



Putting the “Art” in Artificial Intelligence: A Literary Critic’s Response to Machine Learning

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This curriculum unit is recommended for:
English Literature/Language Grades 10-12

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Teaching Standards: See [Appendix 1](#) for teaching standards addressed in this unit. (Insert a hyperlink to Appendix 1 where you’ve stated your unit’s main standards. For directions on how to insert a hyperlink, see Fellows Handbook, p. 29.)

Synopsis: It is rare that the fields of Computer Science and English Literature/Language meet in conversation let alone a lesson plan. The following unit considers artificial intelligence’s impact on literary and artistic endeavors. Students will consider whether machines can be creative and what criteria are used to judge creativity in humans. But most importantly, the central question of this unit is whether author’s purpose or artist’s intention is meaningful in literary analysis. Given the constantly changing meaning of words, does the author’s purpose matter at all? To explore these questions, this unit presents Romantic, Postmodern and Deconstructive ideas and connects to these ideas to the society students live in. Students will also read Alan Turing’s famous essay about the future of artificial intelligence and the challenges it poses. Students interact with poetry and non-fiction using annotation strategies, deliver arguments using a variety of sources, and consider the ethical and artistic implications of machine learning.

I plan to teach this unit during the coming year in to 130 students in Honors English II.

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By Stephanie Misko

Introduction

At first glance, you may be wondering how the hip field of Artificial Intelligence can have any relevance to the English classroom. (Believe me, I was originally just as skeptical.) Most people associate high school English with smelly library books and archaic grammar rules, whereas the field of Artificial Intelligence calls on the young and cutting edge – the Silicon Valley demographic. Generally, these two disciplines do not coexist and we musty English teachers truly don’t understand all the rage. I just don’t trust that the computer can “magically” grade my students’ writing. And by the way, who is this person in the cloud with all of my documents and what is he or she going to do with them? Give me my red pen and paper anytime.

But I entered this seminar on a leap of faith that I might become enlightened on the topic, or at the very least it would provide more fodder for my anti-technology rant. My study of artificial intelligence surprised me on so many levels. To begin, I found out that not all forms of technology can be considered artificial intelligence (this was a foot-in-mouth moment.) I also found that artificial intelligence is the most important ethical question of our time, but I also think that it directly connects to the questions of creativity and art that are essential to literature. The more I learned about the development of algorithms, the more I asked the postmodern question: Who writes these algorithms? What does that mean for our dissemination of knowledge? Even though the technology behind the algorithms is new, the questions are not. Literary critics have worried about these exact ideas for nearly two centuries.

This unit will explore the impact of artificial intelligence on knowledge, creativity and artistic purpose. Furthermore, my goal for my students is to develop an opinion about the importance of author’s purpose in an age of algorithm-based production. Before my classes address our modern question, they will look back at the philosophy and art of the Romantics and the Postmodernists.

English II and the Ubiquitous State Test

My home school where the following unit will be taught lies at the northernmost corner of a city school district, Charlotte-Mecklenburg schools. Whereas most of the schools in our district serve an urban population, my school serves a largely suburban and rural population of students. We teach and learn in a new building with all of the state-of-the-art facilities that one can find in a public school. We have multiple community groups

that bring in resources and money to support student groups and educational initiatives. To put it frankly, I teach a population of students whose guardians provide them with their basic needs and support. They do not want for much and cutting edge technology is the centerpiece of my students' education.

Until recently, I have forced my students to put away their expensive devices and my English classroom has remained blissfully free from the annoyances of technology. My students read from paper books and wrote with pencils. They engaged in discussion with one another face to face. They had to confront me personally when they forgot to complete an assignment. But as initiatives such as Bring Your Own Technology (BYOT) have developed to meet the needs of a new generation, I have been pushed to embrace technology.

Admittedly, that push has sometimes been more of a shove than a nudge, but I have abandoned some of my archaic teaching methods in exchange for a digital classroom: my students submit essays through Google Drive, they retrieve important documents from my website, and they even take some quizzes online. While many of these strategies are helpful and fun, I do not necessarily feel that they enhance my students learning to anything beyond that of the old-fashioned curriculum. As a result, I am compelled to create a unit that both explores the benefits of technology and considers the drawbacks. My unit encourages students to think more critically and creatively and to do so with the help intelligent machines.

The following curriculum unit will be taught in an Honors English II classroom over the course of one week. This will be accomplished so quickly partly due to the fact that my students are in my class for ninety minutes per day. The primary goal of English II is to prepare students for the North Carolina state exam. This is a four hour long reading comprehension exam that counts for 25% of a student's English II grade, and it is included on their college transcript. For this reason, I have included strategies in this unit, such as annotation, that are helpful for the EOC. The English II curriculum also stresses the importance of the argumentative literary essay, so the students will culminate the unit with a five paragraph argumentative essay using various texts from the unit. This also requires students to use higher order thinking skills to synthesize multiple genres of texts to prove one argument.

