

Stephanie Tu

Dr. Gretchen Short

Honors Humanities Core

7 June 2013

An Expiration Date You Wouldn't Believe:

An Examination of the Essence of Jerome Eugene Morrow

GERMAN: His credentials are impeccable. An expiration date you wouldn't believe. The guy's practically going to live forever. He's got an IQ off the register. Better than 20/20 in both eyes. And the heart of an ox. He could run through a wall. If he could still run.

Viewers are first introduced to the character Jerome Eugene Morrow¹ through a dispassionate listing of characteristics by German, a black market dealer in identities, as he attempts to convince Vincent Freeman to purchase Eugene's genetic profile. "Who is Eugene?" viewers are forced to ask. German's description informs us that he is exceedingly gifted genetically, that he has it all—brains, brawn. Yet the viewer remains unsatisfied by this answer, which captures the genome of Eugene, but not his essence. My aim in this paper is thus to pay respect to Eugene as a human being, not a *Homo sapien*, by examining his essence, or personality and motivations. The dominant lens that I will utilize to evaluate the film is narrative analysis (even though visual analysis will naturally be employed considering the medium) in order to trace Eugene's developmental arc to gain insight about 1) why Eugene does what he does and 2) how his actions reflect how the psyche that drives them changes through time. In stark contrast to Mark Jeffreys, who characterizes Eugene's progression as "Sarcastic and witty,

¹Some confusion may arise because both characters are referred to as Jerome throughout the movie—the real Jerome and the fake Jerome (Vincent). Thus, for clarity, from this point on I will refer to the two characters as Vincent and Eugene (the middle name of the real Jerome, who requests Vincent to call him Eugene after Vincent takes on the identity of Jerome).

he [Eugene] is initially quite patronizing to Vincent, but proceeds to behaving as Vincent's equal, then his homo-affectionate roommate, then his housewife, then his child, then his pet, and finally his burnt offering" (148), I argue that Eugene's evolution is one of enlightenment and nobility. After examining the essence of Eugene, I conclude that the film, especially upon the introduction of the character, frames Eugene in a fashion that is consistent with his society's view of him. However, the process through which the viewer comes to understand Eugene as a human being mirrors Eugene's own process of discovery in which he grapples with the emerging understanding of his own identity he is constructing and the societally constructed understanding of his own identity he had accepted. Ultimately, Eugene comes to terms with the fact that though he is more than his genome, he is essentially missing the human spirit, rendering his life purposeless. Thus, when he commits suicide, the act is one of defiance of the society that created him as well as of determination to exert control over the only aspect of his life he perceives he has control over—his life itself.

Eugene is a character in the science fiction film *Gattaca*, which centers on the journey of Vincent Freeman, an "in-valid," or an individual naturally conceived, in a world of "valids," or individuals artificially conceived through a process combining in-vitro fertilization and eugenics. In this dystopian society of "the-not-too-distant-future," those with less "clean" genetic profiles, or genetic profiles that are inferior in some way (whether they are more susceptible to disease or violence, for instance), are often "in-valids," who are routinely discriminated against for that reason. To overcome the prejudice against him so he can achieve his dream of reaching the stars, Vincent buys the identity of Jerome Eugene Morrow, and with this "acceptable" genetic profile, succeeds magnificently, proving that a person and his future is more than the sum of his genes.

Accordingly, Vincent, as the main character of the film, is usually the primary focus of the literature written about *Gattaca*. Eugene, when he is actually analyzed, is almost always considered a means to an end for Vincent or as a cautionary tale about the evils of tampering with nature, not as a nuanced character who has self-agency². While most of the scholarship about *Gattaca* concerns the ethics of genetic engineering, there are two sources in particular which I will refute for their failure to consider the character of Eugene beyond a superficial level. The first source I will contest is “Dr. Daedalus and His Minotaur: Mythic Warnings about Genetic Engineering from J.B.S. Haldane, Francois Jacob, and Andrew Niccol’s *Gattaca*” by Mark Jeffreys, which affirms that the character of Eugene represents a recycling of the myth of the monster, combining both fears of the disabled and the genetically engineered. While I concede that Jeffreys’ argument has merit and that he discusses several salient points, I contend that Jeffreys, in his attempt to fit the characters of Vincent and Eugene to the mythical characters of Theseus and the Minotaur, fails to adequately address the depth and nuance of the character of Eugene. Even though Jeffreys claims that “*Gattaca* is finally about its supporting player, Jude Law’s character Jerome Eugene Morrow” (Jeffreys 144), he continues the trend of only analyzing Eugene in conjunction with Vincent and not as a character in his own right. The second source I will oppose is “The New Eugenics in Cinema: Genetic Determinism and Gene Therapy in *Gattaca*,” by David A. Kirby, which asserts that the film *Gattaca* faults society’s acceptance of the “black box”³ of genetic determinism, rather than the technology itself, for the repercussions (such as genetic discrimination) that it forecasts. In order to defy society’s

² With the exception of “Genetic Coming of Age” by David A. Kirby and Laura A. Gaither.

