

MODERN ARCHITECTURE: AN ANALYSIS OF THE ICONIC VISION IN FILM

A Senior Honors Thesis

by

BENJAMIN MICHAEL JOHNSTON

Submitted to the Office of Honor Programs
& Academic Scholarships
Texas A&M University
in partial fulfillment of the requirements of the

UNIVERSITY UNDERGRADUATE
RESEARCH FELLOWS

April 2002

Group: Art and Literature 2

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ABSTRACT

Modern Architecture: An Analysis of the Iconic Vision in Film. (April 2002)

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In reaction to the academic revivalism of the nineteenth century, early modern architects sought a radical departure in form that would reflect a new spirit. Flowing, open spaces and bold, abstract forms, their use of materials in unusual ways, and the establishment of artificial lighting as a new element in design distinguished their buildings. For the young generation of this time, Modernism became an avant-garde rallying point that symbolized the liberated lifestyle that one could lead by living, working, and playing in the new industrial world.

Many factors contributed to the popularization of modernism throughout the 1920s and 1930s. The allure of this new style proved as enticing to media artists such as fashion photographers and comic book artists, as it was to moviemakers. No other media-driven vehicle provided as an effective and widespread exposure of architectural imagery as the cinematic medium.

The adaptations of modern architecture for the silver screen provided filmgoers with an optimistic view of society. By filming highly stylized architecture, filmmakers sought to exceed audiences' expectations of what the future would hold for them by

suggesting possibilities that they never dreamed of before. In the context of the Depression and the subsequent, overwhelming sense of pessimism of that time, the allure of this heightened version of reality became the dream of audiences. This new visual appeal lent itself to futuristic films with otherworldly settings. Fritz Lang's 1927 classic, *Metropolis*, was one of the first to associate modern architecture with a vision of the future and Andrew Niccol's 1997 film, *GATTACA*, is one of the latest. It is one of the great ironies of the modernist movement that movies, the 20th century's greatest egalitarian visual art form, took modern architecture's collectivist vision and transformed it into a fantasy of privilege, only to be enjoyed by the extremely wealthy.

In the aftermath of the September 11th tragedy in New York City, its important to ask ourselves what cultural forces contribute to the iconizing of certain architectural monuments in the world's subconscious. Are these icons valid? And most importantly, is it something we, as a society, should remedy in order to prevent other acts of terrorism?

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AN INTRODUCTION

In the early half of the twentieth century, modern architects developed a new architectural style. Their buildings were distinguished by flowing, open spaces and bold, abstract forms, use of materials in unusual ways, and the establishment of artificial lighting as a new element in design. As put by Donald Albrect, the modernists defined a new role for architecture in an industrial society; ideologically, theirs was an architecture of vigorous optimism and utopian thrust (Albrect p.xi). In another statement that, for many, would become a fundamental principle of this new modern movement, Paul Scheerbart declared, "The new environment, which we thus create, must bring about a new culture (Scheerbart, p.41)." For the young generation of this time, Modernism became a cultural rallying point that symbolized the liberated lifestyle that one could lead by living, working, and playing in the new industrial world.

Many factors contributed to the popularization of modernism throughout the 1920s and '30s. Not only did architects themselves promulgate their work in books, journals, and exhibitions, but artists in other media began to adopt the characteristic features of the new style. The allure of Modernism proved as enticing to media artists such as fashion photographers and comic book artists, as it was to moviemakers. The new style of architecture was attractive to moviemakers on aesthetic grounds because it was fundamentally the same as the art of film: a careful manipulation of space, light, and movement (Albrect, xii). No other media-driven vehicle provided as effective and widespread exposure of architectural imagery as the cinematic medium. According to Lloyd Lewis ("The Deluxe Picture Palace"), in 1939, American movie-houses boasted

an astonishing *weekly* attendance of 85 million, an outstanding number when compared to the 45 million visitors at the New York's World's Fair the same year during the course of an entire eighteen months (Lewis, p. 175).