Background on Artificial Intelligence

Artificial Intelligence is a field that is concerned with the theory, design and construction of machines that have cognitive abilities that are of human complexity. This requires a very complex set of algorithms in order to be done successfully. In mid-twentieth century, Alan Turing introduced a strategy for testing machines' intelligence; this would later become known as "the Turing Test." In summary, for a computer to win the Turing test, it must answer questions in a manner that convinces a human that the computer is

also human. Now, according to Turing, this is the ultimate goal of artificial intelligence and not necessarily where intelligence functions in 2014. While man has created algorithms to complete tasks and report data, man has not created a machine that can think independently or draw conclusions from the directions it has been given.

Even though computer scientists have yet to develop a machine that can think on its own, they have created algorithms that can solve complicated problems and trick humans into believing that the machine is intelligent. The most popular example is the computer named Watson, a machine that beat other humans at Jeopardy, proving the machine’s exceptional knowledge of trivia. We also see moves towards artificial intelligence every day. In the year 2014, one can use a machine to clean the house, play a game of chess, and provide directions to any charted location in the world. Some machines perform even more complex tasks. For example, chatbots are created to simulate intelligent conversation. This is not because the computer has actually learned how to support an opinion, problem solve, make a joke, or use sarcasm; instead, the computer has been programmed with a set of algorithms to follow when presented with certain situations. In terms of creative tasks like writing a poem or an essay, an n-gram can be used to create a Markov Chain.

A Markov Chain is created by linking together a series of n-grams. An n-gram, essentially, is single word. If one were to input the following text, “I am not a number. I am a free man. I think, therefore I am. I am a man of constant sorrow,” the program would separate each word into a single n-gram. So to make these n-grams useful, the program can create a table, called a Markov Chain, which places each n-gram on the left side of the table and the each word that follows it on the right side of the table (see table below). The table observes textual patterns of the inputted text. For instance, if one were to look up the n-gram “I” in the Markov Chain, every n-gram (or word) listed on the right is an n-gram that follows “I” at some point in the text. The program then randomly chooses a word from the right side of the Markov Chain; for instance, the program might choose “am.” The program has then created text that reads “I am.” This same process will continue for the n-gram “am” and then will continue until the program orders the process to stop.

N-gram

I	am	am	think	am	am	
am	not	a	a			
not	a					
a	number	free	man			
number.	I					
free	man.					
man.	I					
think,	therefore					

therefore	I					
am.	I					
of	constant					
constant	sorrow.					

A Markov Chain can be used to for text generation, in addition to many other tasks. To create text, a Markov Chain can consider as much or as little text as the use chooses and observe patterns and n-grams within that specific text. Later in my unit, I will use multiple texts to use a Markov Chain.

Later in the same article that introduces “The Imitation Game”, Turing identifies and rebuts the most common arguments against artificial intelligence. The counterargument that creativity cannot be automated is one of the arguments that he addresses. As an English teacher, I wonder how a machine can be taught to feel, criticize, judge, and fall in love. After all, it is these very emotionally driven processes that are impacted by human experience and drive artistic expressions. Humans are imperfect, biased, prejudiced; must we create a machine with the same set of neuroses if it can be expected to create? Turing rebuts this concern by implying these intangible qualities cannot be known or judged: “The only way that one could be sure that a machine thinks is to be the machine and to feel oneself thinking. One could then describe these feelings to the world...Likewise according this to view, the only way to know that a man thinks is to be that particular man.”ⁱ If it is impossible to determine whether or not a human truly thinks, it is clearly impossible to judge whether or not a machine thinks. Turing raises an important question about artistic purpose and meaning: Can a viewer/reader differentiate between what is creative and what is formulaic? Furthermore, does the artist’s intention behind his or her work even matter?

A History of Literary Criticism and its Interaction with Technological Advancement

Since the Industrial Revolutions, poets have mused about the influence of technology on art and the creative process. In the 1800s, the Romantic literary movement emphasized the importance of a return to nature, an appreciation for the individual, and the symbiosis of the two. Yet in the nineteenth century, the world became fueled by industry such as the train, factories, and mass production. In the academic text, *Romanticism Against the Tide of Modernity*, the authors consider the impact of the Industrial Revolution on Romantic ideas: “For industrial civilization, nature’s qualities do not exist: it takes into account only the quantity of raw materials...those who were eager for a ‘breath of fresh air’...had to travel several kilometers by railway and walk in the fields.”ⁱⁱ This difference between society’s industrial makeup and the Romantic values creates a strain for the Romantic artist. The Romantic poets’ dissent is evident in much of the poetry from this time period, as can be seen in “The World is Too Much with Us” by William Wordsworth, which I have included in the activities for my unit.

