JENNIFER LYN DORSEY

4. “PEEL[ING] APART LAYERS OF MEANING” IN SF SHORT FICTION

Inviting Students to Extrapolate on the Effects of Change

Punk rock and science fiction (SF) both played a huge role in shaping my identity as a teen. The two seem incongruous, I know, at least if you think about the stereotypical depiction of each. Punk rock was all about nonconformity, angst, and mohawks. SF, on the other hand, was all about nerds, glasses, and pocket protectors. And yet, both offered something the rest of my life and education lacked. They asked questions. Questions that confronted and explored the essence of reality presented to me as Truth at home and at school; questions that forced me to think and examine my stances regarding the nature of society, government, and my role in both.

In the song “The Answer,” Bad Religion sings about how science evolves notions of truth and asks the listener to remain skeptical when given answers as truths. They proclaim, “don’t tell me about the answer/ cause then another one will come along soon. /I don’t believe you have the answer, /I’ve got ideas, too. /But if you’ve got enough naivety, and you’ve got conviction, /then the answer is perfect for you.” Conviction combined with faith makes people believe ideas presented as truths, but since truths change as we learn more, perhaps the only answer is suspended disbelief. Similarly, legendary SF writer Robert A. Heinlein discussed the infallibility of logic depicted as truth by illustrating how “[l]ogic proved that airplanes can’t fly and that H-bombs won’t work and that stones don’t fall out of the sky. Logic is a way of saying that anything which didn’t happen yesterday won’t happen tomorrow” (Glory Road, 1963, p. 120). Think for yourself, question truths, ponder what could be—these are the things I learned from punk rock and SF, and these are the abilities I believe, more than ever, students who live in a world where truths change and evolve at an astronomical rate, need today.

CRITICAL LITERACY IN A CHANGING SOCIETY

In *Teaching as a Subversive Activity*, Postman and Weingarten (1969) point out the need for a pedagogy that develops students capable of dealing with change, an inherent feature of our modern world. They argue such a student would be an “actively inquiring, flexible, creative, innovative, tolerant, personality who can face uncertainty and ambiguity without disorientation, who can formulate viable new meanings to meet changes in the environment which threaten individual

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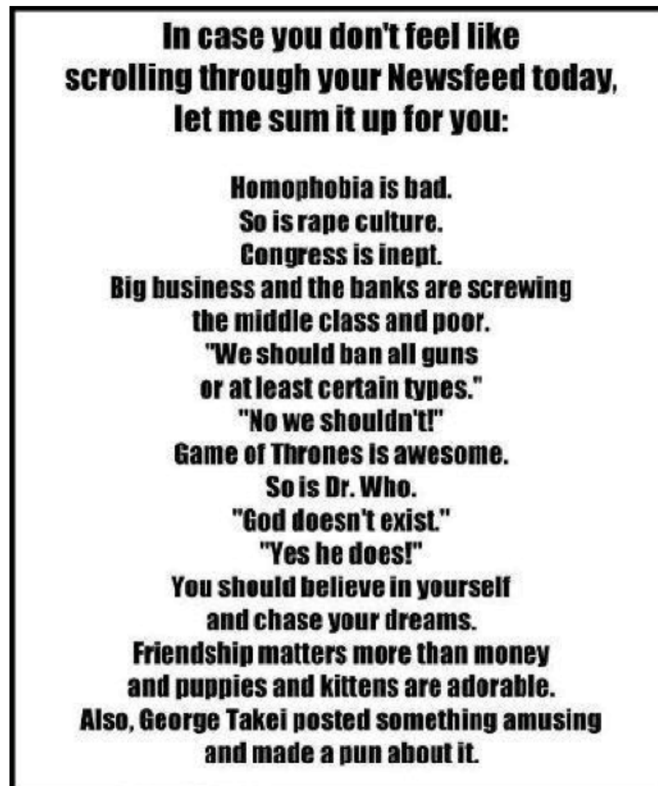
and mutual survival" (p. 218). Today's students are born into a world where an information tsunami exists on demand via the Internet and technology. In this world educational success no longer depends purely on knowledge. Students now need to be able to navigate the flood waters of available knowledge. Because "the heart of critical thinking and problem solving is the ability to ask the right questions" (Crowe & Stanford, 2010, p. 36), the compass they need is the ability to think critically and evaluate (Crowe & Stanford; Wagner, 2008). Facts, students learn early on, are not reliable. After all, today's young people have grown up in a world where at a touch of a button they can find co-existing, yet paradoxical facts, affirming and refuting major scientific concepts like global warming. They spend their days on Facebook, where the paradoxes presented are so ubiquitous, posts are even made mocking the fact, as shown in the picture (Koranek, n.d.):



Growing up enmeshed in postmodernity, even the heroes young people admire, like Doctor Who, and the shows they watch, like *Game of Thrones (GoT)*, both described in the picture as being "awesome," demonstrate the complexity of rightness and knowing and truth. Doctor Who, a SF program, uses a character

imbued with power over time itself to explore the potential shifts and effects in power and world structures, as well as the ethical ramification surrounding the use of such power. *GoT*, a fantasy series based on fantasy novels, deals with people's uses and misuses of power in a world in flux. Both portray complex worlds wherein everything is painted in shades of grey, and both force viewers to confront difficult ethical questions.

SF AND CRITICAL THINKING

The global community these students will enter will be a world continually evolving into one even more complex, one in which "yesterday's answers won't solve today's problems," a world where they will be expected to confront the challenge of doing "things that haven't been done before" (Wagner, 2008, p. 21). However, despite the growing body of research indicating the need for critical thinking skills, it is rare for a classroom to teach a student how to think (Wagner) and even rarer for a classroom to provide a forum where students can pose questions aimed toward transformation, questions that critique existing power structures and strive to find a better way.

Even if an educator would like to find a forum for student exploration into notions of T(t)ruth, finding an effective medium can be problematic. Many traditional literary and non-fiction works are laden with polarizing, socio-political undertones and, as a result, make it difficult for students to step outside their ethics and engage in effective discussions of the issues posed. Because speculative literary forms take the big issues and questions out of their potentially polarizing cultural contexts, speculative fiction is an excellent medium for developing this kind of critical thinker. In his essay, "My Definition of Science Fiction," Dick (1995) writes that for a piece of fiction to be SF, it must present a distinctly new idea, and for it to be *good* SF,

> the conceptual dislocation—the new ideas, in other words—must be truly new (or a new variation on an old one) and it must be intellectually stimulating to the reader; it must invade his mind and wake it up to the possibility of something he had not up to then thought of. (p. 77)

Good SF confronts the nature of reality and forces readers to engage with philosophical questions in a creative way by thrusting them out of their comfort zones and into worlds that operate according to different rules and structures. This makes SF an "ideal literature for rethinking the world through words" (Zigo & Moore, 2004, p. 88). The words used to rethink the new/shifted worlds presented even operate differently in SF.