The adaptations of modern architecture for the silver screen not only provided a sumptuous visual *mise-en-scène*, but also gave filmgoers an optimistic view of society. By filming highly-stylized architecture on sound stages, filmmakers sought to exceed audiences' expectations of what the future would hold for them by suggesting possibilities and opportunities that they never dreamed of before that moment. In the context of the Depression and the subsequent, overwhelming sense of pessimism of that period, the allure of this heightened version of reality becomes an obvious dream of American audiences. Many films of this time are rags-to-riches stories; all conveying the idea that anyone could conceivably become a fashion model, big-business tycoon, or even a movie star, all filmed on the backdrop of Modern architecture. It is one of the great ironies of the modernist movement that movies, the twentieth century's greatest egalitarian visual art form, took modern architecture's collectivist vision and transformed it into a fantasy of privilege, only to be enjoyed by the extremely wealthy (Albrecht, xiii).

What is curious is that the first film to employ the usage of Modern design is a 1927 futuristic silent film produced in Germany and entitled *Metropolis*, a movie considered by historians to also be the first science fiction film. Its usage of Modern design as the vision of the future would set a precedent for many science fiction films to come; one, in particular, as recent as Andrew Niccol's 1997 film *Gattaca*. There are

countless other examples that this research could draw from, some even more recent, but these two films share some startling similarities which will be discussed.

Most of the articles and books written on the subject of Modern architecture and film try to gauge the influence modernism had on the public, who had been exposed to the movement through movies that had wholeheartedly adopted its most vanguard imagery, while usually ascribing connotations to that imagery that modern architects never intended, nor perhaps even perceived. This research is aimed at questioning the messages conveyed through these two films in particular; the ironic use of Modern architecture or Modern design in cinema; and to look at the way media has the amazing power to iconize buildings such as the World Trade Center in the world's collective consciousness. This is done in hopes of raising more questions than it answers, such as: what will be the future of architecture in film? Will modern architecture continue to serve as the backdrops of films produced tomorrow? Will film continue to impact our culture and help define contemporary architectural movements in film?

The World Trade Center is cited because this research also looks at the Center in the context of the symbol it represented. Many journalists and news reporters keep asking the question of how and why the World Trade Center was targeted by international terrorists. This research is also aimed at discovering a partial answer to that question.

* * *

THE WORLD OF *METROPOLIS*

Considered to be the first science-fiction film, *Metropolis* was based on a story written by director Fritz Lang's ex-wife, Thea von Harbou. *Metropolis* is really more memorable for its fantastic imagery than its story, which is, at its best, a bit vague and confusing. Lang further developed the movie's theme and general look after a visit to New York City one evening in October 1924. He purportedly saw the model for his futuristic metropolis when he gazed out at the flickering, neon-lit New York skyline from his vantage point onboard the ship that had brought him to America (Organ p.1). That skyscraper-dominated skyline would come to define progress and the city of the future. Its adoption by Lang as a central motif for his film was indeed prophetic. Upon returning to Berlin, the talented director set about bringing this metropolis to reality. Filming began in May 1925 and was wrapped up in October 1926.

Erich Kettelhut's set designs and drawings helped director Fritz Lang create the unique imagery of this science-fiction classic. The most memorable part of the New York skyline, in 1924 and still today, was the Modern skyscrapers, a building type that found its way into the very core of the film's imagery. Some critics consider the film's architecture symbolic of the power relationships that existed in the story—power versus oppression, freedom versus subjugation—and which takes on a tremendous significance if viewed in light of the times and climate of Germany when the film was produced (Flippo, p.1).

The late teens and early twenties in Germany were a time of rampant inflation, decadence, personal liberty, violence and insecurity, and artistic freedom of expression.

It was followed by the rise of the Nazi Party during the late twenties and early thirties, which saw a severe suppression of these freedoms in all walks of life, especially the arts and politics (Organ, p. 1).

