Gift Song

I will care for you and
give you lots of grain doors
with attractive stampings. Grain doors
held back grains once

and slid open to create hourglass effects
above, like Egyptian traps.
Now, they hold back light and air and create
a contrast with minimal seatings and shelvings,

which stand quietly and wish to jump
out the window but can't.
Grain Door. Grain Door.
They will be white and wear brightly rusted corners.

Snakes won't get to you.
The doors will sit flush
with the floor and will need no pillows
to dampen inside voices or soak

up seeping flood waters.
Badgers won't get to you.
The grain doors I give
you will glide

through an audible succession of clinks.
What you have will stay and what you don't
have won't get to you. I'll miss you.
That won't change. I wish I'd dug

away from you
so a tunnel connected us,
a tunnel for lying in
at night.

Slippage, Spillage, Pillage, Bliss:
Close Reading, Uncertainty, and Machines

Many literary scholars who study and use digital technologies in their work nonetheless claim that they "don't do Digital Humanities"—including, quite recently and in those words, a young colleague of mine, a technological sophisticate whose English Department courses on narrative in video games are overflowing with computer science students. When I myself was asked by Oxford computer scientist Min Chen to join him on a poetry project, one goal of which would ultimately be to create a visualization tool to aid poets and poetry scholars in the close reading of poetry, I told him to find someone else. "I don't count nouns," I said.

Whether or not it is accurate, the perception persists among many of us engaged in research and practices at the heart of the Humanities—close reading, textual theory, the writing of poems—that Digital Humanities research concerns itself primarily with the quantification of texts or their features rather than what we may most care about: the qualitative experience that arises out of textual engagement, which my colleague Scott Black describes in conversation as the "slower, less narcissistically networked, and less *productive* practices of attention" (my emphasis). What Black values is "literature as reading, reading as attention: and the humanities as a space for those less instrumental, even useless, experiences of wonder and enchantment."

As a seeker of "useless experiences" myself, I have thought of the computer as relentlessly utilitarian, driven to help me perform as much work as possible as quickly as possible and at the same time to distract me from my work, insistently—and in both driving and distracting me to keep me from allowing myself to become fully absorbed and therefore "productive" in the fullest and the happiest sense. In most activities, whatever time the computer saves me it simultaneously usurps for itself, so that the browsing I might be doing in the fields of enchantment is given over to another kind of browsing, in which my purpose, or purposefulness, is given, or taken, over.

But I have come to rely on the machine, gratefully or grudgingly, for activities I understand to require quantification. Many visible and valuable gains the computer has brought to Humanities research have been achieved through just such activities, archival work, work tracking specific words as they come in and out of usage, and work on authorship being examples. As important as the gains in these fields have been, and as laborious to achieve, these areas represent for the field of Digital Humanities low-hanging fruit: both the potential value of computers to the work and myriad potential paths to extracting that value have been, though not always easily or immediately

fulfilled, at least apparent. These activities can be largely addressed with minimal adaptation by existing digital tools, so don't require the development of new computational strategies, much less new frameworks or paradigms. Users don't have to push the tool to get it to perform its tasks—and neither, in performing them, will the tool push us, theoretically or otherwise.

Because the computer hadn't seemed to be obviously adaptable to our own research goals, which are centered around close reading, at the beginning of this work, which has led to the development of two different but complementary approaches to using computers to visualize sound in poetry, my research partner Julie Lein and I were skeptical about giving the computer more space in our lives than it already had taken. We feared that when we applied computational tools to our actual scholarship, we would be tempted to let it shape both how we work and also the work we do, in a way that might be detrimental. The risk we saw when we began is that, as digital tools became more available to us, we would limit our work to what the tools could already do, rather than creating new tools that address our existing urgent needs or that enrich or extend the values and practices that are, and we believe should remain, at the heart of humanities research. Indeed, our thinking about our work, and even our processes, did change as we adapted ourselves to the needs of our colleagues and their hypnotically humming boxes. However, we also found that these adaptations, directed as they were toward helping our colleagues create tools that would in fact address our existing practices, had the potential to enhance rather than detract from those practices.

For me, then, since my initial, somewhat skeptical response to Min's generous invitation to join a DH project on poetry with Oxford University and the beginning of a subsequent project with computer scientists Miriah Meyer and Nina McCurdy at the University of Utah, it has become clear that doing the work itself—i.e., describing to computer scientists how poems operate and what I care about in them, and looking at and responding to their digital interpretations of what I say—is interesting and useful. It has also changed how I think and therefore talk about poems. More recently still, the computer scientists have begun, in response to these conversations, to develop tools that are likely to become in and of themselves useful, though not always in the ways I might initially have expected.

Precision and Interpretation

The earliest version of Ezra Pound's "In a Station of the Metro," published in *Poetry* in April 1913 and appearing in this form today on the website of the Poetry Foundation, which publishes *Poetry*, looked like this:

The apparition   of these faces   in the crowd :
Petals   on a wet, black   bough .

In Pound's account of how the poem came about, "How I Began," originally published in *T.P.'s Weekly* on June 6, 1913, the poem looked like this:

The apparition of these faces in the crowd :
Petals on a wet, black bough.   (215)

In his famous 2014 essay "Vorticism," the poem adheres to the form of a famous Moritake hokku, represented by Pound in the same account as follows:

The fallen blossom flies back to its branch:
A butterfly.   (286)

Over the next few years, Pound made small adjustments to "Metro," such as adding, then removing, a comma after "petals." By the time the poem appeared in the first edition of his collection *Lustra* in September of 1916, it had taken the form most of us know, essentially the *T.P.'s Weekly* version, but with the colon replaced by a semi-colon:

The apparition of these faces in the crowd;
Petals on a wet, black bough. (53)

I will say more later about how Pound's decisions help make "Metro" the poetic experience it is. What matters for now is how Pound's obsessive fiddling demonstrates the care and precision poets exercise when they are making poems. In contrast, poets can be remarkably imprecise, not to say slippery, when talking about poetry and about the process of making. To describe a poem, as Wordsworth famously does, as a "spontaneous overflow of powerful emotion, recollected in tranquility" may resonate with poets and readers in that it seems to capture an aspect of what the poetic experience feels like. In addition, his description contains implicit advice for the poet about when to write, or out of what kind of mood, or what kind of overall effect she should be trying to achieve. But it doesn't give us any information about how this "spontaneous overflow" works or what kinds of movements or operations might help it succeed. Wordsworth's definition of poetry appears to require of the poet only that she sit and feel (or, more precisely, re-feel) some unspecified emotion; it acknowledges neither the need to write anything down nor even the existence of a hypothetical reader. Recollection alone apparently leads spontaneously to the emotion's being made present; what is elided and obscured is the practice of composition.

As for his own practice, Wordsworth began to write *The Prelude* in 1798, published a version in 1805, then continued to rework the poem until his death in 1850. During the fifty-odd years he was obsessing over *The Prelude*, he was failing to make progress on *The Recluse*, the poem *The Prelude* was meant to be prelude to. In other words, his practice acknowledges in a way his famous definition does not what is for most poets the central fact about poems: they are acts of language, comprising words and other symbols selected and manipulated via syntax to create effects, even experiences, both for the dreaming pleasure of the poet in the act of writing and, the poet hopes, for the dreaming pleasure of the reader encountering the poem.

