in the
the ; that the blowing
my shroud .
And dumb to the hanging
How of my is made the hangman's
The of leech to the ;
and , but the fallen
Shall her .
And dumb to a weather's
How has a round the .

And dumb to the lover's
How at my the same crooked.

f) Altered Deformance (Lines sorted alphabetically)

And I am dumb to tell a weather's wind
And I am dumb to mouth unto my veins
And I am dumb to tell the crooked rose
And I am dumb to tell the hanging man
And I am dumb to tell the lover's tomb
Drives my green age; that blasts the roots of trees
Drives my red blood; that dries the mouthing streams
Hauls my shroud sail.
How at my sheet goes the same crooked worm.
How at the mountain spring the same mouth sucks.
How of my clay is made the hangman's lime.
How time has ticked a heaven round the stars.
Is my destroyer.
Love drips and gathers, but the fallen blood
My youth is bent by the same wintry fever.
Shall clam her sores.
Stirs the quicksand; that ropes the blowing wind
The force that drives the water through the rocks
The force that through the green fuse drives the flower

The hand that whirls the water in the pool
The lips of time leech to the fountain head;
Turns mine to wax.

g) Altered Deformance (Lines sorted by length)

Is my destroyer.
Turns mine to wax.
Hauls my shroud sail.
Shall clam her sores.
And I am dumb to mouth unto my veins
And I am dumb to tell the hanging man
And I am dumb to tell a weather's wind
And I am dumb to tell the crooked rose
And I am dumb to tell the lover's tomb
My youth is bent by the same wintry fever.
The hand that whirls the water in the pool
How of my clay is made the hangman's lime.
How at my sheet goes the same crooked worm.
The lips of time leech to the fountain head;
Love drips and gathers, but the fallen blood
How time has ticked a heaven round the stars.
How at the mountain spring the same mouth sucks.
Stirs the quicksand; that ropes the blowing wind

The force that drives the water through the rocks
Drives my green age; that blasts the roots of trees
Drives my red blood; that dries the mouthing streams
The force that through the green fuse drives the flower

CONCLUSION

If a pedagogically informed text manipulation tool were created with deformative reading in mind, it would need to be adaptable enough that users could generate new approaches to analysis as discoveries are made during the deformative journey. Many of the tools created explicitly for text manipulation have serious limitations in this regard. What they do provide is a means for handling very large swaths of information in an efficient and organized way. Additionally, whatever discoveries are possible within their limited frameworks are made expeditiously and with easily reversible outcomes. A successful tool would, borrowing from Bass's breakdown of Constructivist goals, "[e]ncourage self-awareness of the knowledge-construction process." Without the means to tweak queries based on results, it is difficult to develop the type of agency that engenders self-aware knowledge construction. Of course, deformance does not depend on information technologies for its success.

There is a current need for a tool that incorporates the practical text manipulation patches in Text Mechanic, with the robust poetical database of poetry.com. If packaged in an adaptable form capable of user manipulation, with an interface and experience design informed by Constructivist theories, it would go a long way in reinvigorating the study of poetical works through deformance. The goal, after all, is not to arrive at the truth, as science strives to do. In literary criticism, as in humanities studies generally, the goal has always been to "arrive at the

question.”⁶² And pedagogically, the goal is to ensure that students continue to have the ability and interest in asking the question at all. Text deformation, I hope it’s clear, can be useful in that unending mission.

By one definition, “deformation” implies nothing more than the basic textual operations by which form’s mutable variations are authorized time and again—functioning as a straight-forward indicator of change. But any reading that undertakes such changes (as all reading must) remains endangered by the possibility that deformation indicates loss of some sort, or corruption resulting in illegitimacy. Put another way in the form of a question, can any deformation or interpretation be “wrong” or “off base”? Or, mis-directed? Can students be taken far afield or goaded into complicity overtime as text deformation as a method becomes overly familiar? These concerns are legitimate. However, I would argue, for pedagogy that utilizes text deformation critically, the objective is to encourage the student to continue to have more active and rich educative experiences, to teach the student how to learn, not necessarily to say that their interpretations are “true.” This distress over the potential for breaking faith with the poetic text may need to reorient itself toward improved faith in the capacity of subjective engagement for liberating the potentialities of meaning. And, that faith can begin with a renewed confidence in the capacity of our students to take on the responsibility of their own learning.

⁶² Ramsay, *Reading Machines*, 56.

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