During the twenties the barriers separating film from art became decidedly blurred in Germany and Europe. Abstract Expressionism, Dada and the Modernist movement carried over into motion picture making, and directors such as Fritz Lang, Friedrich Murnau and Sergei Eisenstein absorbed many of the ideas being put forward by artists and writers of the time. The influence of the German Bauhaus School had a tremendous impact on film as well in regards to the usage of light, arrangement of objects (staging), architectural innovation, and modern design. Cinematographers, set designers and scriptwriters were also similarly influenced, such that the team which produced *Metropolis*, sought innovation and looked to push the boundaries of film as art (Organ, 1). Fritz Lang spelled out this philosophy in an article published during October 1926, towards the end of the final editing phase of *Metropolis*:

“There has perhaps never before been a time so determined as ours in its search for new forms of expression. Fundamental revolutions in painting, sculpture, architecture, and music speak eloquently of the fact that people of today are seeking and finding their own means of lending artistic form to their sentiments. Film has an advantage over all other expressive forms: its freedom from space, time, and place. What makes it richer than the others is its natural expressiveness inherent in its formal means. I maintain that film has barely risen above the first rung on the ladder of its

development, and that it will become the more personal, the stronger, and more artistic the sooner it renounces all transmitted or borrowed expressive forms and throws itself into the unlimited possibilities of the purely filmic..." (F. Lang, *Die Literarische Welt*, 2, 1 October 1926)

The visuals were generally highly praised and audiences flocked to see this cinematic spectacular throughout 1927 and '28. Fritz Lang's masterpiece was almost immediately recognized as a landmark in German Expressionist filmmaking, with its use of lighting to set mood (a common expressionist device partially revived in the late 1940s as a prominent element in Film Noir), state-of-the-art special effects, and overpowering set design, all marked new standards in the developing art of the motion picture (Organ, p.1).

Conceived as a major cinematic production, it was backed by the gigantic, state-operated movie production studio, Ufa, during a period when German filmmaking was at the cutting edge of quality cinematic production. In that brief period following the end of World War I in 1918 and up until the seizure of power by Adolf Hitler's National Socialists (NAZI) Party in 1933, German studios were responsible for the creation of such memorable films as *The Cabinet of Dr. Caligari* (1919), *Nosferatu* (1921), *Das Nibelungen* (1924), *Metropolis* (1927) and *The Blue Angel* (1930). Even despite Ufa's great resources, *Metropolis* nearly bankrupted the studio (Organ, 1).

In production for almost two years, *Metropolis* required vast resources—37,633 performers, including 1,000 men with their heads shaved for the "Tower of Babel" sequence alone. At 5.3 million marks, the film ended up being the most expensive ever

produced in Germany up to that time (Flippo, p.1). The mounting expenses almost closed production early, and the film failed to make money. But even the modern viewer can see where all the money went. Some of the scenes and special effects in *Metropolis* are as impressive today as they must have been in 1927.

So, what is the plot of the movie? Well we have the conventional boy-meets-girl, boy-loses-girl, boy-finds-girl again, and they live happily ever after. This plot is not important, but the subplot is. The boy is a character named Freder Frederson (portrayed by Gustav Fröhlich), and the girl is a character named Maria (portrayed by Brigitte Helm). To complicate things, Freder is the son of Johhan Frederson (portrayed by Alfred Abel), the ruler of the metropolis, and Maria is the well-loved leader of the workers. Freder's role is simply to act as the audience's eyes, not ears... this is a silent film!

Above ground in tremendous modern skyscrapers live the wealthy, supported by the workers who live far below the surface of the city. The workers toil in torturous and often fatal working conditions, while the elite play in rooftop utopias all day, high up in the clouds from atop the skyscrapers in which they live. Johann Frederson has little concern for the welfare of the workers and actually thrills at the thought of torturing them. His brilliant scientist, C.A. Rowtang (played by Rudolf Klein-Rogge) has improved his machines so that they no longer need the workers, so Johann would like nothing better than to drown the entire worker city, children and all. Of course, the workers do not know this yet, but the discontent of the workers still festers. Maria urges them to be patient, after all, she tells them, "There can be no understanding between the