Since SF deals in "worlds of if" (Evans et al., 2010, p. xvi), language can likewise be used speculatively taking on new nuances. For example, Bradbury uses the word "firefighters" in Fahrenheit 451 to depict people who are dedicated to extinguishing knowledge through fire instead of extinguishing fire itself. Moreover, SF's popularity is increasing astronomically, a fact that is understandable considering that SF is the fiction of change, one that helps us "view

change as both natural and inevitable" (Tymn, 1985, p. 41). Therefore, the genre offers students an engaging way for them to explore the nature, causes, and consequences of change.

SHORT SF AND CRITICAL THINKING

That being said, introducing new literary forms, regardless of the worth, into curriculum already laden with required reading, standards, and testing can be a challenge. Novellas and short stories are both accessible and easier to integrate than full-length works, and as this chapter will show, offer just as much depth and complexity. Furthermore, the strictures inherent in the short form create stories geared towards posing provocative questions as opposed to providing answers, stories geared at interacting with readers causing them to become the meaning makers. Because the focus in SF short stories is ideas, many do not have a hero, and some lack human characters all together. Individual characters matter less (Shippey, 1992). They operate more as representative of social forces often symbolizing power, oppression, and marginalization. The stories serve to explore T(t)ruths and how truths affect people and society.

This chapter will begin by discussing the origin of modern science fiction in the short story, evolving from its early roots in pulp magazines into the "fiction of change" (Zigo & Moore, 2004, p. 88). After discussing the trajectory of the SF short story, the chapter will explore the ways in which "SF invites readers to peel apart layers of meaning and interrogate subjective positions within our current techno-global existence, prodding us to ask who develops technology, who has access to technology, who benefits from technology, and who is oppressed by technology" (p. 88). And it will do so, by positing a question as a theme at the beginning of each section as a backdrop for learning (Marzano, Pickering, & Pollock, 2005).

Complex questions require reconfiguring and restructuring knowledge in new forms. Such questions force the reader to develop the "questing-questioning" (Zigo, 2004, p. 86) stance to make new meanings with the text. Analysis questions, for example, call for learners to separate topics into smaller pieces. This requires the reader "to cognitively process a complex idea into simpler more manageable parts helps them see relationships and generalize learning," and "[e]valuative questioning often is used to characterize and appraise opinions, facts, propaganda, and thoughtful insight" (Crowe & Stanford, 2010, pp. 39, 40). Critical questions are useful for helping readers develop and justify their own points-of-view. Questioning that engages this type of thinking is key in English class, as literary analysis and essay writing tasks often require students to take their understanding or comprehension of a material and analyze, synthesize, or evaluate the material in order to create a new understanding.

The early works by SF's Grand Masters developed the querying nature of the genre by asking readers to consider: *what ethical issues surround the uses and misuses of technology*? Recurrent dystopian and post-apocalyptic themes explore relationships among power, society, and technology as well as how power is

engrained and embedded in our selves and our societies (Foucault, 1980). These stories ask readers to ponder: *how is humanity shaped by power structures?* SF doesn't always look at how society and science can wrongly evolve. In fact, some of the best short SF confronts notions of *self* and society and explores issues regarding marginalization making readers wonder: *how could the definition of humanity evolve?*

HISTORICAL ORIGINS OF THE SF SHORT STORY

There is much dissent regarding where SF originated with opinions ranging from the satirical works of Lucian of Samosata in ancient Greece to the fantastic voyages written in the Romantic Age to the Industrial Revolution and even Darwinism. Regardless of where the ideas originated, the genre came together in a coherent form as a short story due to the work of Hugo Gernsback, who coined the term "science fiction," originally called "scientifiction." He created the first magazine dedicated to the form, *Amazing Stories* in 1926. Gernsback's steadfast promotion of SF contributed greatly to the growth in the field through the 20's and 30's as more pulp magazines arose and the genre became more popular. A key turning point for the genre came when John W. Campbell took the helm at *Astounding Stories* in 1937. A SF writer himself, Campbell sought out writers with scientific backgrounds, writers who were willing to write with more style and who could incorporate more sophisticated ideas.

Under Campbell's leadership *Astounding*'s writers "were encouraged by Campbell to tap psychology, philosophy, politics, and other soft sciences and areas of specialization" (Tymn, 1985, p. 46). Campbell believed the science and ideas explored in SF were possible and believed writers and editors could hasten the coming using the power of words. At times Campbell and his writers showed a Wellsian prescience lessening readers' incredulity over time conditioning them to accept technological change and how it leads to social change (Shippey, 1992). Under Campbell's leadership *Astounding* became one of the premiere SF magazines, and although the name was changed in the 60s to *Analog*, it survives today as one of the field's leading magazines. Because of Campbell's prominence in the early years of the field, writers would seek him out for advice, rewrite stories for him, and considered him their primary audience. His voice had tremendous power in the market, and under his guidance "science fiction matured, and entered what fans refer to as its 'golden age' roughly from the period from 1938-1950" (Tymn, p. 46).

WHAT ETHICAL ISSUES SURROUND THE USES AND MISUSES OF TECHNOLOGY?

"Knowledge is not made for understanding; it is made for cutting"
~Foucault

Four of SF's Grand Masters gained prominence during this golden age: Robert A. Heinlein, Isaac Asimov, Arthur C. Clarke, and Ray Bradbury. These men's work has been tremendously influential to today's authors and the genre overall. From the beginning of their careers, these forerunners to modern SF wrote future histories that challenged readers' beliefs and notions regarding philosophical concepts considered unanswerable by science. Foucault (2010) claimed "history has a more important task than to be than to be a handmaiden of philosophy, to recount the necessary birth of truth and values …. Its task is to become a curative science" (p. 90). Similarly, histories of the future should do more than explain truth and values. Texts should look at events as symptoms and use the events to diagnose and critique truths and values. These authors do exactly that showing how nothing, not death, creation, or even faith, is exempt from technology's reach and force readers to consider the boundaries of what technology can and should do. Contrasting beginnings and end points, faith and destruction, the stories stipulate how forces work to define humanity.

Creators and Creations

Nietzche expressed concern that the death of God would lead to life lacking significance for man leading to a "sense of the utter bleakness of life and the devaluation of all values" (Kaufman, 1974, p. 101). This philosophical pondering is a central theme in both Clarke's "The Star" (1967) and Asimov's "The Last Question" (1956), both of which present ideas regarding the ramifications of technological development on faith. The two tales also explore Clarke's notion that "any sufficiently advanced technology is indistinguishable from magic" (Evans et al., 2010, p. 241) by looking at technology on a galactic level.