More than just the distaste for the aesthetics of the industrial world, the Romantics tend to be fearful and resentful of anything mechanical.ⁱⁱⁱ This can be seen in literature by Dickens, Hoffman, and Wordsworth, among many others. According to Sayre and Lowy, the Romantics were “haunted by the terrifying prospect that humans themselves could be mechanized.”^{iv} This fear makes sense, given the Romantic ideals. If technology became too dominant in society, the individual and the natural world would become less important. In an industrialized world, from where would creativity derive? Along with an industrial economy, people began to emphasize wealth and efficiency more highly. As a result, it is fair to say that a major aspect, although not an impetus, of the Romantic period is a rejection of technology and the impact of industry on society.

Of course our modern world has accepted industry as an essential part of life and politics. We have progressed technological miles since the Romantics of the nineteenth century. Households in developed countries use machines to perform basic tasks like dishwashing, students produce research and writing on a computer, and jobs involve producing and distributing products around the world. As an educator, I am required to use devices within my classroom in order to appropriately prepare the future work force. Technology extends so far as to assist with (not conceptualize) creating art. An example of this is the artist Harvey Moon who uses a drawing machine that uses an algorithm to execute his art^v. But much more importantly than the examples above, the entire first world uses an algorithm-based search engine that sifts and organizes information for the consumer; a machine dictates what we read and what we know. Google is so ubiquitous that it is no longer just a proper noun, but is also a verb and an adjective. With The Information Age and progress in computer science, society has catapulted technology into an entirely new realm: the postmodern stage.

As stated in the previous section, the age of Artificial Intelligence coincides with the postmodernity. The term “Postmodern” first entered the philosophical lexicon with the publication of Jean-Francois Lyotard’s *The Postmodern Condition*. Much of this essay is a response to growing technological advancements. Lyotard concludes in this essay that in a postmodern world, the purpose of knowledge will no longer be useful unless it has a technical application. Lyotard begins by questioning the legitimacy of scientific knowledge versus the legitimacy of narrative knowledge and comes to this conclusion, more or less: “Scientific knowledge does not represent the totality of knowledge; it has always existed in addition to, and in competition and conflict with...narrative.”^{vi} Ultimately, Lyotard finds that narrative knowledge is proven to be legitimate in a different way than scientific knowledge, and argues that one form of knowledge cannot exist without the other. In postmodernity, knowledge is considered to be informational and data-driven as opposed to narrative-driven.

After proving that there has been a shift in society’s feelings about knowledge, he asks the very political and very important question: “who will have access to the information

these machines have in storage to guarantee that the right decisions are made...the ruling class is and will continue to be the class of decision makers.”^{vii} Knowledge derived from algorithms such as Google is reflective of the beliefs of the ruling class; this is because it is the knowledge held by the majority of the public and the ruling class inevitably holds the most power. As a result, technology will create a world that prioritizes performance, wealth, and power over truth and humanity. Citizens will aim to use knowledge to become rich and be in control rather than gain insight into humanity and artistic meaning. This will extend into education, the work force, politics, social interactions and even art. It is evident that Lyotard, like his Romantic predecessors was fearful of society run by machines.

Postmodernity also led to a new philosophy of literary criticism: Jacques Derrida’s philosophy of deconstruction. The emphasis of this philosophy is on difference and binary relationships. For instance, binary relationships would include male/female, black/white, light/dark, powerful/powerless. These relationships are important because one state is powerful and other state is being subordinated. This connects to postmodernism because it explores the social structure that oppresses one half of that binary relationship. Deconstruction reading invalidates the author’s purpose, the author’s history, the socioeconomic background of the writing itself. This philosophy arises because Derrida believes that there is a contrast between the signifier (word, phrase, image) and the signified (what’s being represented by the word). Derrida contrasts the previous literary tradition to his new conception of deconstruction:

“The thematics of the sign have been for about a century the agonized labor of a tradition that professed to withdraw meaning, truth, presence, being, etc. from the movement of signification...the difference between signified and signifier or the idea of the sign in general...we are disturbed by that which, in the concept of that sign – which has never existed or functioned outside the history of (the) philosophy (of presence) – remains...determined by that history. It is there that the concept...of deconstruction...re-main by nature exposed to misunderstanding and recognition.”^{viii}

Essentially, the signs (letters, words, images) in writing carry so many dynamic and connotative meanings that it is impossible to clearly derive meaning. As a result, the author’s purpose is no longer as important as the reader’s interpretation. Some even go so far as to conclude that there is no meaning or purpose at all.

Rationale

My students are living in postmodernity or at least in some existential state that is a direct result of postmodernity. From their personal lives to their education and future careers, they are driven by scientific knowledge and to attain scientific knowledge. Google determines the information that they use for school research and shopping. They are

training for jobs with definable skills, and they are engaging in postmodern self-expression everyday through social media.