hands and the brain unless the heart acts as mediator” and that, over time, their plight would be realized by the wealthy and they would eventually earn a better life. This would never happen as long as Johann Frederson is ruler, and he actually has a robot created in the likeness of the beautiful Maria to descend into the bowels of the worker city, and encourage revolution. Enraged, the workers storm the modernist “Tower of Babel” and try to destroy it with fire and with whatever means they have at their disposal. Eventually, through many other plot-twists, the mediation that Maria had encouraged for so long finally does occur. Without every seeing a resolution of the workers plight, the audience is dismissed, as in so many films, with the promise of a happy ending. Of course, this is an over-simplification of the plot, but the theme illustrated here is that through violent revolution, a better equilibrium can be reached. The workers see the modernist structures as symbols of the wealthy class, and that the appropriate response is to tear them down. From this cinematic point on, the seed has been planted in the world’s media-driven subconscious: modern architecture is exclusively meant for the consumption by the controlling upper class and that revolution is a way of restoring the very careful socio-economic balance necessary for peace.

Initial German reviews of the director’s 17 reel showing (given as a 9 or 14 reel showing in other movie houses), 4189 meters long, three hour plus film were decidedly mixed, finding fault in elements such as the narrative structure, and critical of its Socialist / Communist elements (Organ, p.1). The film’s central theme of workers revolting against domination by exploitative management, their soulless machines, and new technologies, also struck a chord with reviewers and the general public, though

many critics in America and Britain objected strongly to this anti-industrialist tale. As such, *Metropolis*, with its many themes and sub-texts, was a controversial film from day one. It garnered both positive and negative comments wherever it was shown, and generated much critical discussion in the press upon its widespread release.

The film's reception at the time of its international release was also mixed. *The London Times* and *The Spectator* gave generally positive reviews, but in the U.S., *Time* magazine's review of *Metropolis* ended with this unkind comment: "Ufa might better have shut the eyes of its great cameras than permit them to reflect nonsense in such grandeur (Flippo, p.1)."

In his later years Lang himself seemed to be one of the film's biggest critics. In 1958 he said, "I don't like *Metropolis*. The ending is false. I didn't like it even when I made the film (Flippo, p.1)." (This from the director who was such a perfectionist, he required three days to shoot a brief love scene in the film between Brigitte Helm and Gustav Fröhlich.) One can only speculate on how much of Lang's negativity stems from his past association with ex-wife Thea von Harbou, the film's co-writer and a big Nazi sympathizer. After the Nazi rise to power in Germany and the banning of some of his films, Lang left for Hollywood via France in 1933—despite an offer from Joseph Goebbels to work in Nazi film production. Lang's wife, von Harbou, got along famously with the Hitler regime, and she remained in Germany (after divorcing Lang), working for the now Nazi-controlled Ufa (Flippo, p.1).

The later, largely adverse criticism was due, in part, to factors beyond the director's control. For example, the film was savagely cut and re-edited to change many

key elements prior to screening outside of Germany. American and foreign theater managers were generally unwilling to allocate more than ninety minutes to a feature in their program, during a period when film attendance figures were high. *Metropolis* suffered accordingly as the original version was thought to be too long. Also, individual projectionists and theater managers saw to it that the film was screened at a ludicrously fast speed of up to 26 frames per second, thereby affecting the rhythm and pace of the original film, which had in all likelihood been cranked at the standard speed of 16 frames per second (Organ, p.1). As such, few people outside of Berlin saw *Metropolis* as Fritz Lang originally intended. The butchered, speeded-up version which was presented to European and American audiences in 1927, and which we continue to see to this day, was disjointed, illogical in parts, and therefore open to criticism on a number of fronts. Lang could rightly claim that by the middle of 1927 his original film no longer existed.