As Auden pointed out in "Squares and Oblongs," poets (and presumably poetry readers) are "passionately in love with language" (171). Poets like the specific things words can do, generally when they come into contagious proximity with other words, where in their ability to infect and inflect each other they become mobile, chimerical. This quality of language enchants us; and, though it's impossible to take advantage of it without exercising deft control, it is almost as difficult to describe without resorting to metaphor. The way we like to speak about poetry reflects and absorbs the things in it we most love: its mutability; its qualitative, experiential nature; the way in which the success of a particular gesture in a poem always depends on how that gesture (colon or semi-colon?) interacts through syntax with every other gesture, making it impossible to pinpoint any single element as *most* vital to the poem's success. It appeals to our sense of poems as somehow magical—and perhaps therefore of ourselves as magicians. But our vagueness is also both limiting and in many ways inimical to the close-reading practice that many contemporary poets espouse.

Pioneered by I. A. Richards and William Empson early in the 20th century and undergoing further development by the mid-century New Critics, close reading itself, as we understand and practice it, arose out of an effort to work toward something like a greater precision in interpreting poetry, explicitly offering a more "scientific" approach to reading based on the idea that poetry, like any other phenomenon, is subject to analysis, and that such analysis can give a reader insight into its meanings. In 1967, E.D. Hirsch wrote in *Validity in Interpretation* that an interpretation of a poem, or "an interpretive hypothesis," as he calls it, "is ultimately a probability judgment that is supported by evidence" (180). If the term "probability judgment" acknowledges poetry's indeterminacy, the assertion that the judgment must nonetheless be "supported by evidence" suggests that this indeterminacy operates in regard to and is limited by a certain range of parameters a skilled reader can discern within the poem itself. To Hirsch, this reader was responsible less to her own experience than to the intentions of the poet.

Hirsch was responding in part to the textual "interventions" of a new generation of theorists, also close readers, also engaged with the complexities, paradoxes, and ambiguities inherent to poetry and indeed to language, even—perhaps even mostly—when it is deployed as precisely as possible. Indeed, much of the literary theory of this period, as devoted as it was to indeterminacy, also relied, perhaps all the more, on readings that are not only deeply interpretive but proportionately precise. Such readers, however, were more interested in the slipperiness and indeterminacy of language than in its legibility—and especially in how and where such imprecisions remained outside the control of a writer and so constituted not fulfillments but betrayals of any meaning the writer might have intended. If the New Critics were the positivists of literature, the theorists who came after were like the young physicists of the time, inventing a new language to describe an underlying reality nobody had ever before imagined, one engaged in its own perpetual undoing.

Still, in my view, the New Critics and the theorists who followed hard on their heels positioned the reader vis-à-vis the poem in similar ways, both relying on the reader to tease out writerly intention and meaning, whether to construct it or to deconstruct it. Either approach requires from the poem under examination a level of complexity that can be created only through remarkable precision in the poet's use of language, even though that language can never be brought entirely under the poet's control. Thus, the pleasures of poetic experience reside in the puzzlement or even wonder that arises from the mystery of a riddle more than from any answer we might essay. What the scholars in question leave out of the equation, then, and where I part ways with Hirsch, is first the poet's perpetual habit of undermining the meaning of her text by intentionally creating the conditions for its undoing, and second the role of the reader, who is engaged, again because the poet so intends, in that poetic unraveling—not in diagnosing or catching out the poem, but in troubling, inhabiting, and experiencing it as it works through, and out, its syntax. The reader, as she interacts with a text's movements and meanings, activates both those we may mark with confidence as intended and those we may not, creating the space for both to reside together.

Meaning and Machines

The emphasis of scholarly reading has at times been, quite naturally, less on observing how elements and features are built to operate together as a complex in the poem than on teasing out the *meanings* that arise from that complex, whether an interpretation reveals the meanings that the poet intended or those that are beyond or even contradictory to those intentions. I am increasingly interested in the *operation* of the poem's complex, in looking at its moving parts and their relationships to each other not only as "evidence"

that might point me to some larger conclusion but also as interesting and productive in themselves. In this, I share an affinity with the critics Julie discusses in her essay who are engaged in "surface reading" (see Lein, this issue). It may be that an interest in this kind of reading is a natural outgrowth of reading alongside computers—perhaps describing poems to computers (or their handlers) leads us to focus on those features that are amenable to such description. But I connect my own interest in poetic operations, which precedes the computer work by decades, to the fact that as a poet, like any magician who wants to learn all the tricks of the trade, I am riveted by technique.

Since a poem's meaning and its operations can't actually be separated, this focus on operation is a matter of emphasis only. If the poem is a "machine for meaning" as a watch is a machine that allows us to locate ourselves in time, I am as interested in the "machine" part as in the "meaning" part. Of course, I also believe that looking closely at the machine can give us deeper insights—not only, say, into how a specific watch works to tell its time, but into something larger and more mysterious, having to do with the very nature of its, and our, engagement with time and therefore mortality.

The paradox at the heart of poetic language, as we have noted, is that it deploys maximum precision in the service of maximum complexity, and therefore of sometimes wild indeterminancy, on the levels of word and syntax. I return briefly to our two kinds of scientists: the positivists and the quantum physicists. In "Problems of Description in the Language of Discovery," Gillian Beer compares scientific and literary language, noting that scientific language tends to operate at two poles, either embracing or eschewing the metaphor and committed play of poetry. The necessary if never quite achievable intention of strictly scientific writing, she argues, is to preclude any meaning beyond the intended one, to become "univocal and unireferential" (157).

The work of poetic language, in contrast, is to deploy all possible *productive* meanings across the space-time of the poem. The question of what is and isn't "productive" is both important and provisional, involving Hirsch's "probability judgment," but I will leave that, and whether unproductive meanings can be disabled, for another discussion. As Julie also notes, the complex of meanings available to a word within a poem is activated by context, as the poem puts the word into play with other words via syntax and devices like rhyme and meter, metaphor, allusion and etymology, and even punctuation (see Lein, this issue). In turn, the reader brings to bear on the poem her own experience, and may complicate matters further not only by engaging with a word on various levels beyond the literal, but by bringing into the poem her own unique history with the word.

The metaphor of a poem as "a machine for meaning" has been applied to various art forms and also to memory as well as to language. The tension between precision and indeterminacy is embedded in the term, which takes into account both the idea of moving parts precisely arranged and the idea that such an arrangement might be subject to dismantling, analysis, and reconstruction, perhaps in a different shape. Whether we turn out to be children who have taken apart our fathers' watches and have no idea how to get the parts back together, or savants who can intuit new subtleties or new configurations, new possibilities for reassembly, always remains to be seen. Beyond this, of course the question of what meaning itself might be or entail is fraught at best. Thus, this particular metaphor for poetry ignores the fact that the poem, though it seems bounded, lives entangled in and extended by a context that cannot be precisely defined—a little bit, though not exactly, like the way a watch must be set according to time zone and the preferences of its user (mine is always ten minutes fast, wherever I am in the world).