Education ideology has shifted the focus away from the humanities and towards the STEM subjects (science, technology, engineering and math). More money is invested in these programs and when looking at scholarship opportunities, more priority is placed on students that excel in these subjects. The school district that I work in has focused on the implementation of technology in the classroom and have made large cuts to art and music programs. This shift in education was predicted in Lyotard's *The Postmodern Condition*. Furthermore, students are using cell phones to communicate and express opinions on social media. This new form of self-expression responds to some of Lyotard and Derrida's concerns. To begin, social media allows any person with Internet access the ability to publish an opinion or thought. This raises many concerns about "legitimization" of what is published online since almost anyone can claim to be an expert on anything. At the same time, social media gives power to a larger demographic of people. So with this informational shift, the use of signs has changed. Derrida briefly mentions the impossibility of discarding all signs in favor of new ones^{ix}, yet the social media allows for a dynamic lexicon of words and images. In fact, most of the acronyms and emoticons that my students use are foreign to even me, someone only ten years their senior. Perhaps with the help of artificial intelligence, my students have entered the post-postmodernity – a state where machines have empowered the formerly powerless.

I want students to use a basic understanding of postmodern and Deconstructionist literary criticism to consider artificially generated art. Can it still be art if an algorithm was used to create it? Students will hopefully argue about the purpose of art and whether or not artificial intelligence has had an impact on that purpose.

Classroom Activities

Day One: The Romantics and William Wordsworth

I will begin class with a brief video that can be accessed on YouTube: https://www.youtube.com/watch?v=k9Ebl_MxbYw. It is titled "History Short: The Romantic Era (Art and Literature)" and summarizes the overarching ideals of Romanticism. At this point, I will have distributed the handout titled "Romantic Poetry and Wordsworth." There are a series of questions on this handout that they will need to answer while they view the video. The questions go in order. After the students view the video, we will have a class discussion about the answers.

The class will then transition to the Wordsworth poem "The World is Too Much with Us." A copy of this poem can be found online or in collected works of Wordsworth. We will read the poem aloud as an entire class, then I will have students choose a partner to annotate the poem. To annotate poetry, I use a handout that is included in this unit and is

labeled “How to Annotate a Poem.” They use this handout as a checklist for interacting with the text. Because the poem uses unfamiliar language, it is useful to work in pairs so that students can collaborate with ideas. In an Honors English II class, I will allow approximately twenty minutes to annotate. As students finish the annotation, I will have them come to the board to write annotations for the entire class to view.

After twenty minutes of annotation, we will analyze the speaker, tone, mood, and theme of the passage. I will encourage multiple answers so long as they can be supported, but ultimately, I will guide students towards a theme about the industrial revolution.

Homework after Day One

Students will be asked to write an argumentative paragraph (7-12 sentences) on the theme of technology in the poem. The prompt will ask them to refer to their annotation for support in the paragraph.

Day Two: Defining and Analyzing Artificial Intelligence

To transition into the conversation about Artificial Intelligence, I will use a portion of Turing’s original paper “Computing Machinery and Intelligence” to explain the procedures and the purpose of the Turing Test. Because this is a challenging article to understand, I will not assign the entire paper. Students will read the first section of the article, titled “The Imitation Game.” This gives the scenario of the Turing Test and the question that it seeks to answer. This will give them enough information to form an understanding without feeling overwhelmed by jargon and antiquated ideas. I will ask students to read individually and annotate as they read. Once they finish annotating, we will discuss the meaning of the Turing Test as a class.

After reading this text, I will have students break into small groups of 3-4. In these groups, they will have five minutes to respond to the following prompt: “What might be some of the restrictions of Turing’s ‘Imitation Game Test’? What types of intelligence does this test not measure?” Each group should make one list. After five minutes of brainstorming, each group will share out their questions with the class.

I will also next assign the NPR interview “Moving Beyond the Turing Test to Judge Artificial Intelligence.” NPR provides a transcript of the interview and an audio clip so that it appeals to multiple learning styles. We will listen and follow along as a class.

To end the discussion for the day, I will pose the question of “Can machines be intelligent?” I will put this question on the board and each student will write a 4-6 sentence response on a sheet of notebook paper. They will have 5 minutes to respond. I

will collect the responses and read out random responses to share out as many thoughts as possible.

Day Three: Artificially Generated Sonnets

Before class begins, I will create a sonnet using Professor Raghu Ramanujan's text generator^x. The sonnet generator uses the lyrics to The Beatles' "In My Life" and "Imagine" and Walt Whitman's "Song of Myself" to create a Markov Chain to write poetry that makes sense – at least grammatically. So the random poem that is produced will be grammatically correct and can potentially be read and understood. I have generated a poem using the text generator and have included it at the end of the unit. As the students enter the class, the poem will be on the board and they will have a copy of it at their seats. They will not know that the poem is created by a machine. Like with any other poem including Wordsworth's "The World is Too Much With Us", I will ask students to work with a partner to annotate the poem. Once again, students will have a copy of the handout titled "How to Annotate a Poem."

