Math and Metaphor: Using Poetry to Teach College Mathematics

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> Math is everywhere, and most people don't even realize it. For the longest time I found math boring and confusing—just a bunch of numbers and symbols jumbled together, or word problems with juvenile purposes. (For example, would I really care about the rate water leaks from a bucket?) When I realized the concepts were actually relevant, and could be used to solve relevant problems, my feelings changed. Many of [my] poems definitely reflect my shift in attitude, and my realization that mathematics can be incredibly interesting.
> —*Katherine, Fall 2007 Calculus I student*

IN THE FALL 2007 SEMESTER at the University of North Carolina, Asheville, I asked the students in my two sections of Calculus I to complete an atypical mathematics assignment. Each student was prompted to write a poem (a few students would end up writing several) offering the reader insight into her or his experience with mathematics. I have since assigned the same exercise to students enrolled in my Fall 2008 Precalculus course, with more or less the same success.

The goal of this assignment was not to craft lasting works of art, but rather to give my students an alternative discourse in which they could explore mathematical ideas. It is my belief that poetry may offer math students new means to explore the recondite realm of abstract mathematical concepts. The purpose of the present article is to demonstrate the role poetry can play in improving cognitive understanding and confidence in mathematics students, and to offer my own students' responses to and reflections on the aforementioned assignment as evidence for poetry's successful portrayal of that role. (More information on the assignment and the questionnaire used to obtain students' thoughts on the assignment can be found in the appendices.)

I would like to acknowledge the fruitful conversations with my colleagues that have informed my writing of this paper. Special thanks go to Professors Art Young, Dr. Mary Alm, and Dr. Karin Peterson. Furthermore, this paper would not have been possible without the hard work of students like Aurora, Katherine, Lisette, and many others who were willing to try something profoundly new and honestly and openly reflect upon their experience.

Why Ask Math Students to Write Poetry?

> The assumption that the languages of social science—propositional language and number—are the exclusive agents of meaning is becoming increasingly problematic, and as a result, we are exploring the potential of other forms of representation for illuminating the educational worlds we wish to understand. (Eisner, 1997, p. 4)

In the quote above, Eisner speaks of the construction of meaning in the social sciences, yet his comments may be applied just as aptly to the natural and mathematical sciences. While math is ultimately grounded in *number*, modern mathematics is such a complicated creature that understanding its organic workings requires much more than the ability to count. There is a great and growing body of linguistic and visual metaphors that constitute a healthy understanding of modern math, in which things called *fields, rings, bundles,* and *flows* play dominant roles; mastery of these concepts often involves creativity more readily expected of a poet than of a scientist.

In the first section of this paper I explore two variables that affect students' mastery of mathematical ideas: students' *cognitive understanding* of mathematical terminology and symbolism, and students' *confidence* in carrying out computation and other mathematical tasks. Students' success in learning mathematics can be measured by means of these coordinates, and at this section's end I will survey the way in which math students typically develop as writers. In the following section I will examine how poetry can assist math students' development along both of the coordinate axes.

Key Variables Affecting Math Performance: Cognition and Confidence

Historically, mathematicians have been poor ambassadors for their nation. As a rule students have gained passage across math's borders only by adopting and mastering the use of math's rarefied linguistic conventions. While the ideas lying at the core of mathematical concepts are often simple and intuitive, students are daunted by dense notation and technical terminology, much of which is highly unintuitive. Indeed, a

good deal of modern mathematical terminology stems from hard-to-trace historical roots, and notation is largely non-indexical: most terms and symbols in no way resemble their referents.

In order for students to become proficient at computation and other forms of mathematical reasoning, they must establish direct connections between the deeper cognitive ground of mathematics in which math's concepts live and the symbolic realm in which computation takes place.

In the math classroom these cognitive connections are constructed in a number of different ways. The connections often, perhaps too often, take the form of expository prose either drawn from a textbook or composed by the instructor. This prose is itself usually laden with predefined terminology that must be elaborated in an ever-expanding wave of explanations that can easily swamp unmotivated students. In place of such prose students may be given exemplary problems or computations that demonstrate the finer details of a new concept and its relation to concepts already learned. For students attenuated to visual cues, pictures, charts, and diagrams illustrate fresh concepts graphically; often these pictorial explanations are more effective for their concreteness: students can literally see the connections made between the underlying body of mathematical concepts and the symbolic surface where most of their work is done.