"The Star," originally published in 1955, predicts what might happen when the magic is exposed by presenting the reader with a crisis of faith that demonstrates the power science has to reveals holes in faith and induce doubt in the faithful. Technology discovers the origin of Christianity has a scientific explanation when an astrophysicist discovers the brilliant star signaling people to the birth of Christ as described in Matthew and Luke, the Biblical Star of Bethlehem, was a supernova from a distant galaxy. The text depicts technology's power to destroy faith and explores the effects on humanity using the character of the doubting astrophysicist priest as a vehicle. Throughout the story, the priest wonders how the destruction he discovered could "be reconciled with the mercy of God" (Clarke, 1967, n.p.), and he wonders how his discovery will effect other people of faith. "The Last Question" expounds on the possibility of science answering and overcoming one of the big questions—what happens when time ends as a result of entropy. The text positions an evolved computer, Multivac, as The Creator

described in *The Bible*. In "The Star" and "The Last Question," events deemed magical and inexplicable are explained by "sufficiently advanced technology." In one, the Star of Bethlehem, a magical light symbolizing the birth of Christ, is transformed into a scientifically verifiable destruction. In the other, the biblical phrase, "Let There Be Light," stated by God during the moment of creation, is transformed into a program stated by a computer who has computed a means of reversing entropy.

Characters in both are merely vehicles for exploring these concepts. Clarke's only character is the doubting scientist priest, and the story focuses solely on the priest's discovery and subsequential faith crisis to explore how God's death might affect humanity's faithful. While there are people in Asimov's story, they are only used to illustrate man evolving and expanding across space and continually striving to stop the universe's inevitable decline. Technology symbolized by Multivac evolves along with man and keeps striving to find a solution to man's question. In both, characters symbolize man's quest for meaning, and in both the characters find answers in science. Foucault (2010) held that "knowledge was made for cutting" (p. 88), and these stories force readers to wonder how deep knowledge can cut and what the implications for such knowledge might be.

Death and Destruction

Science's capacity for cutting is also explored in Heinlein's and Bradbury's stories, but these tales focus more on technology's capacity for misuse than its potential to transform. Heinlein's "Life-Line" (1987), first published in 1939, looks at how technological developments can shift economic and social forces, even when the technology deals with events we consider nonnegotiable like death. Bradbury's 1950 story "There Will Come Soft Rains" (2010) speculates on humanity's ultimate destruction through nuclear war.

"Life-Line" looks at the ethics surrounding death—and not just how death affects us as individuals, but death's role in society and how all too often, technology represents an economic force. In the story, one man's invention, a machine that predicts death, shifts powers in society away from the life insurance salesmen who fight to main control over the death industry and the discourse surrounding death. Bradbury's story also deals with death, but instead of death's economic role, the story is concerned with humanity's potential for genocide via technology. In the story, nuclear war has wiped out humanity, and the balance of power has been shifted back into the natural world.

Characters are used in both stories to symbolize power/ knowledge relationships. In Heinlein, Pinero, the machine's inventor, symbolizes progress and new ideas, while the insurance men represent the establishment. The story focuses on the arguments and arrogances as both forces strive to control the discourse surrounding death. Intriguingly, Pinero shifts from being a force to a person when death is removed from the realm of technology. He is affected by death when his machine reveals an innocent young couple who requested his services will both die that day. Although he had claimed his knowledge is absolute, he tries to forestall

the couple to save them. Even to Pinero, the cynical little scientist, when death becomes personal, the issue ceases to be a rhetorical matter and moves into the realm of ethics.

Bradbury's (2010) story juxtaposes two kinds of technology: the helpful and the destructive. The former is portrayed by the story's main character, a personified house, and the latter is symbolized by humanity's lack of presence and voice. Technology's potential for good is shown through the helpful little house struggling to maintain normalcy with a "mechanical paranoia" (p. 236) right along with all of its potential for evil shown through the family's remains: five spots of paint, silhouetted on the charcoal covered outer wall like a macabre painting. As alluded to in the eponymous Sara Teasdale poem, nature ultimately prevails over both helpful and destructive technology. Fire rips down the earnest little home leaving behind only "smoke and silence" and a natural world full of creatures who would not mind "if mankind perished utterly" and "would scarcely know that we were gone" (p. 238). Technology's misuse brings about our downfall, and despite our arrogant assumption that the world exists for us alone, it continues on—growing and evolving once more without us. More than any other presented here, this story begs the reader to ponder if humanity should limit how technology is developed and whether the potential for protection outweighs the potential for destruction.

HOW IS HUMANITY SHAPED BY POWER STRUCTURES?

"In individuals, insanity is rare; but in groups, parties, nations, and epochs, it is the rule."
~Nietzsche

Foucault (1980) wrote about the role and nature of power in society. Power, he believes, is inseparable from people and "reaches into the very grain of individuals, touches their bodies and inserts itself their actions and attitudes, their discourses, learning processes and everyday lives" (p. 39). Power as threat and lure is evident in a host of post-apocalyptic and dystopian works, a subgenre developed in the wake of World War II. The devastations dealt during WWII war led to society worrying about the Cold War and threat of nuclear war, while writers pondered the consequences of advancement on humanity and the possibility that people could "become the victims of our owns creations" (Tymn, 1985, p. 46). The expansion of SF writing into post-apocalyptical and dystopian realms lead to a greater degree of integration of sociocultural and social sciences into SF stories. SF text's form privileges social theory by basing the social arguments around worlds constructed for the purpose of discussing social practices, and the best SF requires a sophisticated understanding of the antagonisms inherent between social and economic classes (Freedman, 2003).

Science as a Threat and Lure

Power's catastrophic potential can clearly be seen in "The Brief History of the Dead" (Brockmeier, 2003), which like Bradbury's "There Will Come Soft Rains," explores cataclysmic loss of life via science, but examines the ramifications of viral genocide on the after life. While apocalyptical destruction is an old yarn in SF, Brockmeier posits a unique idea by pointing out that the consequences of genocide might reach beyond this life.

Set in The City where people wake after dying, the story's structure is journalistic. Told in a decidedly neutral tone, instead of having a main character, the story consists of snippets of stories from the various residents who came to The City from locations across the globe. The multiplicity of voices interviewed reflects the lived experiences of the billions of residents and illustrates the myriad of ways people died and then lived again because "that was what the living did: they died" (Brockmeier, 2003, n.p.). Each person interviewed is given a unique character and voice, and each represents a different life. This personalizes the tale; the characters become people not faceless masses.