³ This concept was articulated by Bruno Latour in *Science in Action*. According to Latour, “‘black boxes’ [are] scientific theories or equipment that are taken for granted and accepted as being accurate and useful” (Kirby 197). When a black box is “transparent,” the ideas within it can be challenged and reformulated, but once the idea gains traction and credence in society, the box closes and becomes “generally accepted without hesitation and ‘cannot and should not be opened’” (Kirby 197).

recognition of genetic determinism, “the belief that human behavior, personality, and physical appearance are determined exclusively by a person’s genetic makeup” (Kirby 197) as a valid principle, the film endeavors to challenge the underlying principles of the concept. Predictably, the article focuses on Vincent Freeman, expounding how his character undermines the argument of genetic determinism because he has capabilities equal to, if not greater than, the individuals in the movie who are genetically enhanced. Therefore, Vincent proves that genes are not the only factors that contribute to a person’s overall success. While Kirby also has a valid claim, but I believe that the character of Eugene challenges the “black box” of genetic determinism as well, not just Vincent.

The film, especially when Eugene is first introduced, stages Eugene in a manner which is consistent with the way his society views him. To wit, Eugene is presented when German opens his briefcase of blood samples (ostensibly belonging to the individuals whose identities he is selling) and removes one vial filled with the ruby liquid. As Kirby notes, “these extreme close-ups of body parts and waste matter are extremely alienating, suggesting that human beings are valued less than their cast-off DNA” (Kirby 206). In other words, in his society, Eugene is valued less as a human being with a particular essence and more as a *Homo sapien* with an impressive genome, which is echoed by German’s subsequent description of his genomic attributes which opens this paper.

Once the viewer is granted access to Eugene’s physical form, in particular his face, he gains access to Eugene’s essence. This is due to the fact that “The social construction of the soul is also a neurological construction from bodily clues” (Jeffreys 143). In other words, ironically, because the soul itself cannot be interpreted, its interpretation is dependent on the body through body language (even though in the Western tradition the soul and body are considered separate).

The face is the most crucial component in the bodily construction of the soul, and so when the viewer is able to glimpse Eugene's face, the viewer is also able to discern Eugene's own perception of himself. Hence, the viewer's journey of discovery reflects that of Eugene himself as he comes to view himself as more than his genome. In particular, the transition begins when the extreme-long shot of Eugene in his wheelchair switches to a close-up of Eugene's face. Eugene's eyes begin downcast, then rise upwards until he is staring at the viewer (and presumably German and Vincent) dead-on. He then proceeds to blow a tendril of smoke through his cigarette. Remarkably, Eugene's expression is placid but slightly hostile, perhaps reflecting his resentment towards the potential buyer of his identity. Eugene's hostility is the first indicator that Eugene might perceive himself to be more than his genetic material because if his identity contains a component beyond his genes, he would be impossible to replicate. On the other hand, the elegant lassitude inherent in Eugene's motions contradicts the implication of Eugene's hostility, as it suggests Eugene's self-perception of superiority due to his engineered identity, an assumption predicated on the acceptance that he is simply his genetic profile. Thus, this first glimpse of Eugene's face establishes the essential conflict that Eugene faces throughout the entire movie—whether or not he is more than the sum of his genes.

The two competing views Eugene has of himself are highlighted by two different episodes. The first, reflecting Eugene's socially constructed understanding of himself, occurs during the montage of Vincent's transformation into Eugene when Vincent is practicing Eugene's signature:

VINCENT: "Jerome Morrow." It's a nice name.

EUGENE: It's my name.

VINCENT: I can't be you without it.

EUGENE: What makes you think you can be me at all?

EUGENE: Look at this. Look at it.

VINCENT: It's nice. I'm impressed. Is it real?

EUGENE: Are you colorblind too, Vincent? It's silver.