Clearly, students will respond with varying aptitude to these means of understanding according to their particular learning styles. For more on the role of learning styles in effective mathematics education see Midkiff and Thomasson (1993); Jones, Reichard, and Mokhtari (2003) suggest how students' learning styles in mathematics may differ from their learning styles in other disciplines.

Yet there is more to math than computation. Regardless of their understanding of mathematical concepts, many students are discouraged from pursuing advanced math courses simply because they lack faith in their abilities. Yet in mathematics, confidence is crucial: Hackett and Betz (1989) conducted a study of American college students showing that "mathematics performance was correlated moderately with mathematics self-efficacy" and "regression analyses supported the superiority of mathematics self-efficacy over mathematics performance and achievement variables in predicting the choice of a mathematics-related major" (p. 261). Put simply, confidence mattered more than computational skill in determining whether or not a student opted to pursue a math-based degree. More comprehensively, Hembree (1990) performed a meta-analysis of 151 studies on math anxiety and came to similar conclusions. Hannula, Maijala, and Pehkonen (2004) studied a similar phenomenon in primary grades students.

I will now trace the path math students often take as they grow as writers of mathematics and as they develop both a richer cognitive understanding of mathematics and greater confidence in performing computations. Having followed this path we may more readily understand the role poetry might play in assisting students' ongoing growth as mathematicians, especially at the early stages of their careers, when their competence and confidence are weakest.

More than Numbers: Math Students' Development as Writers

At the college level, most students first encounter mathematical writing in a precalculus or calculus course. There students read the logic-laden expository prose of their first-year calculus texts, page after page of definitions and propositions and pictures and graphs punctuated by relatively basic mathematical proofs. While some attention is devoted to the integumentary intuition that ties each theorem to the next, much emphasis is placed on the proofs. Many instructors will challenge their students to reiterate the proofs on exams, to mimic them, and sometimes to paraphrase them in their own words. Students' first tries at this sort of mimicry are clumsy and awkward. Generally students show little control of the complicated idiom while they make tentative attempts at creating mathematical reportage. Even when asked to use their own words, students' papers are overburdened with jargon, passive phrasing, and misused terminology that has a "mathy" ring to the students' ear. Their writing is stilted and lacks confidence.

Typically it is in their sophomore years that novice mathematicians are first asked to create their *own* proofs of mathematical propositions. Although they may have as models proofs of similar propositions and though they will have been given a small store of generic proof techniques, constructing their first few proofs *ex nihilo* is a difficult and often terrifying exercise that pushes the students to the limits of their cognitive understanding and often shakes their confidence in their abilities. It is not surprising that the "gateway" course comprising dozens upon dozens of such exercises is often the most difficult course mathematics undergraduates will take. Having passed this hurdle, students proceed with improved competence and confidence, but that confidence may be shaken again as the proofs they are asked to construct grow in length and complexity.

In their upper-division coursework math students may be called upon to write brief survey papers sketching out the rudiments of a particular topic. In these papers students must do more than validate the proof of mathematical propositions; they

must also provide their readers with a map of the cognitive ground underlying those propositions and a means for connecting that ground with the visible surface in which the propositions live.

In their last few semesters of study math students may engage in original mathematical research that culminates in writing authentic research articles. Writing these articles will present the (by now much more competent and confident) students with genuinely new challenges: instead of working with predefined concepts and propositions, the students are forced to invent and elaborate their own metaphors and provide their readers with a working knowledge of these new ideas. The students are, perhaps for the first time in their careers, true *authors* of math, making their own contributions to the growing body of mathematical knowledge.

Given the importance of both cognitive understanding and confidence in guaranteeing students' success in math, and given our understanding of students' growth as writers of mathematics, we may now ask what role poetry might play in bolstering students' development as writers. It is to this issue that we now turn.

Why Poetry?

I claim that poetry can be made to serve two important purposes in an introductory mathematics course: (1) poetry offers a new sort of cognition, a new lens, one based in linguistic metaphor, through which students can examine and re-examine mathematical ideas; and (2) writing poetry emboldens students and gives them confidence by allowing them a more familiar idiom in which they can express themselves mathematically. I will continue now with a brief description of the assignment as it was given to students in my Fall 2008 Precalculus course. (The full text of this assignment's prompt is contained in the second appendix; the Fall 2007 assignment in my Calculus I course was very similar.) I will then share several students' poems and reflections on their poems, indicating how their work shows evidence of improved mathematical cognition and bolstered confidence in performing math.