After students have annotated the poem at their seats, I will ask volunteers to come to the board and write the annotation on the board. We will have a class discussion where students share out the speaker, tone, theme and mood that they have identified for this poem. I will not reveal that this sonnet was written by a machine until after we have established these points. Undoubtedly, this revelation will be accompanied by complaints and whining. To redirect the conversation, I will ask them to consider whether the identity of the author matters to the meaning of the poem. Again, there may still be shouts of "yes!" or "This is stupid!" so I will take this time to transition to the PowerPoint that begins by explaining how a computer can generate a sonnet like the one they viewed, and then move into a summary of Postmodernism and Deconstruction.

A copy of the PowerPoint can be accessed at my personal website: <https://sites.google.com/a/cms.k12.nc.us/misko-hough/assignments>. In the PowerPoint, I begin by explaining how n-grams are used to take texts and create new texts. I then move into making a generalized argument for these two ideologies. To introduce postmodernism, my PowerPoint largely focuses on the move away from narrative knowledge and toward technical knowledge. I then pose the question of whether there are signs of postmodernism in our society. Next, to explain deconstruction, I have given specific examples of how certain words and symbols that have changed over time (i.e. slang). The second to last slide contains the following essential question for the day: "Does the author's purpose matter if the meaning of words are always changing?"

Day Four: Using Algorithms to Write Poems

At this point, students will have used theory to consider whether algorithms have a place in art. But today, I want to see if using algorithms to create poetry will change their

opinions at all. I will first explain that this is the process used by a computer to automatically generate a sonnet, or any other written piece. I will then model how I want them to do the following activity before I have them do it on their own.

Students will get into pairs for this exercise and they will write a sonnet with an algorithm. I will print off the entire Markov Chain used to generate sonnets; the Markov Chain also included at the end of this unit. On the left side of the chart is a single word; on the right side of the chart are all the words that follow the word on the left in any sonnet that was fed into this program. To begin, one student will draw a beginning word from a basket that I will pass around. Once they pull that word, they must use it to begin the sonnet. They will then look up that word on the left side of the Markov Chain and use the right side of the chart to find all of the potential words that can follow their first word. Since there will likely be more than one option, I will give them all dice in order to randomize their choice. So if the student rolls a one, he or she will choose the first word from the chart; they roll a two and they choose the second word and so on and so forth. They will stop once they reach two sentences. These instructions are also listed on the final slide of the PowerPoint that I include above.

After the entire sonnet has been generated, I will have the pair of students present their poem on poster board with some form of creative representation – in some minor way, they are applying meaning to something randomly generated. These will then be posted around the room.

Day Five: Socratic Seminar

Today, I want students to use their experiences from the previous classes to have a Socratic seminar regarding artificial intelligence and literature/art. To begin class, students will complete the “Artificial Intelligence and the Meaning of Poetry” handout. This is considered the Socratic Seminar preparation, so students will complete this handout independently and silently. I will allow approximately half an hour for students to complete this handout, or it can be assigned for homework the night before, depending on scheduling. After all students have completed the preparation, I will review rules for a Socratic seminar, but students should be familiar with these since I regularly conduct Socratic seminars in my class. The rules that my class will follow during the seminar are as follows:

- One person speaks at a time
- Do not raise your hand; just wait for your turn to talk
- Do not dominate conversation, but instead work to include all participants
- Make connections back to the text
- Stay focused – Do not talk, draw, whisper, laugh, or have side conversations during the Seminar
- Listen and respond to others

For classes who are inexperienced with Socratic discussion, it may be helpful to use an example. Teachers from all grade levels have posted videos on YouTube, so a simple search will yield a variety of examples. When choosing an example for my students, I choose a discussion anchored by a familiar text.

Because the Socratic seminar should be student led, I will merely observe and avoid contributing to or redirecting the conversation. Students will use the questions from Part One of the handout titled, “Artificial Intelligence and the Meaning of Art”, but they may move through them in any order. They also may not address many of the questions I generated, and they are encouraged to focus on the questions that they generated in Part Two of the handout. While students discuss, I will listen and use the attached Socratic Seminar Rubric to assess students’ participation.

Homework

I will give them the handout titled “What is Art? Essay” which describes their take of responding to the prompt: What gives art meaning? If other classes are less experienced with essay writing, the handout can be used to break the assignment into parts and can be done in class.

The Romantics

(with a capital R, not the lowercase r where you buy flowers for your girlfriend...)

Directions: Use the information from the video to answer the follow questions about Romanticism. The video can be accessed at:

https://www.youtube.com/watch?v=k9Ebl_MxbYw

- 1.) On what did Romanticism place an emphasis?
- 2.) What was the subject of most Romantic art?
- 3.) What does Turner's painting show about the nature and human potential?
- 4.) What are the three ideas that are emphasized in Romantic Literature?
- 5.) English Romantics favored poetry. What did they believe enhanced poetry?
- 6.) Why did Coleridge and Wordsworth believe that childhood is important?
- 7.) Why was the 1799 novel *Lucinde* so controversial?
- 8.) **After viewing:** Overall, how do Romantic writers and artists feel about nature and the industrialized world?