VINCENT: So?

EUGENE: Jerome Morrow was never meant to be one step down on the podium. With all I had going for me, I was still second best. Me. So how do you expect to pull this off?

This dialogue reflects Eugene's socially constructed assumptions that those with enhanced genetic profiles are superior to those whose genetic profiles are not and those with enhanced genetic profiles are guaranteed success, both of which are predicated upon the assumption that a person is nothing more or less than his genome. Immediately, the viewer can sense Eugene's belief in his superiority as an enhanced individual when he indicates that Vincent cannot measure up to his name (and by extension, his identity), ostensibly because Vincent is unenhanced, through his challenge "What makes you think you can be me at all?" Rather than a less belligerent "Why do you think you can be me?" Eugene chooses to say "What makes you think," in effect asking why Vincent has the nerve, who Vincent thinks he is, to imagine that he could be Eugene. The "at all" additionally contributes to this atmosphere of hostility, underscoring Eugene's doubt that Vincent can "be" Eugene even one bit. Why does Eugene doubt Vincent's ability to "be" Eugene? Eugene doubts Vincent because he believes that Vincent is inferior genetically to him, and hence cannot measure up to him. This belief that Vincent is inferior to him is further emphasized when he scorns, "Are you colorblind too, Vincent?" His reply underscores Vincent's disprivileged birth in which diseases such as colorblindness would not be weeded out (and in tandem highlights the superiority inherent in his birth, in which such diseases would be removed). Eugene exposes his assent of the societal expectation that those with enhanced genetic profiles are guaranteed success when he states, "Jerome Morrow was never meant to be one step down on the podium." In other words, Eugene accepts the idea that with his genetic makeup, he should be predestined for success—in other words, for the gold medal. Though Vincent mentions this observation in regards to his enhanced brother Anton, the

comment is still applicable for Eugene—Eugene “had no excuse to fail,” as in Gattaca’s society success is assumed to have been engineered into the enhanced genome, and the fact that it may have not disconcerts Eugene. The interplay between the two concepts are apparent when Eugene condescends, “With all I had going for me, I was still second best. Me. So how do you expect to pull this off?” In other words, if even Eugene, with all his genetic gifts which should assure success, could not succeed, how can Vincent, who is not nearly as blessed genetically, think that he will be able to attain success?

On the other hand, the episode that reflects Eugene’s understanding that he is more than his genome occurs the day of Vincent’s interview. Eugene’s half-hearted attempt to sabotage Vincent reveals that Eugene is having misgivings about selling his identity, probably because he perceives himself to be more than his genetic material. If Eugene’s identity is more than just his genetic material, then rationally he would be reluctant to permit someone else to adopt his identity because no one could fully encompass his identity other than himself. However, Eugene does not renege on the deal, even when Vincent reminds him that “This is the last day that you’re going to be you and I’m going to be me;” in other words, the last day that Eugene has full claim over the identity of Jerome Eugene Morrow. Thus, one realizes through his passive-aggressiveness that Eugene has not yet completely developed his own opinion on his identity. His behavior reflects his conflicted state of mind, as he does not have the bravery to inform Vincent to his face that he does not want to sell his identity, but he also has reservations about selling his identity (and therefore underhandedly attempts to sabotage Vincent). Nevertheless, even if Eugene is unsure of how he perceives his own identity, he is quite aware of how his society views identity. When Vincent returns from his “interview” at Gattaca, which was essentially just a urine test, he notifies Eugene, “I got it,” sounding slightly shell-shocked. “Of

course you did,” Eugene replies resignedly. Eugene, unlike Vincent, understands fully that Gattaca’s society views people as nothing less and nothing more than the sum of their genes. Consequently, he is fully cognizant that since his society bases its judgment of individuals on their genome, Vincent would obviously be hired under the guise of Eugene’s genetic profile, as Eugene has “a genetic quotient second to none.” Eugene’s understanding of his society later plays a role in his decision to attempt to commit suicide for a second time.