The Assignment

The assignment was a straightforward one: students were asked to write a single poem each, and each poem was to involve mathematics in some fashion, whether as an element in the poem's structural design or as the basis for the poem's content. For students who had difficulty conceiving of a meaningful matching of math and poetry, I offered several resources on math poetry as models. Given the diversity of poetry's

forms and functions and my students' varying degrees of exposure to poetry, I expected that my students were liable to craft a broad assortment of poems differing from one another in length, structure, content, and form as much as night differs from day. (I was not disappointed.)

Students were asked to submit rough drafts of their poetry, which I would then review myself before offering feedback. As I am not a trained poet, my responses to students' work generally de-emphasized technical elements such as scansion and meter and focused on encouraging students to choose language and structure that most clearly expressed the meaning they were attempting to convey in their poems. This meant that many of my comments to the students comprised statements like "I sense that you're aiming for an angry tone in this poem; are the words you've chosen those that will best convey anger?"

Having received their commented drafts from me, students then had a day or two to revise their work before taking part in a poetry reading/workshop with their peers. This event, held outside of class, was not compulsory, and only four or five students chose to attend. Those who did attend shared their poetry with one another and offered each other feedback on their work.

Students submitted their final drafts two weeks after the assignment was first handed out. The assignment was a graded one, but in order to keep the stakes low and to nurture a safe environment in which students could feel free to explore, students were graded only on whether or not they completed each stage of the assignment.

Writing to Re-vision: Assisting Students' Understanding of Math

Cahnmann (2003) is very explicit about the ways in which writing informs understanding of a particular discipline: "Writing is a vital element of any research inquiry. Thus, the more varied and practiced the art of writing, the more possibilities there are to 'discover new aspects of our topic and our relationship to it,' and the more vital our writing will be" (p. 29, quoting Richardson, 2000). Cahnmann continues: "Poetry and prose are *different* mediums that give rise to ways of saying what might not otherwise be expressed" (p. 31, emphasis mine). Thus the language of poetry offers students access to ways of understanding they have likely never considered.

Indeed, in writing poetry many of my students seemed able to re-vision their own mathematical ideas and discover ideas as yet hidden to them. Students' own reporting of the themes of their poems indicates sense-making in various forms. Some students

wrote to sort out the roles played by mathematics in nature and elsewhere, others to make sense of the patterns underlying mathematics itself, and still others simply to clarify their own emotions surrounding mathematics.

When prompted to discuss the theme of her poems, Katherine offers new general realizations about mathematics: "I wrote multiple poems, but the common thread between them is that [in] mathematics [there] are other places besides word problems and textbooks. Math is in nature, math is in everyday patterns, math is in history…Math is everywhere, and most people don't even realize it." Katherine's awareness of math's universality is evident in her haiku "Math in Daily Life":

Patterns on my bunks,
they resemble the graphs of
cosine and sine curves.

A second example of her brief poems highlights her awareness of the contrivance of the cliché problems she found in her calculus textbook:

A tall ladder falls
At twenty feet per second
Why would it do this?

Another student made more specific discoveries as he attempted to draw relationships between math and humanity:

> I thought about it a bit, and started to think about poetic themes that I could compare to infinitely expanding patterns. Time immediately came to mind. And then, the theme of infinite amounts of time vs. a finite amount of lifetime – an eternal theme of the human struggle – started running around in my brain. Then it really just sort of occurred to me that maybe I could use a divergent series syllable pattern for the first half, in tension with a convergent series syllable pattern for the second half, to show the emotional tension that humans deal with when they try to beat their own mortality, and exist indefinitely.

A third student's poem displays her increasing sensitivity to mathematical structure. The number π (approximately 3.14159265358…), which is the ratio of the circumference of a circle to its diameter, served as a template for the following poem. Each line

has the number of words indicated by the appropriate decimal place of the number π, and the number's name offers the chance for a clever pun in the poem's final line:

Broccoli Carrots Kale
.
Chopped
Garlic onion ginger tamari
Tofu
Cooked in a hot wok
Delicious food fast from my two burner hot plate
Aroma fills
My tiny apartment for many days
One room living makes for
A constant smell
Garlic permeating the whole place
Maybe I should have made some delicious Pi

Some students' revelations about mathematical meaning were more personal. As one indicated, "The theme of my poem shows the different emotions you go through in trying to understand [mathematics] from the viewpoint of a student. Doing the homework is just that kind of cycle of emotions. It explains literally what I go through every time I do the homework."