How to Annotate a Poem

KEEP THIS IN THE POETRY SECTION OF YOUR BINDER! YOU WILL NEED IT TO ANALYZE EVERY POEM IN THIS UNIT AND YOU WILL NEED IT FOR THE TEST!

- Analyze title first-Notice how the poem begins
- Circle connotative words and put + or – next to words that have a positive or negative connotation
- Clarify meaning and definitions of words
- Ask questions about lines that surprise you
- Make predictions
- Explain what each stanza means or is saying
- Find and label figurative language like similes, metaphors, personification, etc.
- Mark the lines with imagery-anything you can see, hear, smell, taste, or touch.
- Underline strong verbs and adjectives
- Notice how the poet sets up the poem- long lines, short lines, breaks in lines, stanzas. There is a reason for this. Write why this is so
- Make connections to self, world, or other texts
- Notice how the poem ends- Think about why
- Write speaker, tone, theme, and mood

Postmodernity and Deconstruction

Directions: Take notes from the PowerPoint. Put notes in your own words when possible.

- 1.) Who created the term postmodernism?
- 2.) What kind of knowledge is mostly valued in a postmodern world?
- 3.) What kind of knowledge is de-valued in a postmodern world?
- 4.) What sort of problems do you think might arise with an imbalance of these two types of knowledge?
- 5.) What is the literary criticism that arose as a result of postmodernism?
- 6.) Who is the father of deconstruction?
- 7.) What do deconstructionists mean by the term “signifier”?
- 8.) What do deconstructionists mean by the term “signified”?
- 9.) Draw an example of a signifier for happiness!
- 10.) Why do deconstructionists believe that we cannot rely on words to convey meaning any longer?
- 11.) In what ways has your generation changed signifiers?
- 12.) What does this belief system mean for the relationship between the author, his/her work, and the reader?

Poem from Text Generator

Imagine there's no religion too
Imagine all these memories lose affection
For people and sing myself, And the world...
Imagine there's no countries
It isn't hard to speak at every atom belonging to me as something new
Though I know I'll never lose affection
For people and their moments
With lovers
and some are dead and sing myself,
and think about them
In my soul, I know I'll often stop and some have their moments
With lovers
There is no one compares with original energy.
My tongue, every atom belonging to do Nothing
There are places I love you
No need for today...

Markov Chain

N-gram	1	2		
to	do	Kill		
for	today.	And		
no	heaven	countries	religion	
kill	or			
It's	easy			
Above	us			
countries	It			
people	Living	Living		
It	isn't			
Imagine	there's	All	there's	all
life	in			
easy	if			
if	you			
there's	no	No		

die	for			
below	us			
only	sky.	one.		
do	Nothing			
hard	to			
all	the	The		
isn't	hard			
Nothing	to			
heaven	It's			
or	die			
\$	Imagine	Imagine	Imagine	Imagine
hell	below			
religion		too.		
you	try	May	will	
us	Above	Only	and	
the	people	people	only	world
No	hell			
in	peace.			
Living	for	Life		
And	no	The		
try	No			
may	say			
say	I			
I	am	Am	hope	
not	the			
hope	someday			
will	join	Live	live	
join	us			
world	will			
live	as			
as	one			

You Put the “Art” in Artificial Intelligence Seminar Questions

Directions: Choose 3 of the following questions to explore. Your answers must be 4-6 sentences and use evidence of some form.

- 1.) Can machines be intelligent?
- 2.) How does our society (like schools, adults, employers) measure intelligence? Is this an accurate view or not? How should we measure intelligence?
- 3.) Is artificial intelligence possible? Use specific evidence from a text in class to answer this question.
- 4.) Which is more important – the author’s purpose or the reader’s interpretation? Consider songs, movies, books, and art when considering this questions.
- 5.) What defines art? Is literature art?
- 6.) How do technology and industry impact us as creative beings? Do you agree or disagree with the Romantic mindset? Why or why not?
- 7.) Analyze the relationship between creativity and the natural world. Do you feel more creative amidst nature?
- 8.) In what ways have words and symbols changed meaning over time? Consider how different symbols and words have different meaning for you and your friends than they do for your parents.
- 9.) Which is more important, narrative knowledge (stories and words) or quantitative knowledge (like math, science, data)? Why?