Because each resident eventually disappears, the residents believe they only exist in The City as long as they are remembered by the living. No one knows where they go. Recently, however, the city had been filling more rapidly, and just as rapidly, the city dwindled. Interviews with new residents reveal an engineered virus has been sweeping over the Earth. Each character interviewed eventually disappears, leaving the reader to ponders the fate of each, expanding the scope and reach of the story's pathos. In the end, the city became silent, and one resident ponders, "What would happen, he wondered, when that other room, the larger world, had been emptied out" (Brockmeier, 2003, n.p.)? Global eradication in the living world leading to eradication in the next.

The weapons by which we wound each other aren't always dramatic, but that doesn't make them any less devastating. "'HELLO,' said the stick" opens Swanwick's (2007, p. 25) ironic little tale of a unique way weapons can wreck havoc during war. This technologically enhanced talking stick, lying innocuously on the ground, is speaking to a soldier on his way to join his troop. The soldier is cognizant enough to ask why a technologically imbued stick was lying around when technological weapons were banned. But it is the cynical stick who knows that it exists because "the technology is there, even if it's not supposed to be used. So they cheat. Your side, the other side. Everybody cheats" (p. 30). The worse a war goes, the more both sides cheat. The stick's comments speak to how man's quest for power is seldom limited by rules. Too often people convince themselves that the ends justify the means.

The seemingly helpful stick itself turns out to be a trick, which the soldier discovers when he gets ill and the stick claims the illness is "radiation poisoning, I expect. I operate off a plutonium battery" (Swanwick, 2007, p. 33). Filled with rage, the soldier rants about the cruelty in killing a man via illness, but the savvy stick posits, "Is this crueler than hacking a man to death with a big knife?" (p. 34). The stick has a good point. The means do simply seem trickier and more clever,

not more cruel. Man used his intelligence and his technology to find better ways to kill—ways that sort of-kind of follow the rules imposed by society. The irony is exacerbated when the stick admits the man might not die if runs to the medics on his side, since the soldier does more damage alive consuming resources than dead. The man drops the stick and hurries for help. A few days later, another soldier comes along, "'Hello,' said the stick" (p. 34). And the cycle continues.

Using the character of a wise and cynical technologically enhanced stick that is able to dupe men into picking up the object of their own destruction emphasizes how power operates behind man's back. The average man here is portrayed as ignorant of technology's scope; he doesn't know how those in control cheat; he lacks the understanding of power structures to realize how he is being manipulated. The stick does. The science knows more than the man, and even when the stick explains things to him, the soldier still doesn't understand.

Swanwick's (2005) stories of the ways humans use and distort their resources and powers aren't always so amusing. Sometimes, they are out right disturbing. "The Dead" is set in a world where zombies are used as high-end workers and peddled as "Postanthropic biological resources" (p. 344), a luxury commodity that is in the process of breaking into the blue-collar market due to a technological breakthrough. Zombies, the product, can now be offered for "the factory-floor cost of a subcompact" a price that is "way below the economic threshold for blue-collar labor" (p. 344). The enormous reduction in cost for businesses is projected to overcome the revulsion factor that had been holding the market back. Swanwick's language evokes political speak. The dead are called "postanthropic biological resources," not zombies or corpses, terms connoting disgust and decay. They are discussed as a means of "competing in a dwindling consumer market" (p. 344) since corpses require no benefits or sick days. The effects on the workers the zombies replace is only discussed by the protagonist, who sees the workers becoming the walking dead, worth more dead than alive. The parallels to American corporate economics is clear: reducing cost while increasing productivity is the name of the game—never mind if the money is made at the cost of other's tragedies.

Throughout the story, the protagonist, Donald, is recruited to join the burgeoning postanthropic market. Yet after accepting the job, he is troubled, hallucinating that the world was "a vast necropolis," thinking about how the millions who would lose their jobs would hate them, sitting there powerless to do anything, helpless against the economic power and force of the corporations. Donald fully realizes the lives he and the others in power will destroy and looks out upon the masses and considers how "there were so many of them and so few of us. If they were to all rise up at once, they'd be like a tsunami, irresistible. And if there was so much as a spark of life left in them, then that was exactly what they would do" (Swanwick, 2005, p. 351).

Constructed as a sales pitch to a desirable executive, and narrated from his perspective, the form emphasizes the moral ambiguity in the situation. Donald describes his uncertainties in joining the death market and his distaste for using corpses as a commodity. Using a man in the crux of joining the powerful or masses

internalizes the issue and shows how when power moves to fill a vacuum, each of us is forced to become an Us or a Them, one of the powerful or powerless.

"A spark of life" Donald claims is all that is needed. If people are not dead inside, they will revolt. Maybe. He hopes. Indicating the degree of oppression it takes for people to rise up against the Powers That Be. Many today distrust the amount of power held by corporations in America and are dismayed by the ever-increasing disparity in wealth. Swanwick forces the reader to wonder if he too is dead inside.

Power as a Threat and Lure

Thoreau states in "Civil Disobedience" that most men "serve the state" as "machines" and "wooden men" whose will and purpose can be controlled as well (as cited in Ellison, 2010, p. 368). He believed few have the spark needed to regain power and control over their destinies; these few "heroes, patriots, martyrs, reformers" (p. 368) possess the capacity to serve the state with their consciences as well. It is one of those few who serves as the subject for Harlan Ellison's 1967 story "'Repent, Harlequin!' Said the Ticktockman" (2010), which ponders the control of the masses for the greater good of society through "an allegory of civil disobedience set in a cartoonishly vivid dystopian future" (p. 368). Ellison's story is told in a form as anarchical as its main character, starting in the middle, jumping back to the beginning, leaping back and forth between Harlequin's tale and the tale of how a society structured on time and order developed. Through the chaotic unstructured structure, Ellison speculates if there is virtue, at times, in embracing anarchic change. The vehicle for Ellison's supposition is the comedic Harlequin, a character who darts about in a jester costume wrecking havoc by dumping jellybeans in the machinery and taunting the workers calling them "ants" and "maggots" that "hurry and scurry" ordered about by the Time Lords.

In Harlequin's society, the old adage that time is money has been taken to a whole new level. Time, in his world, is not just money in the metaphorical sense, but a commodity payable through hours of your life. To make society function smoothly, tardiness was deemed a crime, a crime punished by losing minutes of life. Therefore perpetual tardiness could result in a person being "turned off," like a faulty piece of machinery (Ellison, 2010, p. 373). The overly order-ridden society is described in language that is equally order ridden: "the single driving force was order and unity and equality and promptness and clocklike precision and attention to the clock, reverence of the gods of the passage of time" (p. 371). Order rules. Time is God. Harlequin's disorder was disastrous. He told the masses, "Don't be slaves of time, it's a helluva way to die, slowly by degrees" (p. 376), using language as disorderly as his actions.