Even though Eugene may be beginning to perceive himself as more than the sum of his genes, at the same time, the viewer senses that Eugene’s human spirit, which impels one to work purposefully towards a goal and allows one to prevail in the face of adversity, is essentially missing. Thus, Eugene displays a lack of concern about his existence, now or in the future. This lack of human spirit is exposed during the celebration of Vincent’s upcoming mission to Titan. Vincent continually asks Eugene (in reference to the year during which Vincent will be travelling to Titan), “What are you gonna do?” Eugene remains coy, replying that “I have my books. I go places in my head.” When Vincent further presses him, he responds, “I’m gonna finish this,” promptly consuming a whole goblet of wine. Fascinatingly, Eugene remarks, “Maybe there’s nothing there,” in regards to Vincent’s account of Titan that is in response to Eugene’s diverting tactics from the issue of what he will do. Eugene’s responses, though delivered with his usual devil-may-care attitude, belie a man who really does not know what to do with himself. Eugene daydreams rather than actually actively going places (and ostensibly attempting to make his dreams a reality). Therefore, Eugene does not appear to exhibit any drive or desire to improve himself (and his situation) in the future since he has no ambitions to realize. Implicitly, Eugene must be afraid of taking risks that challenge his meaningless existence because that requires venturing out of the bounds of the comfortable and familiar, and he has no reason to do so.

Understandably, then, he does not seem to actively plan ahead, rather keeping his cares current, what with his “I’m gonna finish this.” Thus, Eugene exhibits a lack of care about his future, which goes hand-in-hand with a lack of plans due to a lack of drive. Significantly, Eugene responds to Vincent, “Maybe there’s nothing there,” which potentially is a reflection on himself—underneath the polished exterior, underneath the impressive genome, the human spirit is fundamentally lacking. In other words, engineered, predestined Eugene has no real impetus, but rather is an automaton going through the motions, purposeless. This lack of purpose, too, later plays a role in his decision to attempt to commit suicide for a second time

Eventually, through his interactions with Vincent, Eugene comes to the realization that one is more than one’s genome in the sense that success (or failure) is dependent on more than a person’s genetic profile. Eugene’s change in opinion becomes apparent during a dialogue that occurs after Vincent must help Eugene into bed after their night of revels because Eugene is too drunk:

EUGENE: You know I wasn’t drunk.

VINCENT: What do you mean you’re not drunk?

EUGENE: When I walked in front of that car.

VINCENT: What car?

EUGENE: I stepped out right in front of it. I’d never been more sober in my life.

VINCENT: Go to sleep.

EUGENE: I couldn’t even get that right, could I? If at first you don’t succeed, try, try again.

VINCENT: Go to sleep.

EUGENE: I’m proud of you, Vincent.

This exchange between Eugene and Vincent reveals that Eugene’s paralysis is not a result of the indiscriminate hand of fate, but rather the deliberate hand of Eugene’s botched attempt to commit suicide. More importantly, Eugene’s pitiful cry, “I couldn’t even get that right, could I?” provides insight into Eugene’s motives for his first suicide attempt. The viewer realizes that the arrogance Eugene has shown thus far conceals a deep-seated sense of disappointment and

inferiority. Despite his impressive genome and the societal expectation that said genome guarantees success, an expectancy that Eugene too has internalized, success has been unattainable. He can't get anything "right;" he cannot fulfill the promise of his genome, as he can't win the gold medal, and when he doesn't, he can't even commit suicide properly, paralyzing himself instead. Thus, at least at the time of his suicide attempt, Eugene bought in to the concept that there are no external factors to one's genome that could determine one's success or failure. However, Eugene's statement that he is proud of Vincent indicates that Eugene's conception of the degree of contribution of one's genome to success has been complicated. In essence, if Eugene can be proud of Vincent, he is implying that Vincent's accomplishments are worthy of his genome, that "Vincent is better at being Eugene than Eugene himself" (Kirby 204). Thus, paradoxically, this signifies Eugene's belief that a person is more than his genome because since Vincent, whose genome is not as prestigious as Eugene's, is able to accomplish what Eugene should have been able to with his enhanced genome, the paradigm is contradicted.

Specifically, Eugene comes to comprehend that the external factor to one's genome that influences success is the human spirit that he lacks, as unfortunately, "there is no gene for the human spirit"—this is not a quality that can ever be engineered. To begin, logically, if Eugene believes that this concept of being more than one's genome is applicable to Vincent, he must also believe that this concept is applicable to himself (for the sake of consistency). However, Eugene believes that he is more than his genome in the sense that he is actually less than what his genome would lead one to presume. In other words, Eugene recognizes that he has been engineered without the human spirit that would help him fulfill the prophecy of his genome. So why is Eugene essentially missing the human spirit? The answer can be traced back to the society that created him. "The decision to equate the cultivation of human excellence with the

breeding of animals naively overlooks the importance of the human soul or spirit in determining the character, and hence destiny, of men” (Foley 47). Consequently, Eugene is a product of his society’s inability to realize that success is dictated by more than one’s DNA. As such, this human spirit which plays an integral role in success is not engineered into individuals; even so, such a quality cannot be engineered, as it emerges “out of an individual’s motivation when confronting the challenges of a specific context or environment” (Kirby 207). Human spirit is the driving force to the continual process of trial and error, of trying something, failing, analyzing the mistakes, and trying again, until success is eventually realized. Eugene never needed to “try” because his genome made undertakings effortless, and so when he finally faced adversity, he did not have the tools to cope.