Critical assessment of this technically groundbreaking epic film has been substantial and is ongoing. Nevertheless, and despite the initial critical reception and the age of the film, *Metropolis* continues to be highly regarded and influential to a new generation of filmmakers. Since the time of its initial public screening, Fritz Lang's futurist drama has motivated critics and others to comment on aspects of its production, the many filmic elements, narrative structure, and way in which it reflects and comments upon so many aspects of Weimar Germany and German culture during a period of great turbulence and social change. They have also attempted to define its place in the developing history of cinema. However, such an expansive, multifaceted film as

Metropolis is not easily pigeonholed. The New York Times reviewer in 1927 called the film “a remarkable achievement...a technical marvel with feet of clay...a picture as soulless as the manufactured woman of the story... (Organ, p.1).”

Since the time of Lang's death in 1976 an audience of both non-professionals and academics have assessed the film in the light of contemporary opinion and building upon over half a century of film analysis. As a result, *Metropolis* is now recognized as a classic, and the first truly modern science-fiction epic. Despite its age, it continues to impress when compared with many latter-day blockbusters, especially in the use of special effects and the sense of wonder it creates. Even today, there is something fascinating about the futuristic scenes shot by the camera team of Karl Freund and Günther Rittau—a fascination that influenced films such as Ridley Scott's *Blade Runner* (1982), Alex Proya's *Dark City* (1998), George Lucas's *Star Wars: The Phantom Menace* (1999), and David Fincher's "Express Yourself" music video for singer/performer Madonna (Organ, p.1).

As a result of the many accolades it has received over the years, *Metropolis* is usually listed among the Top 10 science fiction films of all times, alongside classics such as *2001: A Space Odyssey*, *Forbidden Planet*, and *Star Wars* (Organ, p.1). *Metropolis* has left an indelible mark on the science fiction genre of film and on the audience itself.

* * *

THE WORLD OF *GATTACA*

Welcome to the 21st Century, an era when things are not that much different, but people are. No longer is standard procreation the accepted way to reproduce. Consider all of the birth defects that such an approach can bring about. And, while it would be unreasonable to outlaw sex for the purpose of producing offspring, be aware that any children so conceived are almost certain to be "in-valids"—genetically imperfect and ill-suited to be productive members of society. There is a better, more rational way—a method that will guarantee health, stamina, and physical attractiveness. Let money do the talking and science a little tinkering with the DNA. In the world that director Andrew Niccol creates in the film *Gattaca*, why not? Everyone does it. Or at least everyone who is wealthy enough and wants their child to have a shot at a normal, well-adjusted life. And so the battle lines are drawn: the genetically superior are allowed to oppress the genetically inferior in the name of advancement. Producer Stacey Sher explains that "in the world Andrew has created, the question of who controls genetic material isn't political, it's economic. The wealthier you are, the more privileged you are, the more you can control your child's destiny (Sony Interactive, p. 1)."

At the point at which *Gattaca* was produced, in the year 1997 (incidentally 70 years after *Metropolis* was released), science had not, and still has not, perfected the genetic engineering techniques employed in the film to develop genetically-perfected babies, and yet with every day, advancements bring the medical profession closer. In 1990, the Human Genome Project, which was estimated to take the following fifteen years, was officially begun ("Human Genome Project", p. 1). From that point on, every

major magazine publication has published at least one article that raises the question of ethics and our advancements in genetic science. Many scientists and ethicists are comparing these early days of genetic research in the 1990s to the early days of atomic research in the 1940s and '50s (Sony Interactive, p. 1). Once again, humans are discovering a God-like power to alter the world but may not have the moral understanding or prescience to see where such tinkering might take us.

In the last few years, a genetic basis has been discovered not just for various illnesses but for such behavioral traits as shyness, sexual promiscuity, musical ability, risk-taking and over-eating. Eventually, it may be possible to rout out such undesired features as obesity, depression and reclusiveness along with such inherited diseases as Parkinson's, cystic fibrosis and various forms of cancer. And it may be possible to select for genes that contribute to higher IQ, better eyesight, and a trimmer physique ("Human Genome Project", p. 1). But what will be the consequences of such a world? What will happen to the glorious creative chaos of diversity? This question is one that may soon be upon all of us.