To the governmental leader's dismay, Harlequin had "become a *personality*, something they had filtered out of the system many decades before." He had become what the masses need "their saints and sinner, their bread and circuses, their heroes and villains, he was considered a Bolivar; a Napoleon; a Robin Hood; a Dick Bong (Ace of Aces); a Jesus; a Jome Kenyatta" (Ellison, 2010, p. 369). He

was one of Thoreau's few whose conscience would not let him serve Order and spoke up asking others to stand up as well. A role model, if only his society's people possess the spark Swanwick suggests is necessary to rise up. But as quickly as a spark can ignite, it can be extinguished. Harlequin is caught and instructed in how to conform. Yet, Ellison concludes Harlequin's loss was worth it and "you can't make an omelet without breaking a few eggs, and in every revolution a few dies who shouldn't, but they have to, because that's the way it happens, and if you make only a little change, then it seems to be worthwhile" (p. 378). The change, in this case, seems to be in the Ticktockman, who in the end, runs late himself…and even seems amused by the fact—another spark being lit, perhaps. This time in a person with the power to enact change. And maybe that is part of the issue. People need to possess not just the initiative but the power to enact change. That is, unless the masses can be persuaded to rise up. Masses use force of numbers behind them. Single voices need power and privilege.

While Swanwick and Ellison's stories portray the ways the masses of men are held down for the greater good, Orson Scott Card's "Unaccompanied Sonata" (1979) looks at how individual talents can be exploited. Structured as a traditional coming of age/ identity quest tale, Card uses the example of a musical prodigy, Christian Haroldson, to force the reader to reckon whether "preserving the world that made the world, for the first time in history, a very good place to live" was worth the destruction of the few. The system worked "for practically everyone" (n.p.) but the misfits tend to be the extraordinary, those with gifts surpassing society's capacity to placate.

Each person is assessed and given the job he would love best, but if, and only if he follows the rules. To ensure his music is unique, Christian is isolated as a small child and forbidden to listen to the music of others, but his longing to hear other musicians is too great and he listens to Bach and is ruined. He becomes "derivative." So The Watchers, overseers who notice when "someone acted madly" or against the role given, make Christian a truck driver and forbid him to make music. According to this society Christian is Mad and needs to be fixed. Individual choice is deemed madness in this society, a disease to be eradicated for the greater good.

Years passed, but the lure of music is always too great for Christian. He keeps creating songs of such sadness and wonder they infect all who hear them with his madness, and so he keeps losing pieces of himself: his fingers, and finally, his voice. After losing his voice, Christian is made a Watcher himself, charged with overseeing the system that kept "almost everyone happy" (Card, 1979, n.p.). Those beyond redemption, like Christian, are eventually charged with watching other dissenters and systematically squashing individuality out of society.

Reading the tale of a prodigy being destroyed piece by piece so that society overall can function better forces the reader to critique whose rights matter. If order and happiness for most is maintained, is it worth the loss of the da Vincis and the Einsteins? Moreover, it confronts whether this level of control is good—and if attempts to control and extinguish outliers even works. Near the end of his life, Christian discovers his songs being sung by teens who say the songs have to be

sung because they were “written by a man who knows.” Christian’s gift couldn’t be silenced no matter how hard the authorities tried.

“Unaccompanied Sonata” looks at how music speaks to people and communicates an intangible/ indefinable aspect of being human and binds people together. Butler’s (2005) 1983 story, “Speech Sounds,” also looks at what binds us together as people and a society. Through exploring communication issues readers see how tenuous mankind’s hold is on the very things that make us human. All too easily, everything we built can be taken down, and disintegrated, and it takes a special extremely strong individual to fight back.

In Butler’s story, civilization, not humanity is destroyed by means of a mysterious virus that leaves survivors with specific, stroke-like after effects impairing language skills and cognitive abilities as well. The way speech and language are harmed is highly individualistic, so two people may end up having no way to communicate. This inability to communicate brings out all the darker sides of human nature, rape and beatings had become common, and those who struggled less with language were frequently targeted for attack. The story, therefore, contains almost no dialogue and is narrated by a third person narrator from the perspective of one woman who learns to fight the destruction while she travels attempting to find her family.

Butler’s (2005) warrior in the war to regain communication and humanity is a woman named Rye who had been an author before the illness. To her devastation, the language skill she lost was reading and writing leaving her with “a houseful of books that she could neither read nor bring herself to use as fuel” (p. 573). This loss leaves her—like the other people in this world with a bitter resentment for those who can do what she lost. Due to the lack of communication and surplus of anger and frustration simple things like travel had become huge ordeals. People can only communicate by body language and gestures and these are often misunderstood. Miscommunication leads to confrontation and often to violence. Showing the reader the many means by which literacy binds society together, and what happens when the bindings are torn apart.

During the journey, Rye finds two small children whose mother was just murdered, children who can speak fluently. Children who symbolize hope. The kind of hope all too readily destroyed by the hopeless, driven by despair and vengeance. But while Rye is also struck by evidence of the children’s skills, a stronger feeling exerts itself, awe.

“She had been a teacher. A good one. She had been a protector, too, though only of herself. She had kept herself alive when she had no reason to live. If the illness let these children alone, she could keep them alive” (Butler, 2005, p. 578)—so she reveals that she, too, can speak clearly. She reaches out, and the story ends with this little glimpse of humanity’s goodness and instinct to survive and rebuild, rising out of the devastation. Maybe this story shows kindness can overcome, and maybe we are more than our instincts, even in the face of devastation. In Butler’s tale, the character does matter as much as the message if only to emphasize how individuals do matter.

HOW COULD THE DEFINITION OF HUMANITY EVOLVE?

"When you light a candle, you also cast a shadow."
~Ursula K. Le Guin

Besides confronting the interwoven relationships between technology, power, and society, much of SF confronts notions of *self* and society and even asks the reader to explore notions of what it means to be human, all of which are key features of a critical literacy that "connects the political and the personal, the public and the private, the global and the local, the economic and the pedagogical, for reinventing our lives and for promoting justice in places of inequity" (Shor, 1999, p. 1). Related to the notions of identity and society, SF stories also challenge readers through exploration of our notions of "other" and marginalization never fearing to address issues like race, gender, and sexuality.

Evolving/Redefining Humanity

Like several of the previous stories, Gunn's (2005) 1988 funny and odd story, "Stable Strategies for Middle Management," discusses the relationship between individuals and corporations, but from the angle of individual ambition. Gunn's story depicts "how bioscience may someday make possible career-advancement ploys far more bizarre than any that are possible today" (p. 152). Today, people worry about getting the appropriate education and possessing the skills corporations are looking for, while corporations urgently push educators to instill "21st century skills" in students believing we live in revolutionary times requiring new abilities (Rotherman & Willingham, 2009).