To help him manage with this revelation, Eugene holds tightly to a familiar saying—“If at first you don’t succeed, try, try again.” The saying is anachronistic for the futuristic society of Gattaca, in which the concept of “try” does not seem to exist. Who needs to “try” when every task is effortless due to an engineered genome? The fact itself that Eugene even considers trying to be necessary reaffirms that he believes that success is not only predicated on one’s DNA—that there are external factors beyond one’s genome that influence outcomes. Eugene also is implicitly stating that he will attempt to commit suicide again. Nevertheless, I argue that Eugene’s reasons for committing suicide now are different from his reasons for his previous attempt. Eugene’s revelation that he is more than his genome disheartens him, in contrast to Vincent, who is empowered by the same revelation—Eugene can no longer bear to live in a society that construes this “burden of perfection” on him, a burden that he understands all too well, when he is not equipped to live up to those expectations. Ironically, however, the very reason why Eugene is unable to fulfill the expectations created by his genome is because his

genome was created, automatically removing the human spirit. Thus, even before Eugene's life was dependent on Vincent's, his lack of human spirit to push towards a goal made his life purposeless. Therefore, unable to fulfill the expectations of him because he lacks the human spirit which simultaneously makes his life purposeless, when Eugene eventually commits suicide, it is an act of defiance of the society that created him as well as an effort to exert control over the only thing he feels he has power over—his life.

In this last conversation between Eugene and Vincent, indeed, the last conversation that Eugene ever has, one observes that even the process of making preparations for his suicide attempt helps Eugene reclaim his life, to finally exert control over something he has power over to find his purpose:

EUGENE: You're flying today, aren't you? Look what a mess you're in. Come on, I have your samples ready.

VINCENT: I don't need any samples where I'm going.

EUGENE: You might when you get back. Everything you need to last you two lifetimes.

VINCENT: Why have you done this?

EUGENE: So Jerome will always be here when you need him.

For one, in contrast to his first suicide attempt, this suicide attempt is more clear-sighted and intentional. His first suicide attempt, we can assume, was a reflexive reaction to his failure to win the gold medal (and thereby disappointing his genome). One can hypothesize that, in despair over his second-place finish and likely inebriated, Eugene suddenly had an epiphany to commit suicide and attempted to walk in front of a car, failing to realize that the driver would probably try to stop once seeing him, resulting in paralysis, not death. As will be shown later, Eugene's method of committing suicide this time is much more foolproof and therefore more clear-sighted. Furthermore, this suicide was planned out well in advance as opposed to being spur-of-the-moment, and thus is well-informed and consensual. Eugene tells Vincent that he has prepared enough samples to "last you two lifetimes," so clearly Eugene had to have been

cognizant for a while that he would attempt to commit suicide to extract such a sheer volume of samples, as he is limited by the time it takes for his body to regenerate its own matter.

Nevertheless, the process of extracting samples for Vincent is not simply an indication of Eugene's foresight in his second suicide attempt, but is actually in and of itself a development that aids him in reclaiming his independence. As mentioned before, Eugene's life has become dependent on Vincent's—Vincent once mentions that he “paid the rent and kept him [Eugene] in the style to which he'd become accustomed.” Thus, by providing Vincent with his bodily matter, the only aspect of Eugene that Vincent actually finds use for, Eugene effectively severs his link with Vincent. This is emphasized by Eugene's comment to Vincent that “So Jerome will always be here when you need him,” rather than “So I will always be here when you need me,” or “So Eugene will always be here when you need him.” Eugene's use of “Jerome” underscores the fact that what Vincent really needs is “Jerome,” in other words, the bodily matter that allows him to “be” Jerome, and not Eugene himself. Simultaneously, Eugene severs his link from alcohol, which for so long had helped him cope with his perceived failure. His abstinence is evident because in order for all those bodily samples he has prepared to be valid, the blood alcohol content cannot be too astronomically high, and so he would have needed to be sober during the whole process. Eugene's sobriety symbolizes his acceptance of his failure and his necessity to move forward, no longer relying on alcohol to console him and imprison him in the past.

