

# Gattaca (1997)

Gattaca is a 1997 science fiction film produced in the US that depicts a future society that uses reproductive technology and genetic engineering in order to produce genetically enhanced human beings. By selectively choosing certain genes, scientists and physicians ensure that individuals born using reproductive technologies have desirable physical and psychological traits and prevent undesirable traits. The film tells the story of Vincent Freeman, a man conceived without the aid of reproductive technology, who works to overcome his genetic disadvantages compared to his enhanced counterparts in order to achieve his dream of a career in space travel. The film was directed and written by Andrew Niccol and released by Columbia Pictures in Culver City, California, on 24 October 1997. Gattaca addresses the ethical uses of biotechnology, gene manipulation, and genetic engineering, and the film illustrates the debate over human genetic engineering research and implications.

The film Gattaca explores themes of genetic manipulation, freedom of self-determination, and eugenics, the practice of advocating for the genetic improvement of the human species through selective reproduction. When Niccol was working on Gattaca in the 1990s, scientists were studying DNA, genetic material containing heritable traits and biological information that make up a human being. At the start of the 1990s, the Human Genome Project became an international scientific research collaboration to describe the full sequence of nucleotides in human DNA. At the same time, the US National Institutes of Health in Bethesda, Maryland began to explore the medical, social, and ethical implications of such a research project.

Gattaca examines how individuals born naturally fared in a futuristic society in which reproductive technology is commonly used to produce children with enhanced genetics. In Gattaca, parents produce children with the help of geneticists, who use reproductive technology to selectively choose particular genes in each parent to prevent genetic disorders and to produce healthy and attractive children. The film implies that selecting certain genes reduces an individual's propensity for violence, crime, and other undesirable behaviors.

The main character of the film, Vincent Freeman, portrayed by actor Ethan Hawke, is rare compared to most children as he is born without genetic modification. The film describes children born without the assistance of reproductive technology as faith babies. In the film, faith babies are children born to couples who choose to forego the use of reproductive technology, thereby leaving their children's genetics to chance. Because his parents did not use reproductive technologies to select his genetics, Freeman is born with a much shortened estimated lifespan, a heart condition, and is genetically predisposed to neurological issues, manic depression, and an attention deficit disorder.

In a flashback scene depicting Freeman injured as an infant at daycare, Freeman's parents express regret over Freeman as a faith baby. Freeman's parents' health insurance cannot cover the cost of his injuries, and the film implies that if Freeman was born with the use of reproductive technology, he would not have been injured in the first place. Freeman's parents decide to conceive another child with the help of reproductive technology. Freeman's younger brother, Anton Freeman, was produced by picking desirable genes from Freeman's mother and father. Freeman's brother is often described as genetically superior compared to Freeman, as shown through height and strength, swimming and running, and later in job opportunities available to him due to his genetics.

Freeman dreams of a space travel career at Gattaca Aerospace Corporation, a prestigious space-flight corporation, despite his less than prestigious genetics. He trains extensively, trying to improve his physical strength, and he is shown constantly reading and studying. However, Freeman knows that, despite his efforts, he is always at a disadvantage compared to other candidates because of

his genes. In the film, genetic discrimination for employment is illegal, but often overlooked, and most everyone is subjected to genetic profiling. Employers often test potential employees for their genetic material, using blood samples, skin cells, and hair samples. Those tests enable people to differentiate those born with enhanced or desirable genes, referred to as valids, from those with undesirable genes, often called in-valids.

Freeman applies for a technical position at Gattaca Aerospace Corporation, but he is quickly dismissed after being genetically tested. He mentions in the film through a voiceover that even if one chooses to withhold genetic information, like Freeman did, that samples can be obtained from the cells that a person leaves when opening a door, the saliva on the envelope of one's job application, or even a handshake. Discouraged at his prospects for other employment, Freeman resigns himself to working the low-paying and low class jobs. Freeman eventually obtains a position cleaning the offices at Gattaca Aerospace Corporation.