However, the new abilities envisioned by corporations now are nothing compared to those pushed by companies in this future world where employees volunteer for bioengineering and agree "to let the B-E staff mold you into a more useful organism"(Gunn, 2005, p.156). Structured to show one individual's quest for career advancement set on a single day at work, the story depicts Margaret's attempts to mold herself into "a successful competitor for a middle-management niche" (p. 158). Margaret's only problem is that while "you can truly be anything you want to be" (p. 156), you have to cooperate, and Margaret's engineering isn't agreeing to mold itself safely into the social insect she believed would situate her properly for advancement. Instead, her inner competitor comes out in an extreme fashion when she discovered she is being pushed aside and she, quite literally, bites a co-worker's head off. But in this dog, or bug-eat-bug world this is all too normal and she simply calls the assistant and reports, "Mr. Samson and I have come to an evolutionary parting of the ways. Please have him re-engineered. And charge it to personnel" (p. 161). Although the story parodies the corporate world, it does evoke images of ambition in an advanced scientific environment. Mediated by science, companies can design perfect workers, and it's not hard to imagine how far ethical boundaries could be pushed, especially if the workers are willing.

Bear's (2005) 1983 story, "Blood Music," straddles the border between science and fiction while implying how wildly different—and far from human—the future could be in a nanotech story that explores how "the true frontiers of exploration may not lay Out There, but rather deep inside" (p.1) depending on how far science is willing to push. Like always, the danger seems to lie in the nature of the person holding the power, and Bear's tale asserts Frankenstein-esque images of advancement gone far astray. Bear's Dr. Frankenstein is embodied in Vergil, a microbiologist who has been experimenting on himself after he was fired by his company for going off on tangents they felt were "premature." Vergil asks his old doctor friend Edward to give him a physical that reveals Vergil is "being rebuilt from the inside out" (p. 4) by biochips he inserted in bacteria and then into his body.

The chips kept evolving, clustering, rearranging, and cooperating till each group became as smart as a small child, and as the chips evolve and improve, they make improvements to Vergil's body. If this seems a little too bizarre to be possible, science is rapidly proving the fiction Vergil was correct. In 2012, *Scientific American* published an article discussing the potential for "engineering microorganisms to ferry nanoparticles" citing bacteria as a logical choices because they know how to maneuver around a body and "can sense changes in their environment and adapt" genetically (Jabr, 2012, p. 2). This seems like a good idea, letting technology help the body help itself, but once again, ethical boundaries get fuzzy when man's quest for knowledge and self-betterment is thwarted by rules. Rules are made to be broken, from time to time, if the greater good is served—at least some believe. The problem becomes determining when the rules should be broken, and under what circumstances, and when rules are broken without regard for the consequences, the results can be dire.

Bear's (2005) story pushes the boundaries of possibility to show how dire the consequences of experimentation can be when the chips don't stop evolving and start talking to each other within his body, which Vergil says is their universe. They are growing and making cities of cells, and these expanding colonies send out scouts. Edward finds Vergil in a bath full of pinkish water—the scouts, not blood, sitting there waiting and trying to decided if he should flush them down the drain. Terrified, Edward electrocutes Vergil and his trillions of little bioteched beings. Unfortunately, he didn't do it fast enough. Edward is also infected and so is his wife, Gail. Within hours they melt and merge growing together while filaments grow out across the room. Eventually, they look like cells, and as time goes on, their "individuality declines," and they have been completely taken over. Even more troubling, the infection has spread throughout their building. New creatures are coming, and Edward is left with only one question: "How many times has this happened, elsewhere? Travelers never came through space to visit the Earth. They had no need. They had found universes in grains of sand" (p. 18). Unnatural evolution transforming humanity, melding it into something new, resulting in utter loss of self—for us at least. The interesting thing here is how many more lives and identities were created in the process leading the reader to ponder the lives created

in humanity's ultimate evolution and if the new evolution could be defined still as being human.

Redefining Notions of Self and Society

The question of boundaries and identity is also the topic of Michael Resnick's (2005) "Kirinyaga," first published in 1988, which considers preservation and loss of identity on a cultural level. Historically many marginalized groups like Native Americans worried about identity loss when their people were transformed from being "savages" through education, "civilized," and integrated into modern society. While some of the Indians "were thankful for the education" many worried about the little pieces of "self" lost—language, traditions, religions (Enoch, 2008, p. 74). Eventually, the groups wonder if they have an identity separate from the mainstream any more. Efforts to reclaim minority identity can be met with skepticism and resistance, especially when so many feel the new and larger norms are better.

In Resnick's (2005) future, identity concerns cause a group of space colonies to be created as utopian experiments where marginalized groups could reclaim their cultural identities. One such colony uses an ancient Kenyan tribe, the Kikuyu, as a model. This culture's norms include practices such as infanticide and "leaving the old and the feeble out for the hyenas" (p. 168) that outreach the ethical boundaries considered acceptable even by the colonies. Yet, the Kikuyu feel these practices are an inherent part of their identity. When colony authority's come to question the strangling of a baby, Koriba, the priest, insists the baby had to die. It was born feet first and was therefore a demon

The representative tries to be responsible and claims they can accept the elderly being left to die because they can consent, but an infant cannot. Identity is not the issue to the representatives from the majority—ethical treatment is. But whose ethics? To Koriba "it is not murder to put a demon to death" (p. 169). He and his people do not equate this child as being normal and deserving of concern. To them, it is a harbinger of evil. Furthermore, Koriba goes on to explain that if the Kikuyu turn their backs on their customs and beliefs, they will be just as bad as the modern Kenyans on earth—so where should the boundaries be drawn? Koriba insists his people's beliefs must be respected:

> Our society is not a collection of separate people and customs and traditions. No, it is a complex system, with all the pieces as dependent upon each other as the animals and vegetation of the savannah. If you burn the grass, you will not only kill the impala who feeds upon it, but the predator who feeds upon the impala, and the ticks and flies who live upon the predator, and the vultures and marabou storks who feed upon his remains when he dies. You cannot destroy the part without destroying the whole. (Resnick, 2005, p. 174)

That night Koriba takes the young men of the tribe to the wood saying to himself that he will "administer a hideous oath and force you to do unspeakable things to prove your fealty" (p. 176). The tribe does not know this, but war is upon them,

and the reader is left believing Koriba will use any means possible to ensure the safety of his people's cultural identity and wondering where cultural identity lines should be drawn.

Gender and sexual identity are the core of Le Guin's (2005) 1995 tale, "Coming of Age in Karhide," which is set in the same world as her best-known novel, *The Left Hand of Darkness*. Her tale explores a common concern, the difficult transition to adulthood, but what makes this story intriguing is the extent gender and sexual identity concerns are universalized when the story is set in an Alien world, full of intelligent beings who develop in different ways then humans. Their young people still struggle with the changes brought on by growing up—and the changes in this world are even more complicated since most people possess the potential to be either sex. Gender here is not inherent but changeable each time a person comes into kemmer, the time of fertility. Sexual roles shift, since each person can kemmer male or female during a fertility cycle. Therefore, who you are as a person, is distinctly different than your sex, which is not constant.