Eugene's actual suicide attempt, as mentioned before, is a struggle to exert control over the only thing he feels he has power over—his life, as he is intimately aware with the way his society views him and how that view has left him with no other alternative. Thus, Eugene's narrative forms the basis of a “subtler, less convenient morality tale” in comparison to Vincent's (Jeffreys 144), though not for the same reasons Jeffreys expounds. Vincent's storyline praises

self-determination that resists the compulsion of Gattaca's society to restrict individuals based on their genome. While Vincent accomplishes this achieving more than Gattaca's society would predict by rising quickly through the ranks of the elite in Gattaca, I argue that Eugene accomplishes this by committing the act that is the most extreme self-determination possible that not only defies the extreme genetic determinism of his society but also the dictates of nature. Since the narratives of the two men are so inextricably linked, the assumption of nobility on the part of one also extends to the other. My reading is supported by the parallelism established between Vincent and Eugene's "journeys," which begins when Vincent asks Eugene, "Where are you going?" and Eugene responds, "I'm traveling too." Therefore, this concept that the two men are traveling is carried through for the rest of the movie through a montage of their respective "journeys." Indeed, one of the most striking scenes of the movie connects the actualization of each character's act of self-determination when Eugene pushes on the button for incineration just as Vincent's rocket blasts off. More interesting, however, is the final shot of Eugene in the form of his medal, which has turned gold in the light of the flames, implying that Eugene has achieved victory through his suicide. While some validly contend that Eugene triumphs because he sacrifices "himself to an able-bodied man's dreams" (Jeffreys 144), I affirm that Eugene's suicide is a triumph because he exerts control over the last thing he feels he has power over, his life, and in doing so establishes his freedom from the forces that oppress him. In a society that believes that "a genetic readout can be used to predict a person's future: genetic inheritance is equivalent to predestination" (Kirby 202), or that the probabilities present in a person's genome are certainties, Eugene defies the fate that he has been "predestined" for, challenging the "black box" of genetic determinism. The fact that his genome predicts that he will have "an expiration date second to none" means nothing in the face of Eugene's decision to

end his life. In addition, suicides are often described as “playing God,” as some force, whether one designates it as divinity or nature, is thought to be responsible for dictating the time of death for individuals. Thus, even if individuals can have control over every other aspect of their lives, they are not supposed to have control of their death. In turn, Eugene usurps this power for his own by determining when he will die.

In *Gattaca*, “an element of indeterminacy, of unpredictability...[that] thwart[s] the madness of overcontrol and inflexibility” is retained (Parker 52). In other words what defeats enhanced individuals in the film from fulfilling the promise of their genome is the fact that the intangible human spirit has not, and cannot, be engineered. Thus, ironically, Eugene’s act of extreme self-determination that eschews every attribute of the tripartite structure that humans interact with—divinity, society, and nature—arises out of an inability to control any of these structures. Eugene’s suicide consequently reveals that while we may believe that we have circumvented or subordinated divinity, society, or nature, the belief itself belies the fact that we never actually have.

Works Cited

Foley, Michael P. "Plato, Christianity, and the Cinematic Craft of Andrew Niccol." *Logos: A Journal of Catholic Thought and Culture* 9.2 (2006): 43-67. Print.

Gattaca. Dir. Andrew Niccol. 1997. Sony Pictures, 2008. DVD.

Jeffreys, Mark. "Dr. Daedalus and His Minotaur: Mythic Warnings about Genetic Engineering from J.B.S. Haldane, François Jacob, and Andrew Niccol's *Gattaca*." *Journal of Medical Humanities* 22.2 (2001): 137-152. Print.

Kirby, David A. "The New Eugenics in Cinema: Genetic Determinism and Gene Therapy in 'GATTACA'." *Science Fiction Studies* 27.2 (2000): 193-215. Print.

Parker, Helen N. *Biological Themes in Modern Science Fiction*. Ed. Robert Scholes. Ann Arbor: UM Research Press, 1984. Print.

Prunes, Mariano, Michael Raine, and Mary Litch, eds. *Yale Film Studies*. Yale University Film Studies Program, 27 August 2002. Web. 12 May 2013.