What I mean to highlight is the essentially metaphorical nature both of poems and of how we talk about poems. Metaphor is crucial to the poem's ability to offer a rich experience, and equally important to our ability to characterize that experience; but inherent to the way metaphor works is that it also always, as when we call a poem a machine or an emotion, fails. The delightful trouble with metaphor inheres partly in language itself, but poems, being insistently metaphorical in their operations, offer an extreme case. An important question when it comes to understanding poems (as opposed to feeling as if we do) is that of when metaphors, including the ones I am using here, are "useful" in the practical sense and when not. We compare poems to machines and almost never machines to poems, precisely because the machine is bounded as the poem is not. Unlike a poem, which is different in the hands of every reader, a machine must as a rule operate in the same way every time if it's going to serve its purpose.

Teaching Machines, and Their Makers, About Poems

Given the lack of immediate relevance of existing digital tools to my own work and to Julie's, our first team decided to tackle the problem of creating a visualization tool meant to help poetry scholars and poets in close reading by visualizing the interacting poetic features in poems. Even the best (in our view) existing tool for visualizing individual poems, Myopia, relies not on enhancing the reader's real-time, qualitative experience of a poem of her choosing, but rather on providing, through meticulous hand-coding, the existing knowledge of one particular scholar, Laura Mandell, about a preselected poem—specifically on naming the figures and devices in use. Because Mandell's knowledge is deep and thorough, Myopia is extremely

useful as a pedagogical tool; however, it leaves little or no room for the kinds of exploratory experiences Julie and I, along with many other readers of poetry, most value.

To teach us about poetry in a meaningful way, a computational tool must be able to engage the richness and ambiguity of a poem in order to enable and enhance the reader's interaction with it. But before a computer can teach us about a poem, we must learn to teach computers about poetry. Thus, we need not only to understand what about poetry can actually be quantified, but more importantly to understand with previously unpursued precision what the reading experience entails: not only what a poem does, but how. Whether or not a poem can be pleasurably described as a "spontaneous overflow," such a description, leaving both words and the reader out of the equation as it does, can't help us figure out how poetry works—which is also a pleasure. The act of interpretation through conventional close reading brings us closer, but since it focuses on meaning and not on operation, on what is generated and not how, it doesn't quite get us there either.

Of course, the computer scientist, not the poet, teaches the machine. What, then, do we need to tell computer scientists about poems in order to help them do this? And if we can even figure out what computer scientists need to know about poems to help us, can we ever be precise enough about poems to tell them? Our collaborators at Oxford, and later at the University of Utah, needed to know not only, yes, what poems are "like," but also what *exactly* we wanted the computer to capture—a question I needed first to teach myself how to answer.

The work began with a Digging into Data grant, awarded by JISC in the UK and the NEH in the U.S. to a team comprising computer scientists led by Min Chen at the e-Research Centre at Oxford University and poet-scholars Julie Lein and myself at the University of Utah. The issue of specificity became foregrounded for me when, at our first meeting in Oxford, Min Chen asked me what—and he meant what *exactly*—I meant when I talked about "poetic time," a term I have long enjoyed tossing around but had never actually tried to define with any kind of precision. This question was one of many the answers to which I "knew" not consciously but intuitively and practically, in ways I hadn't articulated. When, in response, I first wrote out Louise Bogan's "Night" on the whiteboard, I thought I was going to say something about the temporal development of the poem's imagery. But we quickly detoured into sound, mostly because we could do this more precisely, following the long "o's" through the beginning of the poem and watching them change into other sounds in a movement that operates both forward and backward in the poem, and so enacts the surges and recursions of poetic time. Much later, we were led to look at the shifting, clustered repetitions of sound beginning in "estuaries" and "breathes" and moving through "restless"

and "inlets." Here sounds don't so much repeat as overlap; as they enact change and delay across syntax, they keep the time of the poem, showing us how, as Julie observes, "time emerges through movement and rest" (see Lein, this issue).

This discussion led to our initial focus on visualizing sound, and also eventually to the overarching metaphor for our work thus far, the one we keep returning to: "flow," which we define as *a fluid (or fluids) moving via its linguistic devices and figures through a defined space.* Of course, this definition is metaphorical. A poem is not a fluid, but may behave through its syntax and devices as a fluid does—as might also traffic, or neurons, or patterns of migration, all of which can also be described in terms of "flow." In this, we are reminded yet again that metaphor is at once precise and imprecise; it must exercise imprecision (the simultaneous stickiness and slippage between one thing and the other thing it's being compared to) with as much precision as possible, so that both the points of likeness between A and B and also the places where likeness fails are revealing.

What we mean when we describe poetry as engaging flow, then, is this: though its movement is highly structured, poetry offers the reader immense freedom to create the conditions of its structuring through reading, which brings the poem into time by releasing the turbulences captured within it. The metaphor of "flow" also illuminates our need to identify not a given poetic element in a static way, but rather how the element becomes part of a complex of relationships that enables a given poem to move in time. This is a profound question, one most computer tools, like most poetry textbooks or high-sounding definitions of poetry, don't address.

Further, once we identify those interactions that enable a poem to move—or, as I have meant to suggest, that enable a reader to move a poem—we need to be able to describe them, to people and machines, both in isolation and as they work together. As this interaction is, in its essence, qualitative and experiential, at once mental and physical, it also may be irreducibly complex. Certainly, it can seem so when one is actually trying to reduce it. If sound emerged as being a poetic feature that, while finally not separable from other components within the poem, could at least be pulled out and looked at in its own terms, it also had elements that seemed potentially to be subject to computer analysis. It is possible to isolate sonic features from other features (acknowledging of course that the sonic features of a poem are constantly at play with every other feature) and also to isolate specific sounds.