Interestingly, the baseline androgyny of these people makes storytelling in English, and even describing the story in English, difficult. English has only gendered pronouns, while the language of Karhide has gender neutral pronouns called "somer pronouns" (Le Guin, 2005, p. 331). Le Guin's narrator admits the trouble and to compensate makes sex choices for some characters based around the sex the person was last or becomes most frequently. The first person narration aides in this as well, since it allows the main character, Sov, to say "I," thus avoiding the "he/she/it" quandary. "It," when referring to sentient beings, feels derogatory, as if implying the characters are things, not people.

The language difficulties are even more intriguing since the fourteen-year-old Sov is facing coming of age, as they call it, coming in kemmer. "Until we come of age we have no gender and no sexuality, our hormones don't give us any trouble at all" (Le Guin, 2005, p. 332). The time and process of reaching gender they call kemmer. Sov comes from a large family, with lots of "sibs", but no father—since people can be either sex, the sperm donor is simply the "getter." Sov is raised and educated with sibs in what is described as a happy home. Kemmer is all that worries Sov as it is quickly approaching and causing all kinds of grief. A grief Sov describes in a way that resonates human adolescence saying, "It did not feel like my body, like me. It felt like something else, an ill-fitting garment" (p. 333). While Sov feels like an alien, all the adults seem to be amused, this is after all completely normal. They welcome Sov throughout the process and the family all goes to the kemmerhouse together. There Sov kemmers for the first time as a woman and is iniated into the arts and acts of love by a friend who kemmers as a male, and she learns "love is love," even when she/he isn't in kemmer. The story carries a strong message about the nature of love, sex, and gender when acts of love are completely separated from a person's sexual identity. This makes worrying about a person's sex feel petty, and begs readers to consider their own notions of love, self, and sexual identity.

"When it Changed," written by Joanna Russ (2010) in 1972, explores gender, sexuality, and identity by examining the effects of gender loss. The story takes

place on the colony of Whileaway, “a lost earth colony populated exclusively by women—all the men having perished in a shadowy plague” (p. 507). Despite the lack of men, the women manage to run society and raise children, a fact that shocks the male explorers who “rediscover Whileaway after six centuries of women-only rule” (p. 508). In many ways, this makes the encounter a first contact story—neither sex knows what to make of the other—and their cultures wildly clash.

The men expect the women to be thrilled to see them and shocked to find the women are repulsed by their big and hairy appearances, and really, just don’t know what to make of them, especially since the men declare Whileaway’s culture “unnatural.” One of the men explains how he believes in instincts and that the women, who claim to be a couple, should somehow feel there is something missing and insists “men must come back to Whileaway” (Russ, 2010, p. 513). These misunderstandings lead to struggles between the sexes. The men believe they know how women should be and act, objectify the women, and assume the women here would want to assume traditional gender roles if given the opportunity. Whileaway’s women are simply put off and repelled by the hairy creatures who make no attempts to accept or understand the single gendered society and go about asking disrespectful questions such as which of the women plays the role of man.

But the men are coming, and so the narrator ponders if future generations will look back on Whileaway as a curiosity, “quaint but not impressive” (Russ, 2010, p. 515) and reflects back on the original name, changed by the women after the men died as being too painful and says, “I find it amusing, in a grim way, to see it all so completely turned around. This too shall pass. All good things must come to an end. Take my life but don’t take away the meaning of my life. For-A-While” (p. 515).

Both Le Guin and Russ’s stories speak to sexual identity issues explored by feminist scholars who feel “we need now to ask not only how sexual difference works in history but also how it matters in relation to other kinds of mapping in the universe. And we need to interrogate and historicize our own desires, subjectivity, and ideological practices” (Dubois, 1988, p. 7). While these stories do not function in a historical context, they do ask the reader to question how sexual differences work in society, And whether ideological practices reflect society’s treatment of gender issues.

WHY THESE QUESTIONS MATTER

After being condemned to death for corrupting the youth of Athens by asking questions that challenge them to explore their beliefs, Socrates was asked by the court to offer a counterproposal. Most in his circumstances would have countered with exile. Socrates, however, refused exile saying he would rather die than give up philosophy because “an unexamined life is not worth living.” Socrates believed questioning and speculating on the nature of man and society was “the greatest good there can be for a mortal man” (Plato, 2001, p. 315) because it is only through examination can truth be revealed. Socrates wasn’t wrong. The Athenian court system was. In ancient Greece, the Socratic method was an invaluable tool for

examining and defining ontological, metaphysical, and epistemological T(t)ruths, and today more than ever interrogating our selves and our positions is required to reimagine the world of now into the worlds that might be. As the fiction of change, SF's inherent nature and form works to teach the skills needed for success in an ever-changing society. In fact, Card (2011) claims the point of SF is

> to show how humans adapt and change to deal with whatever the future brings. The skills that sci-fi readers practice are adaptability, resourcefulness, calmness in the face of change and stress. When we read, we practice extrapolation—if this changed, then these other things would have to change as well, but this and that might remain the same. What is at the core of human nature, and what can change according to the winds of fashion or culture. (n.p.)

Because SF takes important issues out of their inherent sociopolitical contexts and places them in speculative settings, the genre offers a way to alleviate the polarizing undertones and enables "critique of the hegemony of dominant texts in relation to diverse cultural and sociopolitical resources" (Wohlwend & Lewis, 2011, p. 188) opening the issues for classroom discussion and debate. More than any other form, short SF forces students to extrapolate on the effects of change. As demonstrated throughout this chapter, short stories pose questions and introduce provocative situations, but force the reader to answer the questions. This process of meaning making helps students see they've *got ideas too*, ideas that matter and merit our consideration.

REFERENCES

Asimov, I. (1956). The last question. *Experimental Life*. Retrieved from http://www.arunchinnachamy.com/isaac-asimov-the-last-question-analysis/

Bear, G. (2005). Blood music. In G. Dozois (Ed.), *The best of the best: 20 years of the year's best science fiction* (pp. 1-18). New York, NY: St. Martin's Griffin. (Original work published 1983.)

Bradbury, R. (2010). There will come soft rains. In A. B. Evans, I. Csicsery-Roney Jr., J. Gordon, V. Hollinger, R. Latham, & C. McGuirk (Eds.), *The Wesleyan anthology of science fiction* (pp. 234-241). Middletown, CT: Wesleyan University Press. (Original work published 1950.)