The following rubric will be used to evaluate your participation in the Socratic seminar:

	4	3	2	1
Conduct	<ul style="list-style-type: none"> *Patient with differing opinions. *Asks for clarification. *Brings others into convo *Very focused 	<ul style="list-style-type: none"> *Respectful. *Comments, but does not attempt to involve others. *Generally focused. 	<ul style="list-style-type: none"> *Participates but shows impatience. *Some focus. *Engages in “sidebar” conversations. 	<ul style="list-style-type: none"> *Disrespectful. *Argumentative. *Does not participate.
Speaking	<ul style="list-style-type: none"> *Speaks to all participants. *Articulate. *Takes a leadership role without monopolizing the discussion. 	<ul style="list-style-type: none"> *Speaks to most participants. *Tends to “ramble on” after making a point. 	<ul style="list-style-type: none"> *Speaks too softly. *Needs prompting to get involved. *Has no sustainable point *Monopolizes 	<ul style="list-style-type: none"> *Reluctant to speak or does not speak at all. *Comments do not support point.

Reasoning	<ul style="list-style-type: none"> *Cites relevant text. *Relates topic to outside knowledge and other topics. *Makes connections between own thoughts and others'. *Willing to take an alternate viewpoint. *Asks questions to further dialogue. 	<ul style="list-style-type: none"> *Makes limited connections to others' ideas. *Some intriguing points that merit reaction. *Some references to text. 	<ul style="list-style-type: none"> *Accurate on minor points, but misses the main point. *No textual support; "talking of the top of your head." *Refuses to acknowledge alternate viewpoints. 	<ul style="list-style-type: none"> *Illogical comments. *Ignores the movement of the seminar.
Listening	<ul style="list-style-type: none"> *Attentive and focused. *Builds on other's ideas & gives others credit. 	<ul style="list-style-type: none"> *Generally attentive and focused. *Responds thoughtfully. 	<ul style="list-style-type: none"> *Appears disconnected. 	<ul style="list-style-type: none"> *Inattentive. *Comments show lack of understanding. *Takes no notes.
Reading/ Preparation	<ul style="list-style-type: none"> *Familiar with text. *Understands major concepts. *Writing assignment completed on time. 	<ul style="list-style-type: none"> *Fairly familiar with text. *Asks for references. *Writing assignment completed on time. 	<ul style="list-style-type: none"> *Confused with key concepts of text. *Writing is completed, but maybe not on time. 	<ul style="list-style-type: none"> *Unfamiliar with text. *Writing assignment completed but not on time.

WHAT IS ART? Essay

Assignment: *What gives art meaning? Is it the author's intended meaning or the reader's/viewer's interpretation? Use specific evidence from your notes about the Romantics, Postmodernists, and Deconstructions - along with your own personal experiences – to prove your thesis.*

1. 1st Paragraph- Introduction (4-6 sentences)

1. Begin with a Hook that broadly discuss the theme you are addressing in your paper (quote, thoughtful question, anecdote, etc.) **DO NOT MENTION ANY OF THE TEXTS YET.**

2. Give background information about your topic. This is where you can mention the novel and begin to connect your attention grabber to the thesis.

3. Thesis: DO NOT USE A 3 POINT THESIS THIS TIME

Sample thesis: The reader's interpretation is what gives art meaning.

2. Body Paragraph One is about the FIRST REASON (7-12 sentences)

1. Topic sentence (tells what your paragraph will be about)

2. Supporting Detail from the text

3. Explain the supporting detail

4. Connect the Supporting detail to the thesis statement. How does it prove your thesis?

5. Supporting Detail from the text

6. Explain the Supporting Detail

7. Connect the Supporting detail to the thesis statement. How does it prove your thesis?

8. Concluding Sentence (summarizes paragraph/restates topic sentence in different words)

3. Body Paragraph Two is about the SECOND REASON (7-12 sentences)

1. Topic sentence (tells what your paragraph will be about)

2. Supporting Detail from the text

3. Explain the supporting detail

4. Connect the Supporting detail to the thesis statement. How does it prove your thesis?

5. Supporting Detail from the text

6. Explain the Supporting Detail

7. Connect the Supporting detail to the thesis statement. How does it prove your thesis?

8. Concluding Sentence (summarizes paragraph/restates topic sentence in different words)

3. Body Paragraph Three is where you address the COUNTERARGUMENT (7-12 sentences)

1. Topic sentence (tells what your paragraph will be about)
2. Supporting Detail that disproves your thesis
3. Explain how it is a weak detail
4. Supporting Detail that disproves your thesis
5. Explain how this is a weak detail
6. Concluding Sentence (summarizes paragraph/restates topic sentence in different words)

5. Conclusion (4-6 sentences)

1. Restate Thesis in different words
2. Summarize the results you found. **DO NOT ADD NEW INFORMATION!**
3. Final thought- Leave the reader with a final thought about your topic and give them a call to action on this topic.

THESE MUST SHOW UP IN YOUR ESSAY

~Logical Transitions both between paragraphs and within the paragraphs. (Additionally, Next, Finally, Furthermore, As a result)

~Strong words/diction (do not use words that you don't understand!) **NO DEAD WORDS!**

~**NEVER USE THE WORDS YOU, YOUR, I THINK, I BELIEVE, PERSONALLY, IN MY OPINION**

Appendix 1: Implementing Common Core Standards

RL9-10.4: Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone.