Seeing Sound

The tool we developed out of our discussions with the Oxford team is called Poem Viewer. Poem Viewer visualizes an array of poetic features and elements, and does so in real time with any poem the user chooses to load into the program. Beyond this technical innovation, for Julie and me Poem Viewer is most successful and innovative in its treatment of sonic features. Conveniently, as Martin Wynne, one of our collaborators at Oxford, pointed out, existing dictionaries and linguistic alphabets can automatically identify where in a poem certain sounds occur and recur. Wynne also noted that the International Phonetic Alphabet, a linguistic alphabet, could tell us where in the mouth a specific sound was made, a feature that became useful in indicating a poem's sonic turbulence *as enacted by the reader's body*. Visualization scientist Alfie Abdul-Rahman, another member of the Oxford group, subsequently developed pictograms showing where in the mouth a sound takes shape (see fig. 1).
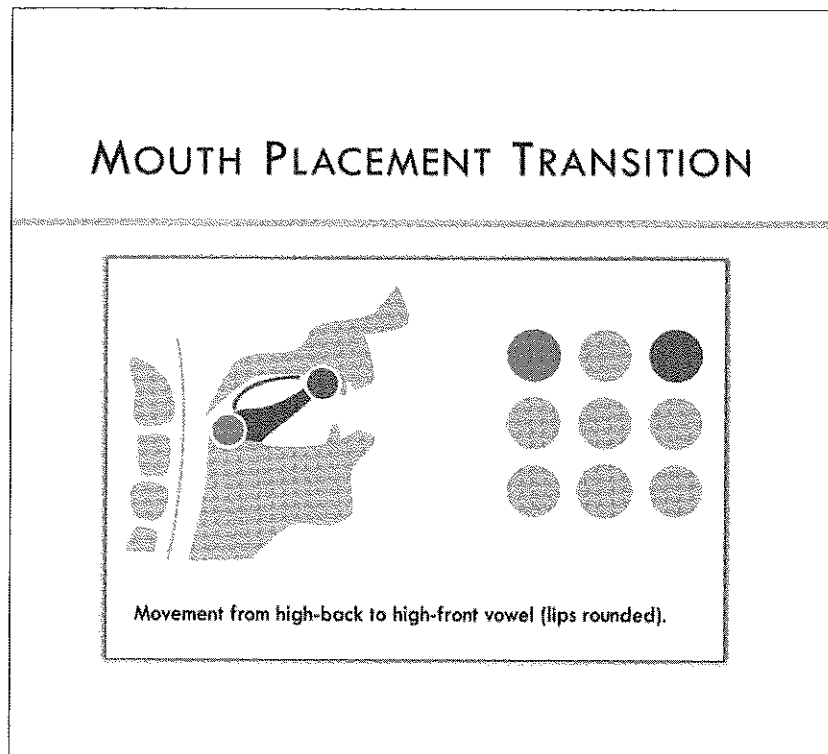

Fig. 1. Pictogram illustrating mouth placement transition

Within the tool itself, the pictograms, which appear above the text, show mouth placement both spatially and through color; because they show the placement both of the current and the previous sound, a viewer can see how much turbulence the mouth undergoes as it moves from vowel to vowel and consonant to consonant in time (see fig. 2).

Our computer scientists initially tested the tool by feeding into it texts ranging from poems to editorials to instruction manuals. Used to thinking of poems as musically "smooth," they were surprised to discover that the poems displayed the most turbulence and the instruction manuals the least. This made sense to Julie and me, since we already understood how broad a range of sonic effects a poet might deploy within a single poem. But we wondered whether the tool could show us anything about poems in relation to each other. Working with Poem Viewer to read Pound's "In a Station of the Metro" and, again, Bogan's "Night," we noticed that Pound's imagistic two-line poem did not register nearly the sonic play, or turbulence, of Bogan's free-verse lyric.
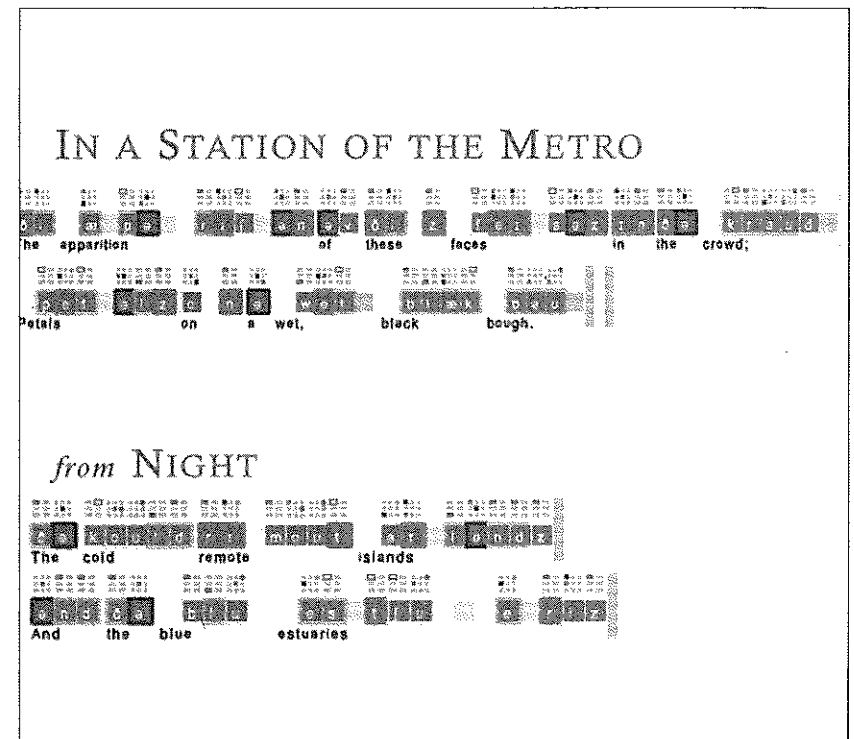

Fig. 2. Poem Viewer shows that Bogan's "Night" is more sonically "turbulent" than Pound's "In a Station of the Metro"

This made us wonder whether how a poem situates its priorities in regard to sound and image might influence its sonic turbulence. Understanding that most poems use sound and image together, might a pure lyric—which I would define for our purposes here as a poem that commits itself to sound as both technique and topic—be more turbulent, or differently so, than a poem that prioritizes image over sound?

For the study Julie and I performed in Utah, we found twenty-two short twentieth-century poems in English whose associations with image and sound are especially clear. Some, by writers connected with the "imagist" and "deep image" schools, rely for their effects heavily on transformative visual details and metaphors; others, both free-verse and formal poems, announce their relationship with the lyric by using "song" in their titles. In general, the "songs" in our test group displayed a higher base-line level of sonic turbulence than the poems devoted to image. The "lyric" group also demonstrated a notably higher degree of repetition, even in free-verse poems.

For a scientist, and perhaps for some digital humanists, a result of this kind is significant and reportable, however preliminary. For Julie and me as poets and readers—and for us this is the crux of the matter—an observation like this one, whether we make it about a single poem or a group of poems, is not an end but a beginning. We mean not to replace our judgment with that of a machine, but rather to be sent by the machine back into the poem and our engagement with it. For me, the "mouth placement" feature of Poem Viewer accomplishes this. While I can use its glyphs to see at a glance how sonically turbulent a poem is, and even to "know" where in the mouth the sounds of a poem are clustering and moving at a given moment, the overall impact this has on my reading is to get me to check the results for myself and, in checking, to investigate their implications. In a way I never quite did before, I now literally chew on the poems I read, rolling them around in my mouth—both those I have up on the tool in front of me, and those I don't. The tool *shows* me that something is happening at a specific place, and this is useful. But it has also made me even more aware of my body as the physical site of the action of the poem; it has reminded me that the poem doesn't merely exist "out there" but engages me on every level, invoking me both as mind and as creature.