It should not be surprising that students find poetry a useful tool for accessing these mathematical ideas: the language of poetry is precise and exact, as is the language of math. In both idioms words are heavy with meaning, and word choice is crucial. A well-constructed poem will in this manner be like a well-constructed proof.

Furthermore, as Eisner (1997) says, "Poetry was invented to say what words can never say. Poetry transcends the limits of language and evokes what cannot be articulated" (p. 5). The language of mathematics serves the same transcendent purpose, and in both poetry and mathematics this transcendence is achieved in similar fashion. Both poetry and mathematics deal in images, ideas, and *aha!*s: metaphor is the currency with which poetic trade takes place, and math's economy has the same basis. Spheres, balls, neighborhoods, lattices, chains, nets, sheaves, bundles, sources, sinks, orbits, itineraries, distances, colorings … these math metaphors are alive and well, for the active images they evoke aid in mathematical understanding. Meanwhile dead metaphors litter the mathematical landscape: to *calculate* is to reckon with counting

stones (Latin, *calculae*); to do algebra is to apply "the reductions" (Arabic, *al-jabr*) indicated by *algorithms* (Arabic, *al-Khwarizmi*, the famed medieval mathematician), and to do *geometry* (Greek, γεωμετρία) is to measure the Earth.

By using poetical metaphors students become more aware of these and other mathematical metaphors, and thereby gain deeper understanding of the mathematical concepts those metaphors describe. This new form of mathematical cognition is made possible through poetry.

Writing to Reassure: Building Students' Confidence

In asking the students to craft poems with mathematical themes, I intended to bolster their confidence by providing them with an alternative means of expressing their personal experience with mathematics. This opportunity was particularly appealing to students who were not math or science majors. I echo Samuels (1987, p. 58), who noted that performing poetry in a sociology classroom emboldened "weaker" students: I found that some of the students who performed more poorly or at least more reluctantly than their peers on traditional mathematical exercises (such as computation-heavy homework problems and in-class exams) relished the chance to work with a new medium. For instance, as we saw above, Katherine, an Art major, was able to call upon her creative resources in order to make mathematical sense of the world around her.

For many students the assignment created a safe place where they felt more at ease in exploring mathematical ideas. In a sense the assignment offered an open arena in which the formal rules of technical composition no longer applied and in which students were set free to explore their feelings towards math unselfconsciously. For Aurora, poetry offered an opportunity to express otherwise indescribable frustration with math. In her poem "Frustration," she felt free to use obscenity, unthinkable in formal mathematical writing, to describe her feelings:

It used to come so easy.
Never being challenged or troubled
Always loving the beauty and complexity of it,
Now getting bogged down in the cumbersome intricacies,
Confused not knowing how to help myself,
Frustrated with the fucking functions,
Wanting to get back to the beauty,
Seeking guidance.

Writing this poem proved highly therapeutic; in her reflection on the exercise Aurora said:

> I wanted to express my frustrations with calculus and my inability to learn the concepts as quickly as I usually do. Around the time this assignment was given I was struggling with my courses and becoming very frustrated with my inability to learn the concepts. I am a person who usually hides my frustrations and my negative feelings unless I am very comfortable, therefore, writing this poem really helped me 'vent' my feelings in a positive way. I can honestly say I felt better, more composed, and refreshed to get back in there and give math another go.

Aurora was not the only student for whom poetry played a therapeutic role. The author of the following excerpt used her poem to talk herself through her self-described "attacks of math phobia":

> Is this the end of the beginning?
> Is this the hurdle that's just too high?
> *Breathe. Slow down. You can do this.*

Other students' poems signaled similar shifts in their attitudes towards mathematics, although I cannot pinpoint whether these poems were merely symptomatic of those shifts or whether they helped bring those shifts about.