In the tradition of classic science fiction and futurism, Andrew Niccol dreamed up one chilling possible outcome of this future—the world of *Gattaca*. It is a world of extraordinary achievement and aesthetic beauty—but also a world that has a brutal core of “genoism”—discrimination based on the very building blocks of a person's life. The result is a film that doesn't just function as a science fiction thriller, but also as a cautionary tale about the dangers of letting scientific ability outstrip ethics and a sense of

morality. Fellow producer Mark Shamberg applauds the film for being what he calls a "social science fiction (Sony Interactive, p.1)."

Niccol's modernist future, which contains more than an element of Orwell's "Big Brother" mentality, isn't just a clever backdrop against which to set a thriller. Instead, it's an integral part of the story. While it's true that there is a murder mystery, that's just a subplot. The main focus of *Gattaca* is the struggle of a genetically inferior man, Vincent Freeman (portrayed by actor Ethan Hawke), to survive and prosper in a world where his kind is routinely discriminated against; all filmed on the backdrop of Modern architecture from the first half of the 20th century.

So, again, what is the plot and why is the theme important? Well, shortly after Vincent's parents were married, they decided to start a family the old-fashioned way, without any help from doctors and test tubes. The result was a boy who was diagnosed as 99% likely to have a serious heart defect. That rendered Vincent ineligible for all but the most menial of jobs. But his dream was to one day work at the Gattaca Aerospace Corporation and participate in the first-ever manned flight to the moons of Saturn. For most "in-valids" this would have remained a fantasy, but Vincent possessed the determination and drive to make it real. Ready to revolt against his proscribed future, Vincent leaves home, more determined than ever to pursue his dream of traveling into space, of leaving earth and all its oppressive order and assumptions behind.

With the help of a shady middleman, Vincent locates Jerome Morrow (Jude Law), a genetically superior individual who was paralyzed as the result of an accident. He agrees to sell Vincent his identity (including blood and urine on demand,

fingerprints, hair and other body debris, etc.). So, equipped with a genetic resume that will guarantee him work anywhere, Vincent applies for a position at Gattaca. He is accepted and quickly proves his worth to everyone. But, a week before he is to attain his lifelong ambition of making a space flight, he becomes a suspect in a murder investigation and his carefully guarded secret is in danger of being exposed. The plot has its twists and turns, but the important theme here is similar to that of *Metropolis*: power versus oppression, freedom versus subjugation. Again we have a man attempting to undermine the controlling system. And we, as audience members, applaud his attempts, because after all, he's helping bring down the oppressive elitists.

From a visual perspective, Niccol's cinematographer, Slavomir Idziak, uses his trademark filters to differentiate the soft, warm glow of the outside world from the harshness of the windowless interior of Gattaca, but most importantly he frames each scene with exacting detail (Berardinelli, p.1). The two main settings in the story are both real, not set designs. "Gattaca Aerospace Corporation" is actually Frank Lloyd Wright's 1957 Marin County Civic Center. The Modernist structure that serves as the exterior of the apartment that the characters Jerome and Vincent share is, in actuality, the California State Polytechnic University Building. Again, its important to note that we are looking at modernist designs used as futuristic settings in this film.

Andrew creates this very manicured world in which human feelings are trying to burst out and in which the quest to make a better society has destroyed individuality. This may be why Modern architecture was chosen for the backdrop and lent itself so perfectly to the message of the film. As discussed previously, the Modern movement

was very much concerned with the equality of man; the result of which unintentionally shunned individuality. In terms of architecture, this movement translates into the idea that a space for everyone is a place for no one. Actor and producer Danny DeVito provided insight into this when he said, "The environment Niccol creates is fascinating—it goes along with the theory that as the technology increases, so does isolation (Sony Interactive, p.1)."

* * *

METROPOLIS AND GATTACA CONSIDERED TOGETHER

Metropolis and *Gattaca* are presented here together to illustrate the startling similarities that both films share and to point out the very potent message that these films are conveying to their audiences.