Poem Viewer also made clear that, to keep us as close as we want to be to the poem, a tool would need not just to show us the movement of one sound into another but also to do so within and across what we came to call the "poem space," the integrity of which is essential to our experience of reading, and which I think of as being both physical (the space a given poem takes on the page) and psychological (the dreaming, mobile space I occupy and reconfigure when I enter the poem in the act of reading). The partnership around our new tool, Poemage, which Julie and I are working on with com-

puter scientists Miriah Myer and Nina McCurdy at the University of Utah's Scientific Computing and Imaging Institute (SCI Institute), evolved from a commitment to honor just this space, not only the shape of the poem on the page and its internal actions and relationships but also, wherever possible, its engagements with the reader, as we continue to work on the tractable but difficult task of visualizing how a poem sounds. As Julie and I encountered a series of prototype visualizations and representations, always accompanied by the question of whether they showed us anything we really wanted to know, we became increasingly focused not on what features of a poem we might be able to identify and highlight in isolation, but rather whether we can identify how and where these features become, through lively interaction across the space and syntax of the poem, *interesting*. While any tool dealing with sound clearly must, for example, be able to show us where exact end rhyme is occurring in a poem, end rhyme is, first, a feature an experienced reader can identify almost as quickly as a machine, and, second, rarely in itself interesting. Subtler variations like slant rhyme and pararhyme are more interesting. Still in its early "sketch" stages, Poemage shows a variety of rhyme types, one at a time or in combination (see fig. 3).
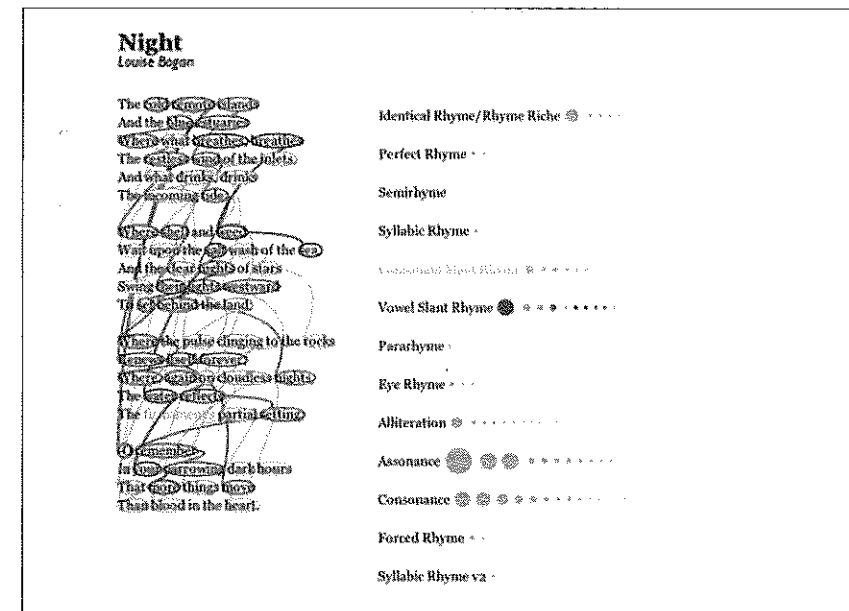

Fig. 3. This screen shot of a sketch version of Poemage shows a variety of rhyme types in "Night" and also allows the reader to perceive at a glance which types are dominant.

"Interesting" is, we recognize, a problematic word—imprecise, in fact—but we use it here to refer to something that has the capacity to arrest, to absorb, to cause the reader to enter what is now called a state of "flow" by entering the flow of the poem.

Still earlier versions of Poemage showed us that none of these kinds of rhyme alone can capture how a poem arrests us with sound—for example, our favorite sonic movement in Bogan's "Night," from "estuaries" to "breathes" to "restless" to "inlets," about which Julie will say more (see Lein, this issue). Most interesting, we then realized, are places where sonic and other poetic devices rub against each other or overlap rather than reproducing themselves—and, not surprisingly, these are precisely the places where we find turbulence. It is this insight that, after a lot of discussion and many drafts of designs, allowed Meyer and McCurdy to develop a new computational framework for analyzing sound in poetry, one that identifies these overlapping sonic moments and how they create a poem's evolving sonic identity. In other words, as Julie will discuss, they deal with these moments in their complex evolution, in time, within the poem (see Lein, this issue).

Image Evoked in Time

I've already suggested that the benefits of working on the tool don't inhere only in what the tool itself can tell me—far from it—or even only in what a tool sends me back to the poem to experience more fully for myself. The very need to think about poems precisely enough to teach a machine to read even one poetic operation has led us to new insights about poems, both theoretical and specific. While our first set of discussions led to our focus on sound, I have not let go of the desire to think as precisely as possible about other poetic features, like image and metaphor, and how they operate—features that at the moment are not yet tractable (because they are, computationally speaking, "open problems"), but that we hope to begin to approach through our work. Perhaps even more important is the question of syntax, which creates the linguistic field from which everything else in the poem arises and across which all its devices, including sonic devices, play.

In my considerations of how sound operates across this field, I kept inevitably returning to what Poemage, in dealing with the poem space, already so beautifully captures: how, in a poem, sound becomes inherently recursive, suspending the reader in place even as she moves forward via her reading. Barthes coined the term "dilatory space" (84-86), *un espace dilatoire*, to describe narrative actions that inhibit forward motion and thus are closely related to the more inherently recursive movements of lyric. Peter Brooks describes it as "the space of retard, postponement, error, and partial revelation," which is also "the space of transformation" (96). One difference

between most prose and most poetry is precisely in the way poetry defines its own space formally. Thus, when I consider the term "dilatory space," I imagine not only a sort of willful postponement but also a movement that is at once bounded and dramatic: the pupil of an eye opening into vision that can be dizzying in its velocity.

As I considered the recursiveness of sonic action, I began to apply my thinking to how our conventional idea of the image as static or at least as enacting a kind of stillness in the poem is not only imprecise but inaccurate, belying both how image takes its shape or its place through the linguistic and formal operations of the poem, and also our experience of it. For convenience's sake, we talk about images in poems as if they were as stable as images that come directly to the eye, but we should know better. Poetry relies for its effects and pleasures on paradox, and here is no exception: like everything else in the poem, the image cannot be still, because it is built into the operations of language, of syntax, which works across lines and stanzas in and through time.

Indeed, why would poems engage images only to repeat what has been already laid down, in a more immediate way, on canvas, in marble, on film, or on a screen? And if these other art forms are more accurate than poems at depicting the world as our eyes see it, why would poetry need to attempt such depictions for itself? The question is not, then, whether there is a difference between poetry and visual art forms, but rather in what the difference inheres, in how we experience the image differently when it comes to the brain through language rather than through the action of light on the eye.

One difference is built into how the various media determine our apprehension of an image and therefore what the image becomes in our perception. If we are looking at an actual red wheelbarrow, for example, we feel that we perceive its image both directly—we are looking at the thing itself—and all at once. We may know intellectually that light takes time to reach the eye, but its brief passage is irrelevant to our experience. And we may know in theory that what we see in our mind's eye is likewise constructed by our neurons as they respond to the light entering the eye, then shuttle it from the retina of the eye inward to the retina of the brain, where it takes its shape on our perception. Even if we are looking at an actual wheelbarrow, then, our image of the thing we see quite literally exists only in our heads. Though the processes of perception take time, the time they take is so fleeting that we don't perceive it; we experience our apprehension of the image as instantaneous.