For instance, when asked about her parodical poem "Mathbeth" (excerpted below), Lisette indicated that "the theme is the dread that math can inflict upon pressured students over the course of the semester, and the resulting all-nighters that are soaked in coffee and laced with sleepless visions of talking pens and pencils…I chose this theme because it represented my relationship with math perfectly at the time." However, when asked "How do you feel about mathematics?" Lisette responded:

> Until a few months ago, I would have taken this opportunity to lambaste mathematics and all those associated with the loathsome subject. However, during the last school year at UNCA, I realized that what I assumed to be a hatred for math itself was actually a product of my *confusion* in math. At some point, after math began to click in my mind and the confusion lessened, I saw the difference. Math and I then became good friends.

In "Pencil's Soliloquy" from Lisette's poem, we get the sense that the character Pencil is giving voice to Lisette's thoughts, casting out her antiquated hatred:

> However the task was first derived,

To a veteran of your caravans,
Make good this oath with eye and voice:
Look to the ink of stalwart pens
In your aimless waste of parchment.
For never will your proofs amend
Those errors in your quotient.
Day upon day you dulled my lead
As ere you chased the numbers 'round.
So many times I thought, perhaps
You'd finally reached your limit,
Then watched my world shake upside-down
To briskly hide your mishaps.
I grew quite bald from misadventures
With wild domains and vicious powers
No more! I say again, No more!
My lead is soft, my wood is fragile.
Find some youth with a liquid core
And a shiny plastic shell.
We of wooden constitution
Have failed our last equation.

Lisette's literary banishment parallels her own very real banishment of mathematical trepidation. Again, it is difficult to say whether poetry helped her to grow bolder mathematically, or whether it merely offered her a means to express her greater confidence gained by other means. In either case, poetry has served a useful purpose.

The Road Ahead: Math Poetry In and Outside of the Classroom

I am heartened by the successes my math students have had in creating math-themed poetry. While freedom from the formal conventions of mathematical writing allowed my students a broad array of expressive possibilities, it also brought some of them face to face with a unique challenge, namely to tell tales about a highly technical science without the use of technical language. For many students that challenge led to profound new observations about the nature of mathematics and their engagement with it.

Now convinced that poetry can play a useful role in the mathematics classroom, I am eager to explore new ways in which poetry can help students at all levels to gain

a better understanding of mathematics. As students develop greater mathematical sophistication, so they may also discover new uses for poetry in the math classroom. For example, I am currently developing an assignment that will ask students in Abstract Algebra (an advanced undergraduate mathematics course) to use poetry to analyze various algebraic structures. By writing poems whose structure depends strongly on algebraic objects known as a *homomorphism*, students will be able to demonstrate whether or not they have achieved an understanding of such objects.

How might poetry and other nontraditional forms of technical exposition prove relevant outside of the classroom? My students' literary work deals almost exclusively with "already known" mathematics, but it is natural to ask if we may make use of poetry to engage in formal mathematical inquiry. That is, can we perform mathematical research and disseminate its results through poetry or other highly nontraditional literary genres? I will consider this question in a future article as I attempt to uncover the mathematical equivalents of what Richardson (2000) refers to as "creative analytic practices" in qualitative sciences.

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APPENDIX 1: SURVEY OF STUDENTS' REFLECTIONS ON THE POETRY-WRITING PROCESS

(Below are the questions posed to the students as they reflected on their experience in writing mathematical poetry.)

1. Do you typically enjoy poetry? Have you been asked to write poetry for other courses? Do you write poetry for your own pleasure, or as a means of expressing your ideas to yourself or to others?
2. How do you feel about mathematics?, or, how does it make you feel?
3. What do you feel is the theme of your poem, and how did you choose this theme? Why do you find this theme meaningful, on a personal level? How does it relate to your feelings about mathematics?
4. Do you feel that your poem offers any special insight into a particular mathematical topic? Please explain.
5. Can you indicate any conscious word choices you made in writing your poem? Why did you choose the words you did?
6. How do you think the words you chose help to convey the poem's theme?
7. Is there anything about the structure of your poem (stress patterns, verse forms, rhyme schemes, etc.) that reflects a conscious decision on your part? How do feel the structural elements you've chosen help to express yourself through the poem?

8. What part of your poem are you most satisfied with, and why?
9. Looking back on it now, how does your poem make you feel? Do you think that it succeeds in conveying the feeling that you intended it to convey?
10. What do you feel that you gained from the experience of writing your mathematical poem? Please explain as well as you can.
11. Would you mind if I quoted your responses to this interview in the article I am writing? If you don't mind me quoting you, would you prefer that it be done anonymously?
12. Would you mind if I included your poem in the article I am writing? If you don't mind me including your poem, would you prefer that it be done anonymously?