Starting off with a more obvious similarity, consider how both are largely based on the premise of class differences and the inherent tension that is created by the oppressed class's discontent and the perceived elite. The two films also deal with how key characters ultimately deal with that discontent and, in both cases, it is to undermine or to destroy something to which the upper class is privy.

In *Metropolis*, the workers set out to destroy the symbol of their oppression, the tower where Johann Frederson happens to live, aptly named by numerous critics as the "Tower of Babel" (Flippo, p.1). In *Gattaca*, the struggle of one man is witnessed by his eventual undermining of the Gattaca Aerospace Corporation Building and everything for which it stands. Characters in both films identify the architecture as a symbol of their oppression and these symbols, in each respective film, are examples of Modern architecture or Modern design.

So could we say that these two films are the reason humans associate architecture and/or our built environment with certain functions or class types? What about as symbols of any sort? The answer to both of these questions is a resounding, no. The human species does this cognitively all of the time. It is the reason why, in the Western culture, we can look at a house, or a child's scribbled picture of a square with a triangle on top, and know what building type it is and know its very specific function. It is

socialized within us, most likely due to the fact that our brains subconsciously need to do this as intelligent creatures anyway, to build associations between certain characteristics and a responsive function.

But can we say that either of these films are to blame for humanity's subconscious association of Modern Architecture to the upper class? The answer to this question may actually be yes.

Metropolis was the first documented science-fiction film set in the future to create an association between Modern designs and the socially mobile, so in that respect, it's possible to argue that it could be to blame for this correlation. Now, the movement itself and the unfortunate perversion of its message has been discussed, but the audience of the film when it was first released has not been considered.

It's important to realize that film, like most fads, was established by the avant-garde. Typically, the avant-garde hails from a wealthier, more socially mobile sect of the population. Those first involved in watching films had the time and luxury of doing so; therefore, the early international audiences of cinema were essentially the middle to upper class. Ironically, it is this wealthier class that would have seen *Metropolis*, which essentially condemns them as being insensitive to those below their social station in life and those who work to support them. Even more ironic is the fact that they probably saw the Modern set-designs featured in *Metropolis* and identified them as being something they wanted to have.

Likewise in *Gattaca*, we, as audience members, most likely want to be one of those genetically perfect, social elite. British actor Jude Law, who portrayed the

character Jerome in the film, stated that the film “plays on the simple paranoias that humans have—that they are not as good or successful as the next person or that their child is not the most perfect child of all time (Sony Interactive, p.1).” As we silently condemn the elite, we secretly want to be one of them.

The necessity of equilibrium theme from both films is the one that is most potent. Looking at *Metropolis* and *Gattaca* we can see two examples of worlds that are tremendously out of balance. The polarization of both fictional societies has become so great that it is threatening to tear them apart. Whenever this has happened in the course of human history, revolution has been on the horizon. It seems to be that, whether it is necessarily true or not, we see revolution as a type of mass conflict resolution and ultimately the only way to restore peace.

Film is an incredibly powerful medium with which to communicate ideas. Just as we shape film, film has shaped and reshaped our own nation many times. Taking these two films as example, we can be sure that they will continue to do so.

* * *

THE ROOTS AND THE LEGACY OF THE WORLD TRADE CENTER

If any singular building type should be identified with American architecture of the twentieth century, it is the skyscraper. The tall buildings made a huge impression on so many European immigrants whose first sight of the American coastline was Manhattan Island, which bristles with a forest of towers. Those towers remain as a symbol of the American corporate power. As Carter Wiseman remarks in his book Shaping the Nation: Twentieth Century American Architecture and Its Makers, “how else did Americans explain how high Superman could leap in a single bound (Wiseman p.47)?”

To catch a glimpse of the skyscraper’s roots as an American building type, we must look a little further back into the nineteenth century when the idea of the tall building was only beginning to emerge, and even further back into ancient times where we see the evidence of man’s fascination with height.