Likewise, if we are looking at a photograph or a realistic painting of the same image, we immediately apprehend not only the image that is the painting or photograph but also our recognition of what the depicted object is; we may even first perceive the depiction of the wheelbarrow *as a wheelbarrow*,

not as a depiction, unless we are self-conscious observers approaching the image *as* representation. In this case, only on rumination, or if the depiction itself calls attention to its constructedness, will we think of the image as mediated—as a good or bad representation of the wheelbarrow, as causing us to think about wheelbarrows in a whole new way, etc. Further, and importantly, in both cases—looking at the wheelbarrow, looking at a realistic depiction of the wheelbarrow—we experience ourselves as apprehending the wheelbarrow in its entirety: shape, position, color, condition. Here is a fundamental difference between looking at an actual wheelbarrow or even looking at a wheelbarrow realistically represented in a visual medium and encountering a wheelbarrow, even an apparently straightforward William Carlos Williams wheelbarrow, in a poem:

THE RED WHEELBARROW

so much depends
upon

a red wheel
barrow

glazed with rain
water

beside the white
chickens

Let's put aside for a moment Williams' manipulation of the wheelbarrow's entrance into the body of the poem. Even if, on seeing the title, we immediately produce for ourselves an image of a wheelbarrow, we process this image differently than one that comes to the eye as image, since language so obviously (if often to us still nearly invisibly) mediates our encounter with the object it invokes. We don't imagine that the words "red wheel barrow" actually *are* a red wheelbarrow. Nor will most readers, in translating the words into a mental image, produce a detailed, complete, and stable picture of a wheelbarrow, much less the (evoked but unmentioned) barnyard in which it appears. Rather, the image is different for each reader, depending on her experiences, memories, and imagination. The mind will generally not even do the work to translate the image fully, to present it as a singular, intact, or stable picture of a specific wheelbarrow. Not only is the image produced unique to the reader, then, but it is incomplete, impressionistic, essentially abstract. Because of this abstraction, the image even for a

given reader may be different each time she reads the poem, influenced by new or simply different experiences, memories, and impressions. It remains, in essence, an idea.

Let's back up still further away from the image, into the language that helps the reader create it, language the reading eye absorbs in time as it encounters words in their horizontal and vertical movement on the page, a syntactic movement to which the poet is subject but that he can also manipulate through line and stanza breaks. The language in both the poem's title and its body delivers the image of the wheelbarrow in two pieces of information: first, its color; second, its name. Unlike when we encounter an actual wheelbarrow or even its picture, the nature of language dictates that these two pieces of information reach our perception separately, the adjective "red" arriving a fraction of a second before the noun, "wheel barrow," to which it is attached. We hang onto the color in a momentary suspension, waiting for the object to arrive and fulfill it.

One might think a poet like Williams, committed to the image, to the thing, would do as much as possible to shorten this delay, to work against the dictates of language to allow the image to arrive in our minds as nearly intact as can be. But in the two lines in the body of the poem in which we encounter the object for the second time, not until just above halfway through, the poet uses his medium to manipulate, both visually and temporally, how we apprehend the object, encouraging us not so much to create it as to decreate it, then create it again. We have not only the inevitable delay as we wait to attach "red" to its object; we have an additional delay in the line break, which, coming in the middle of the words "wheel barrow" but without the hyphen that would conventionally be used to indicate a split word, also introduces intentional confusion about what the red object actually is, leading us, however momentarily, into misreading. Of course, at this point we are not *actually* misreading, since we still carry in mind the intact wheelbarrow of the title. Rather, momentarily, we enjoy the pleasure of being two readers at once, of engaging in a layered or cumulative reading comprising our original apprehension and its revision. By the time Williams repeats the same kind of gesture a couple of lines later, splitting "rain/water"; and creates still a third delay in separating the "chickens" from their color, we have become knowing readers, aware of and able to experience this confusion within the pleasure of satisfied expectation.

Time, then, is implicated in the production of this simple image in at least four ways beyond the ways in which it is implicated when we believe ourselves to experience the image directly. Some of these complications are inherent in language itself; others are introduced by the poet through devices (in this case line and stanza breaks working across syntax) inherent to poetry. Rather than resisting the interventions of time in an image created in lan-

guage, this poet works in precise ways to deepen and complicate them. What the poem depicts, as a result, is not an image of a wheelbarrow, but the poet's contemplation of his encounter with the object, and his consideration first of the meaning of the encounter and second of what it means to depict both the object and the encounter in language. This depiction creates the opportunity for yet another encounter, yet another opportunity for contemplation: that of the reader.

"The Red Wheelbarrow" seems as simple an image-making poem as one might find, eschewing overt gestures toward metaphor, relying instead on form and rhetoric to create its ambiguities. On the other hand, Ezra Pound's "In a Station of the Metro," drafts of which opened my discussion on precision, uses metaphor to intensify and complicate the temporal action of its image in ways that, in essence, "make" the poem.

Pound's title (though it too unfolds in time) places us into timelessness. There is no verb to indicate past, present, or future or to suggest an action— we are simply located "in" place. And the poem in its final version seems straightforward, comprising only two lines:

> The apparition of these faces in the crowd;
> Petals on a wet, black bough.

Again, there is no verb; action on the level of syntax is repressed. The poem and its "apparition" seem to exist in an eternal present, or perhaps I should say in *presence*, which is what the poem seeks: the presence of the visual specter.

However, presence and stasis are not the same thing. The image isn't present in the poem from the outset; rather, it must emerge into the place named in the title through language, an emergence that is enacted within the poem via metaphor, via the transformation of one thing into another through the apparently simple expedient of renaming it, in temporally distinct stages. Even the singular image of the poem's first line involves an action that implicates time, and in a way that is anything but simple. If a poem calls a face an apparition, we encounter a crowd of weary commuters becoming spectral, ghosts whose lives are invoked in the same gesture that marks them as already past. If, on the other hand, a poem (as this one does) calls an apparition a face, it reverses the temporal logic of ghostliness: the corporeal body arises from the specter, rather than the other way around. As in magical sleight of hand, the metaphor moves faster than the eye can see, but it does still take its time, turning one thing into another in the turn of a moment. Though we may on one level experience the "apparition" and the "faces" as

collapsed, as one and the same thing, there is an opening between them—a space that is as essential to the resonance of the image as the collapse is, and one that raises the question of temporal directionality in a very explicit way.

Then there is the movement from the first metaphor not merely to a second but into the larger metaphor that is the poem. This movement sets the second line against the first in a kind of equivalence, again transforming one thing into another. Here, the specters-turned-bodies become petals, still fresh but already fallen, intensely vulnerable to the passage of time, and, precisely because they send us backward to the image of the "apparition" that opens the couplet, also spectral.

Unlike in the Williams poem, the line break doesn't introduce impediments to sense-making or image-construction; rather, it divides the poem neatly into its apparent metaphorical halves. However, as we've already seen, the metaphor is neither neat nor neatly divisible—and the punctuation, as the early versions make clear, further complicates matters, with important implications for how the poem keeps time. About the decisions that led from the first draft to the second, I'll note only Pound's movement away from complication—one he affirms when (in a fleeting revision I have described but not included here) he adds, then quickly removes, the comma after "petals," giving up the desired emphasis in favor of grammatical simplicity.