This standard is addressed during a few moments in my curriculum unit. When annotation poetry, students are asked to define words, analyze connotation, tone, mood, and impact.

W1. 9-10: Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

Students will conclude the unit by writing an argumentative essay on the topic of the meaning of art. They will be required to use specific examples which will come from texts used in class and class discussion.

W7.9-10: Conduct short as well as more sustained research projects to answer a question or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources of the subject, demonstrating understanding on the subject under investigation.

The entire unit is driven by the question, “Can machines think?” and “Does the author’s purpose matter in interpreting text?” We will read poetry, non-fiction, and literary criticism with the intention of determining an answer to this specific question. When they write their argumentative essays, they will be responsible for using evidence from a wide range of sources.

SL1.9-10: Initiate and participate effectively in a range of collaborative discussions with diverse partners on grades 9-10 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively.

As can be seen in the Socratic seminar rubric, students will be graded on conduct, speaking, listening, reading, and preparation. As parts of all of these standards, students will need to be articulate, respond to others’ ideas, and connect these questions to a variety of topics that are outside of the English classroom.

Reading List for Students

NPR. "Moving Beyond the Turing Test to Judge Artificial Intelligence." Last modified June 14, 2014, <http://www.npr.org/2014/06/14/322008378/moving-beyond-the-turing-test-to-judge-artificial-intelligence>.

Turing, A.M. "Computing Machinery and Intelligence." *Mind* 49 (1950) 433-460.

Wordsworth, William. "The World Is Too Much With Us." The Poetry Foundation. Last accessed November 23, 2014. <http://www.poetryfoundation.org/poem/174833>.

Bibliography for Teachers

Derrida, Jacques. *On Grammatology*. Translated by Gayatri Chakravorty Spivak. Baltimore: Johns Hopkins, 1976.

This is the most important text to read for those interested in semiotics and deconstruction. It is a pretty arduous read, but there are some very interesting ideas in this that can be adapted for lower levels.

Lowy, Michael, and Robert Sayre. *Romanticism Against the Tide of Modernity*. Translated by Catherine Porter. Durham: Duke, 2001.

Lowy and Sayre introduce the literary movement known as Romanticism first in this book. They later consider the Romantics' reaction to a growingly modern world. Not only do they reference specific poets and writers, but they also reference specific poems that can be used in class to discuss certain aspects of Romanticism.

Lyotard, Jean-Francois. *The Postmodern Condition*. Translated by Geoff Bennington and Brian Massumi. Minneapolis: Univ. of Minnesota, 1984.

Like the novel by Derrida, this text is very complex and really is intended for a college-level. Still, I suggest this as a requisite read before planning to teach this unit, which is a much simpler conversation about the basic ideas behind Lyotard's very complex. Lyotard created the term postmodern.

"Robot Art: Harvey Moon's Drawing Machine." youtube.com. Last modified on June 14, 2013. <http://www.youtube.com/watch?v=VufMgHvaoG0>.

This video explains how Harvey Moon programs a machine to create his art. It is his original set of algorithms, so it is arguably still creative. His artwork is a beautiful example of postmodern art.

Wordsworth, William. *William Wordsworth: Selected Poems*. New York: Gramercy, 1993.

Wordsworth is a quintessential Romantic poet who embodies the Romantic qualities highlighted in the lessons from this unit. I chose to include “The World Is Too Much With Us,” as a representative poem, but others could be pulled from his selected works in order to conduct a deeper study of Wordsworth and Romantic ideas.

Notes

ⁱ A.M. Turing, “On Computing Machinery and Intelligence,” *Mind* 49 (1950) 433-434.

ⁱⁱ Lowy, Michael, and Robert Sayre. *Romanticism Against the Tide of Modernity*.

Translated by Catherine Porter. Durham: Duke, 2001.

ⁱⁱⁱ Sayre and Lowy, *Romanticism Against the Tide of Modernity*.

^{iv} Sayre and Lowy, *Romanticism Against the Tide of Modernity*.

^v “Robot Art: Harvey Moon’s Drawing Machine,” youtube.com, last modified on June 14, 2013, <http://www.youtube.com/watch?v=VufMgHvaoG0>.

^{vi} Lyotard, Jean-Francois. *The Postmodern Condition*. Translated by Geoff Bennington and Brian Massumi. Minneapolis: Univ. of Minnesota, 1984.

^{vii} Lyotard, *The Postmodern Condition*.

^{viii} Derrida, Jacques. *On Grammatology*. Translated by Gayatri Chakravorty Spivak. Baltimore: Johns Hopkins, 1976.

^{ix} Derrida, *On Grammatology*.

^x Raghu Ramanujan (Computer Science Professor) in discussion with the author, November 2014.