Brockmeier, K. (2003, September 8). The brief history of the dead. *The New Yorker*. Retrieved from http://www.newyorker.com/archive/2003/09/08/030908fi_fiction?currentPage=all

Butler, G. (2010). Speech sounds. In A. B. Evans, I. Csicsery-Roney Jr., J. Gordon, V. Hollinger, R. Latham, & C. McGuirk (Eds.), *The Wesleyan anthology of science fiction*. (pp. 566-579). Middletown, CT: Wesleyan University Press. (Original work published 1983.)

Card, O. S. (1979). Unaccompanied sonata. Retrieved from http://janlowman.escuelacampoalegre.wikispaces.net/file/view/Card,+Unaccompanied+Sonata.pdf

Card, O. S. (2011, October 3). Orson Scott Card on science fiction. FiveBooks interviews. Retrieved from http://fivebooks.com/interviews/orson-scott-on-science-fiction

Clarke, A. C. (1967). The star. *Nine billion names of god: The best short stories of Arthur C. Clarke*. Retrieved from http://www.uni.edu/morgans/astro/course/TheStar.pdf (Original work published 1956.)

Crowe, M., & Stanford. P. (2010). Questioning for quality. *Delta Kappa Gamma Bulletin*, *76*(4), 36-44.

Dick, P. K. (1995). My definition of science fiction. In L. Sutin (Ed.), *The shifting realities of Philip K. Dick: Selected literary and philosophical writings*. New York, NY: Vintage Books. (Original work published in 1981.)

Dubois, P. (1988). *Sowing the body: Psychoanalysis and ancient representation of women*. Chicago, IL: University of Chicago Press.

Ellison, H. (2010). Repent, Harlequin! said the Ticktockman In A. B. Evans, I. Csicsery-Roney Jr., J. Gordon, V. Hollinger, R. Latham, & C. McGuirk (Eds.), *The Wesleyan anthology of science fiction.* (pp. 234-241). Middletown, CT: Wesleyan University Press. (Original work published 1965.)

Enoch, J. (2008). *Refiguring rhetorical education: Women teaching African American, Native American, and Chicano/a students, 1865-1911*. Carbondale, IL: Southern Illinois University Press.

Evans, A. B., Csicsery-Roney Jr., I., Gordon, J., Hollinger, V., Latham, R., & McGuirk, C. (Eds.). (2010). *The Wesleyan anthology of science fiction.* Middletown: Wesleyan University Press.

Freedman, C. (2003, July). The strongest link: SF as social register. *Science Fiction Studies*, *30*(2), 176-178.

Freire, P., & Macedo, M. (2001). *Literacy: Reading the word and the world*. London: Routledge.

Foucault, M. (1980). *Power/knowledge: Selected interviews and other writings 1972-1977.* New York, NY: Pantheon.

Foucault, M. (2010). Nietzsche, genealogy, history. In P. Rabinow (Ed.), *The Foucault reader.* New York, NY: Vintage Books. (Original work published 1977.)

Graffin, G. (1992). The answer. On *Generator*. United States: Epitaph Records.

Gunn, E. (2005). Stable strategies for middle management. In G. Dozois (Ed.), *The best of the best: 20 years of the year's best science fiction* (pp. 152-161). New York, NY: St. Martin's Griffin. (Original work published 1988.)

Heinlein, R. A. (1987). Life-line. *The past through tomorrow* (pp. 3-14). New York, NY: Ace Books.

Heinlein, R. A. (1963). *Glory road*. New York: Tom Doherty Associates, LLC.

Jabr. F. (2012, March 29). Microbial mules: Engineering bacteria to transport nanoparticles and drugs. *Scientific American*. Retrieved from www.scientificamerican.com/article.cfm?id=microbial-mules

Kaufman, W. (1974). *Nietzsche: Philosopher, psychologist, antichrist* (4th ed). Princeton, NJ: Princeton University Press.

Koranek, I. (n.d.). In Facebook [George Takei]. Retrieved from http://www.facebook.com/georgetakei?fref=ts

Le Guin, U. K. (2005). Coming of age in Karhide. In G. Dozois (Ed.), *The best of the best: 20 years of the year's best science fiction* (pp. 328-341). New York, NY: St. Martin's Griffin. (Original work published 1995.)

Marzano, R. J., Pickering, D., & Pollock, J. (2005). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Upper Saddle River, NJ: Pearson.

Moylan, T. (2003, July). "Social" versus sociopolitical. *Science Fiction Studies*, *30*(2), 174-175.

Plato. (2000). *Selected dialogues of Plato* (B. Jowett, Trans.). New York, NY: Modern Library.

Postman, N., & Weingarten, C. (1969). *Teaching as a subversive activity*. New York, NY: Dell Publishing Co., Inc.

Resnick, M. (2005). Kirinyaga. In G. Dozois (Ed.), *The best of the best: 20 years of the year's best science fiction* (pp. 162-176). New York, NY: St. Martin's Griffin. (Original work published 1988.)

Rotherman, A. J., & Willingham, D. (2009, September). 21st century skills: The challenges ahead. *Educational Leadership*, 15-21.

Russ, J. (2010). When it changed. In A. B. Evans, I. Csicsery-Roney Jr., J. Gordon, V. Hollinger, R. Latham, & C. McGuirk (Eds.), *The Wesleyan anthology of science fiction* (pp. 507-515). Middletown, CT: Wesleyan University Press. (Original work published 1972.)

Shippey, T. (Ed.). (1992). *The Oxford book of science fiction stories*. Oxford: Oxford University Press.

Shor, I. (1999). What is critical literacy? In I. Shor & C. Pari (Eds.), *Critical literacy in Action: Writing words, changing worlds* (pp. 1-30). Portsmouth, NH: Boyton/Cook.

Swanwick, M. (2005). The Dead. In G. Dozois (Ed.), *The best of the best: 20 years of the year's best science fiction* (pp. 342-351). New York, NY: St. Martin's Griffin. (Original work published 1996.)

Swanwick, M. (2007). “Hello!” said the stick. *The dog said bow-wow* (pp. 3-8). San Franciso, CA: Tachyon Publishing.

Tymn, M. B. (1985, April). Science fiction: A brief history and review of criticism. *American Studies International, 23* (1), 41-66.

Wagner, T. (2008, October). Rigor redefined. *Educational Leadership*, 20-24.

Wohlwend, K. E., & Lewis, C. (2011). Critical literacy, critical engagement, and digital technology: Convergence and embodiment in glocal spheres. In D. Lapp & D. Fisher (Eds.), *Handbook of research on teaching the English language arts* (pp. 188-194). New York, NY: Routledge.

Zigo, D., & Moore, M.T. (2004, November). Science fiction: Serious reading, critical reading. *English Journal*, *94*(2), 85-90.