The most significant of the revisions is Pound's last change, from colon to semi-colon between the two lines. Though it's often used to denote swiftness or movement, I consider the colon to be most importantly the linguistic sign of reciprocity, the equivalent of the equals sign in mathematics. If the mark is a colon, the poem creates a reciprocal relationship between the two halves of the image, in which each half is given its own equal moment of priority. A colon implies that the logical relationship between the two halves works equally well in both directions, backward and forward. Thus, when the colon is used, the odd reversed movement of the image in the first line— from ghost to body—is in some sense arrested. Yes, the poem still moves forward both spatially and syntactically, but the colon permits a perpetual series of flips. In magical terms, the frog who was once a prince can hope to recover his former form, assuming the kiss comes.

The semi-colon, on the other hand, insists that the poem move forward in time, even in the absence of any verb. Of course, metaphor by its nature resists this movement, holding its two terms in a sort of vibrating tension; like a magic spell, a metaphor always creates a fluctuation between its two poles. However, in the final version of the poem, the semi-colon prevents the two terms in the overarching metaphor from ever fully reversing. Unlike in the poem's earlier versions, we must take these lines in the order in which we get them. The petals retain the ghostly aspect of their former selves, but

finally we are left only with them and their implied passing—the relentless movement of time as one thing replaces another thing, to which it cannot return.[1]

Like "The Red Wheelbarrow," "In a Station of the Metro" is celebrated for its immediacy—or for its *impression* of immediacy. But like "The Red Wheelbarrow," it enacts an experience that unfolds and passes in time. Though each poem deftly maintains the illusion of an image that appears *as if* whole, the poignancy of the image as the reader experiences it lies not in this illusion's absolute success, but in its failure.

As it does with sound, our signature poem "Night" also illuminates ways in which poetic time operates through the movement of the image. Here, however, the image is repressed, its immediacy denied in the very gesture that seems to invoke it.

NIGHT

The cold, remote islands
And the blue estuaries
Where what breathes, breathes
The restless wind of the inlets,
And what drinks, drinks
The incoming tide;

Where shell and weed
Wait upon the salt wash of the sea,
And the clear nights of stars
Swing their lights westward
To set behind the land;

Where the pulse clinging to the rocks
Renews itself forever;
Where, again on cloudless nights,
The water reflects
The firmament's partial setting;

--O remember
In your narrowing dark hours
That more things move
Than blood in the heart.

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[1] There exists a small cottage industry in commentary on this poem in general and its punctuation in particular. Not all of its participants would concur with my reading.

In the opening lines, the islands and estuaries that, in a photo or painting, would be located and contextualized, even if that location was indefinable and the context obscured, are left suspended. The poem invokes but declines to show first the islands—dislocated, perhaps innumerable—then the estuary. They are placed beside each other syntactically, but their geographic relationship is rather confused than clarified by the "and." The adjective "remote" suggests that the islands are distant; the parallel adjective "cold" reinforces the sense that this distance is at least as much psychological as spatial.

In line three, the poem turns from image stilled and potentially (though not actually) observable to image in motion and in its essence unobservable. Movement enters the poem via two verbs, "breathes" and "drinks," but the poem complicates their actions by placing the verbs in an intensified present tense—"what breathes, breathes" and "what drinks, drinks"—in which presence is essentially doubled. However, these verbs take as their subject not a concrete noun but the indefinite pronoun "what," subsuming the actor into action only. We know what the actor does, but everything else about it remains indefinite. In being suppressed by the very action that expresses it, the pronoun participates not only in the poem's sense of mystery and unobservability but also in its developing temporality. Referring neither backward nor forward, the pronoun has neither past nor present, only provisionality; still, in its ongoing and repeated action it marks itself as operating within time. It may be, as Sharon Cameron says in reference to Beckett's character, that "the Unnamable . . . has no sense of time" (20), but in "Night" it is the unnamable that simultaneously invokes time and encapsulates it.

This specific action in "Night" is consistent with the poem's deceptively slow unfolding, its dilatory revelation. Likewise, though it repeatedly invokes the conjunctive pronoun "where," the poem refuses to land in place. Rather, unlike Williams' wheelbarrow and Pound's apparition, Bogan's landscape is *explicitly* in motion. The poem moves the reader through a dizzying range of points-of-view, from tight and narrow to vast and encompassing, locating us and as quickly dislocating us in relation to beach (invoked via "shell and weed wait[ing]"), pulsing water, relentlessly mobile sky, distant landmass. In this movement, the landscape as a whole becomes its own dilation, an expanding universe in which each body is held to every other through syntax and its containment in the poem's space, a kind of lyric gravity, even while it is unmoored and sent wheeling.

Only in the penultimate stanza do we get something like an entirety, when at last "the water reflects/the firmament's partial setting," and the poem brings sea and sky together, gesturing toward the dizzy vastness of space in preparation for its last unexpected move into the containment of the

body, where body as landscape emerges as the controlling metaphor of the poem. That the body, the poem's "what," is withheld until the final line increases the intensity with which it now asserts its presence, taking on the landscape's expansiveness even as it folds that landscape into a singularly intimate space—not even that of the body as a whole, but more specifically that of the heart. This small organ into which the landscape has been compressed expands and contracts, and in so doing it implicates not only the body through which it circulates blood but also the larger physical and temporal universe to which that body is connected, both metaphorically and, the poem suggests, in reality.

Though "Night" is committed to image, then, and develops through it, unlike in the other two poems image here is not the point. Rather, again image serves the encounter and experience of the reader. The landscape in "Night" is not meant to take our breath away with its sense of immediacy and vivid presence, nor is it meant by itself to bear the burden of meaningfulness. The scene it unfolds is less literal than psychological, its landscape not external but internal, requiring time to unfold and reveal itself in order to reveal the reader's self.

It will likely be some time before our tool can show us very much about the image, much less provide on its own a sophisticated analysis, even if we school ourselves to think of the development of the image only in regard to syntax and not in the context of metaphor. But we can already teach the computer that image at its most basic level engages concrete language: nouns, verbs, and words that explicitly invoke the senses. As we have with sound, then, we can begin to imagine a new framework for visualizing the image, one that can deal with language 1) as it operates in time, 2) as it uses visual (or, at an even greater level of complexity, other kinds of sensory) language, and 3) as it moves via syntax within the poem space from one sensory image to another.

Since the discussion of the image that happened here occurred without the direct intervention of a computer tool, one could argue that the tool is superfluous. However, thinking first with the tool about sound and then about what the computer needs to know to help me read image brought me to think about these poems through a new lens, and therefore also brought me to a new way of thinking about how the image works, one I hadn't used before but will use again, both in considering the image directly and in thinking about such devices as ekphrasis. This thinking arose not out of the tool but because of the tool, under the pressure of its potential presence. I hope this thinking will eventually help me to teach the machine what to show us about the image, and how.

Error by Any Other Name

Just as it's a mistake to think that the computer will relieve us of the need to read, it's also a mistake to think of it as delivering absolute answers about the poetic elements we use it to interrogate. When modeling, visualizing, or simulating the actions of any complicated process, the computer makes not only calculations but, yes, a series of "probability judgments" about what may be happening—judgments that may, to a greater or lesser extent, be in error. For scientists using computers in their research, this presents real-world problems. When a computer calculates patterns in the electrical activity in a patient's brain and creates from them a model to show a surgeon that epileptic seizures are originating *here*, for example, the amount of potential error in the model's "probability judgment" will determine whether the surgeon removes a pea-sized bit of brain or a piece the size of a golf ball, though the source of the anomaly might be the size of a grain of sand. Likewise, a small error or amount of noise in data can lead to enormous errors in predicting, for example, the path or intensity of a storm or a fire. Thus, the estimation and visualization of error has become an issue visualization scientists address both routinely and urgently.