APPENDIX 2: THE ASSIGNMENT PROMPT

(Below is the prompt of the math poetry assignment as given to my Fall 2008 Precalculus class.)

Doing math, to most people, is a scientific enterprise. Made up of ice-cold lemmas, theorems, and propositions, mathematics is a means to an end, a collection of procedures that can be applied to analyze the phenomena that arise in the natural world. Thus most see math as a pragmatic discipline, interesting only insofar as it is useful.

Many mathematicians, on the other hand, see math in a different light. To them, math can be beautiful: in its forms and structures one finds patterns, symmetry, and harmony of all kinds. From the obvious aesthetic beauty in lattices and fractals to the deep and subtle patterns in the distribution of the prime numbers, there is beauty in mathematics.

As such, math has served as an inspiration to artists of all stripes. For instance, many of the Renaissance's finest artists were among the period's best mathematicians, and many of Bach's finest works are built upon simple mathematical formulas.
Less obviously, mathematics has informed writers as well. One need only look briefly at the work of Katherine Stange, or the Franco-Italian collective Oulipo, or even more "mainstream" work of Hermann Hesse to see that math can play a meaningful role in the literary process.

Your next writing assignment will ask you to take a departure from the run-of-the-mill written math project.

Your goal for the next couple of weeks is to create a mathematical poem. Because

both "poetry" and "math" mean such different things to different people, I will leave it to you to explore exactly what exactly this means to you.

For instance, you might choose to construct a poem whose *form* is mathematical: perhaps your work could be based upon the digits in the number π or a pattern in the prime numbers or the Fibonacci sequence or Golden Ratio. Instead, perhaps in your poem the *content* is mathematical: might you write about a specific function or mathematical idea? Or maybe your poem could be more personal still; you could use it to explore an experience you had while studying, learning, or discovering mathematics. In a past class in which I assigned this project, I received all of these kinds of poems.

I am not asking you to construct a poem that rhymes, nor do I demand that it have any set metrical structure. Your poem may be serious, humorous, long, or short. It could be epic, idyllic, heroic, futurist, rap, beat, odic, you name it! You may use any words you feel are appropriate. You may choose to make use of (or not make use of) any poetical device with which you're familiar, as long as the resulting work means something to you. Please keep in mind that although it is important that your poem means something to you, it is just as important that you make an honest attempt to convey the poem's meaning to others as well. Metaphor and imagery are often useful tools to do this effectively.

Although this exercise is a highly nontraditional one, I ask that you take it seriously. Choose your words carefully, but don't be afraid to experiment with different ideas, different images. I hope that you'll see it as a unique opportunity to meld your creative side with your computational one, in whatever way makes sense to you.

This project is to be completed in two stages. First, I will be asking you to submit a rough draft of your poem on **Friday, October 3rd**, after a bit more than a week's work. At this time I will schedule an out-of-class peer review session that you may choose to attend in order to get ideas from your colleagues as we share our poetry with one another. Such a meeting, like that meetings of a writers' group, will allow you to reflect on your word choices, and to fine-tune your metaphor. This meeting will be held on **Monday, October 6th**, at a time to be announced.

I will then ask that you submit your poem to me by 5:00 p.m. on **Friday, October 10th**. Along with the poem you will write a brief (1 page or so) description of the poem's meaning. In this description you might indicate how you chose your poem's subject matter or wording, what consideration went into the poem's form and structure, or any other aspects of the poem and its construction you find important. While the description will be useful in helping someone else to understand the poem, the poem should stand well by itself.

As a class we will also schedule an out-of-class poetry reading for the finished poems. I hope that many of you will choose to come to such a meeting (we'll get some pizza or some other more poetical food!) and feel free to read your work to others.
As I am not a professional poet, I do not feel qualified to assess your poem on the basis of its technical literary merits. Instead, your performance on this assignment will be judged based upon your completion of the assignment and on the clarity of your creative process as evidenced by the poem itself and the accompanying description. Please note that although I am not a teacher of poetry, it will be very easy for me (and others!) to tell whether you have taken this assignment seriously or not. I am sure that if you do take make a serious effort, you will do well on it.

I look forward to working with you on this project, and am eager to see the sort of art you're capable of producing. Please take this opportunity to set your creativity free!