At that point in the film, Freeman calls himself a de-gene-rate, someone who is born as an in-valid but refuses to resign himself to a lesser fate based on his genetics. He pursues an illegal, alternative option for those conceived as faith babies, posing as a valid by using another person's genetic signature obtained biological samples. Freeman uses the identity of Jerome Eugene Morrow, played by actor Jude Law, whose enhanced genetics made him physically and mentally ideal, unlike Freeman. Morrow is paralyzed after having tried to commit suicide by throwing himself in front of a car following a loss in a swim competition. Morrow provides Freeman with his identity and his genetic material, his blood, skin cells, and his urine. Freeman changes his physical appearance, undergoing cosmetic surgery to lengthen his legs, dyeing his hair, wearing contacts, and getting dental work to look as identical as possible to Morrow. Using the identity and genetic information of Morrow, Freeman then obtains employment at Gattaca Aerospace Corporation. Freeman becomes a navigator for a future space flight to Titan, one of Saturn's moons.

After Freeman is employed as a valid, he is constantly shown being tested through blood and urine samples and fitness exams as part of his training for the mission to Titan. The film depicts him continuously combing his hair and scrubbing his body in order to remove as much of his dead cells as possible so that no one uncovers his true genetics. He also carries urine samples, blood samples, and wears a replica of Morrow's fingerprint over his own. Freeman is also shown as constantly cleaning up after himself to ensure that he leaves no trace of his own genetic information, and he intentionally leaves behind Morrow's skin and hair samples.

A week before the launch, an administrator is murdered, and everyone at Gattaca Aerospace Corporation becomes a suspect. Everyone is under suspicion because an eyelash belonging to an in-valid was found near the scene of the murder. The eyelash belonged to Freeman, though he now poses as Marrow and has changed his appearance to match. Investigators monitor every Gattaca Aerospace Corporation employee by collecting blood and urine samples from everyone. Freeman removes himself from suspicion by passing all of the genetic testing using samples from Marrow and is permitted to proceed with the launch to Titan.

However, just prior to the launch, the administration required one last genetic test in the form of a urine sample, but Freeman finds himself without Morrow's sample. The physician who tests him clears Freeman and passes him as a valid. Even though the tests proved that Freeman was an in-valid, the physician explains his actions by telling a story of his own son who also does not have all the advantages of enhanced genes. The physician contemplates the future of his son, comparing him to Freeman, and hoping that his own son can also surpass genetic discrimination and achieve great things. As the film ends, Freeman proceeds with the launch, and Morrow commits suicide, but only after leaving enough genetic material for Freeman to use as his own to last two lifetimes.

Many critics like Janet Maslin of the New York Times praised the film for questioning the ethics of genetic research and technology. Film critic Robert Ebert likewise praised the film for its depictions of the medical, ethical, and social implications of reproductive technologies. Gattaca was released on 24 October 1997 and grossed \$12,523,777 in the US. Science and bioethics writers like Eva Emerson used Gattaca to discuss the ethical implications of genetic and genome research and eugenics and to discuss new policies and regulations on how to utilize genetic and genome research and technology.

## Sources

1. Ebert, Roger. "'Gattaca' sees flaws in a perfect world." *Chicago Sun Times*, October 24, 1997. <http://www.rogerebert.com/reviews/gattaca-1997> (Accessed July 26, 2016).
2. Emerson, Eva. "Gene therapy, Gattaca-style, poses ethical issues." *Science News* 187 (2015): 2.
3. Foley, Michael P. "Plato, Christianity, and the Cinematic Craft of Andrew Niccol." *Logos: A Journal of Catholic Thought and Culture* 9 (2006): 43-67.
4. *Gattaca*. Directed by Andrew Niccol. Columbia Pictures Corporation, 1997.
5. Gavaghan, Colin. "'No Gene for Fate?' Luck, Harm, and Justice in *Gattaca*." In *Bioethics at the Movies*, ed. Sandra Shapshay, 75-86. Baltimore: The Johns Hopkins University Press, 2009.
6. The Internet Movie Database. "*Gattaca* (1997)." *IMDd.com, Inc.* <http://www.imdb.com/title/tt0119177/> (Accessed July 26, 2016).
7. Maslin, Janet. "Film Review; The Next Bigotry: Privilege by Genetic Perfection." *The New York Times*, October 24, 1997, Movie review. <http://www.nytimes.com/movie/review?res=990DE4DD103EF937> (Accessed July 1, 2016).
8. National Human Genome Research Institute "ELSI Research Program." National Institutes of Health (1990). <http://www.genome.gov/ELSI/> (Accessed July 1, 2016).
9. National Institutes of Health. "Human Genome Project." National Institutes of Health. <http://report.nih.gov/nihfactsheets/ViewFactSheet.aspx?csid=45> (Accessed July 1, 2016).