One of the pleasures of reading and writing poetry arises from its lack of mortal consequence, which allows us to make not just a virtue but a pleasure from the necessary existence of the ambiguities and layerings that we call by names other than error but that operate in some of the same ways. One way to think of the distinction between what Beer situates as the language of positivism and poetic language is to consider how poetic language not only inherently but *intentionally* introduces "noise" and the attendant potential for ambiguity into poems by leveraging linguistic slippage, opening opportunities for attentive readers. Even an apparently simple poem may lead a reader into interpretations that the poem at once reinforces and undermines, that must be modified and corrected, that are laden with alternative readings or even apparent misreadings that may yet be productive. A reader is given the opportunity to make what might look like mistake after mistake, her forward progress temporarily impeded or even reversed by each of them. We've already seen how, in its lining, "The Red Wheelbarrow" invites us momentarily to picture a "red wheel." Another kind of opening occurs when two words are spelled or sounded the same way, as Julie points out in her discussion of the computer's error in reading "wind" (see Lein, this issue). Given how "Wheelbarrow" operates, the momentary "error" into which Williams leads us is clearly part of his point; whether or not Bogan similarly intended to lead our computer astray, "Night" is built so that the presence of the long-

i'd "wind" within short-i'd "wind" enhances our experience of the poem.[2] In both poems, even after the reader has "corrected" her temporary misreading and made it part of her layered experience, the less probable reading ghosts the poem, creating additional richness and pleasure.

Our ability to embed misdirection intentionally, to make it part of the playing field of the poem in order to be measured, experienced, and delighted in by the reader, is a luxury that allows poets and readers to approach questions about accuracy quite differently than scientists. As Stephen Ramsay puts it, "We are not trying to solve Woolf. We are trying to ensure that discussion of *The Waves* continues" (15). We seek not to close the gaps opened in reading, but rather to prise them open, to generate (returning again to Beer) as many productive readings as possible, at least partly through, as we've seen, the creation of multiple, sometimes conflicting readings. If a scientist develops one hypothesis to test, close reading, as my colleague Barry Weller once observed in conversation, comprises the generation and suspension of multiple, sometimes contradictory hypotheses, the answers to which may also contradict each other, are never final, and always give rise to more questions.

Despite the fact that such contradictions are not an unwanted condition of the work but a desired feature, such moments arise out of the same kinds of ambiguities in the data that create and propagate error through other kinds of visualizations and simulations. Thus, the fact that computer scientists have already developed techniques for measuring and visualizing such ambiguities creates an interesting opportunity. As the computer searches the poem, according to instruction, for repetition and variation in sonic or other elements, it identifies specifically those places where variations intensify or different patterns rub up against each other—in other words, where the potential for ambiguity or error is heightened—and marks them as potentially interesting. It can then tell us, based on statistics, how sure it is first that it has "read" accurately and second that the site it has marked is not simply messy or indeterminate but rather is turbulent in a way that will reward our attention. As the reading machine performs its "probability judgments" about the poem, engaging the poem's moments of slippage and uncertainty, we are free to explore these determinations, and to agree or disagree with them or to take their ghosts on board, in ways that enhance our interactive play within the poem.

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[2] Given its instructions and the overwhelming probability that any one-syllable word comprising a beginning consonant and "ind" will have a long and not a short vowel, the computer had little choice to make the "judgment" it did. Still, the proficient *human* reader would not make this mistake. Only the machine, or perhaps another non-native speaker, would default to this delightful error.

The accuracy of the machine's judgments, like those of a human reader, will be variable, depending on its programming, the quality of the data it is given, and the model it is using. Of course, computers don't have emotional lives or personal histories that, for good or ill, they can bring to bear on poems, at least not yet, though they can already learn from experience. Like a human reader engaging the vast complexities of language, the machine may be correct or incorrect; the interest is in the gap between what it thinks it knows or can quantify and what we perceive when we go to the page. In this sense, error, as inherent to the computer's processes as our own, reminds us how poetry remains constantly hypothetical. Meanwhile, the time may come when computers begin, on their own initiative, to engage poems for the reasons we do—for pleasure, for the arousal of mind and body. But there is no reason to think they will ruin things for the rest of us. We can pay attention to them or not, as we do with any other reader, good or bad.

A Time to Play

Clearly, as I've outlined in some depth here, working with and for the machine has altered how I read poems, shifting both my attention and my focus. But it has in no way diminished my experiences of poems. Though the thinking I've done about poetry in response to this project is thinking I probably wouldn't have done without the pressure of the machine, it is, somewhat to my surprise, in keeping with my lifelong practice of observing how poems operate, a practice that hasn't changed so much as it has intensified. The machine hasn't separated me from the poems in question; rather, it has carried me deeper inside them—and it has allowed me to bring the poems more deeply into myself, both into my mouth and into my imagination.

What about meaning, then? Or wonder? Can we know too much about a poem? Does imprecision in how we think about poems really preserve a mystery that enhances our relation to them? Do we ruin our experience of something beautiful, as Keats famously claimed about the rainbow, if we know how it works? In regard to the image as in regard to the rainbow, my own answer would be absolutely not. A more precise understanding of a poem's operations deepens its mystery rather than inhibiting it. One can't really get to the bottom of a good poem, not once and for all.

Even to begin to bring a computational tool for analyzing poetry into existence, then, I've had to relearn how I think and talk about poetry. Everything I've said about poetry so far I have learned, by which I mean *brought to mind*, from this iterative process of articulation, of saying *what I mean*. Thus, I have learned (often reluctantly) that some important things about poetry are after all subject to quantification, even enlightening quan-

tification. But what implications, if any, does all of this have for composition? The phrase "spontaneous overflow" suggests that poems come from within, independent of the poet's volition. My experience is different, in a way this project has helped me to bring to mind. I don't wait for words that express my emotion or experience to pop unexpectedly from some internal poetic jack-in-the-box. I attend to the world—poems, newspapers, books on mathematics, what my best friend says over red wine—looking and listening for language that creates unexpected connections, overlaps, and insights, the turbulence out of which pleasure might arise, even as it knocks me about. In my most delightful moments with the computer, the machine shows me relationships among words I may or may not in time have noticed on my own. It not only expands my word store, but suggests how various words are playing together, and so draws me into their dreaming realm. Here, as with reading, the tool is not an end. Rather it starts me in a place newly brought to mind, and changes how I think about reading and writing poems, and therefore, I guess, how I do it.

Finally, then, as I have already suggested, the computer teaches me that the poet and reader play, not the poem. Call the poem the playground, which provides measured space. Only a poet or reader, by activating latent turbulences, can make its ground move and so bring it back into temporality. Between readings, the poem lies inert, abandoned outside time; its relationships mean nothing until they are brought to mind.

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