Once conceived, the tall building challenged architecture in the United States and would bring profound change to the rest of the Western world. Wiseman sites an article in a *Lippincott’s Magazine* written by Louis Sullivan in 1896 and entitled, “The Tall Office Building Artistically Considered.” Sullivan, arguably the most influential architect of his day, issued a challenge that would resonate through architectural history from that moment forward (Wiseman p.48). Sullivan declared, “The tall office building must be tall, every inch of it tall. The force and power of the altitude must be in it. It must be every inch a proud and soaring thing, rising in sheer exultation that from the bottom to top it is a unit without a single dissenting line—that it is the new, the

unexpected, the eloquent peroration of the most bald, most sinister, most forbidding conditions.”

In his statement, Sullivan seized upon not only the architectural fact of his time, but also its spirit. The emergence of the tall building as an architectural type was an unprecedented opportunity, yet it was also somewhat frightening. Indeed, it was to sweep before it the very definition of the word “architecture” and establish the unchallenged power of American design up to that moment.

But this obsession with height goes much deeper in our own human psyche. Man has always been attempting to reach the heavens and beyond. We will not delve into the human psyche and its relationship to the heavens through the built environment here, but I will site just a few examples where, as a species, we have attempted to conquer gravity with our built environment. Architectural gestures, such as the obelisks and the Great Pyramids of Egypt, the burial *ziggurats* of ancient Mesopotamia, reflecting ponds in Islamic architecture; and more recent monuments such as the *duomos* of St. Peter’s in Rome, St. Paul’s in London, and the Eiffel Tower in Paris are all testaments to our spiritual desire to be closer to the divine or of the wonder and power at vertical domination.

Only with the coming of iron and steel as structural elements in the early nineteenth century were designers able to escape the inherent limitations of masonry and brick, allowing man to explore the world from an unprecedented height. According to Wiseman, as a rule of thumb for architects of those days, a one-story building required a twelve-inch-thick wall, and the thickness at the base had to increase by four inches for

every additional floor (Wiseman p.48). Thus a stone building of sixteen stories required walls six feet thick at the base to support the upper stories; at twenty stories, the walls at the base would have to be more than seven feet thick.

Thanks to technological advances made in metal construction—especially by bridge builders like John and Washington Roebling—the impulse to go ever higher could theoretically be indulged without limit. Metal beams could be used to span comparatively much larger distances, and could also support greater loads with a decreased bulk. Metal members freed the building's skin from its support role, permitting much larger windows that simply hung from the building's structural frame, as well as greater and more flexible interior spaces to meet the growing demand for offices and factories. While it was technically possible to create much taller buildings, it was not until the inception of the passenger elevator that there became a practical use for the additional space. Here we start to see a very important parallel: the tall building-type was meant for the singular purpose of serving as commercial office space. This is important because it explains why tall buildings began to be uniquely identified as towers of commerce.

Thrilling as the prospect of increased height was to many architects, it was at the same time something of an artistic threat. At their best, these early skyscrapers were wonderfully romantic and entertaining, often decorated garishly and “tethered to the teachings of the European monumental traditions” (Wiseman p.51). The Woolworth Building, designed by Cass Gilbert in 1913, achieved truly aesthetic, as well as physical heights. This landmark was the tallest building in the world at the time and was instantly

dubbed the “cathedral of commerce,” soaring to a then staggering height of seven hundred and ninety-two feet (Wiseman p.52).

The skyscraper evolved rapidly, especially with the enthusiasm for Modernism to fuel the construction of these commercial workplaces. By 1960, the ultimate commercial tower was proposed on a nineteenth century landfill that was to be anchored to bedrock seventy feet below. Developed by the Port Authority of New York & New Jersey, and designed by Minoru Yamasaki & Associates and Emery Roth & Sons, the World Trade Center opened in 1970. According to Eric Darton, author of Divided We Stand: A Biography of New York's World Trade Center, the towers cost \$1.1 billion to build. Each day fifty thousand people worked there, and another one hundred fifty thousand visited or passed through the complex on a typical workday (Darton, p.32).

The complex of seven buildings housed over three hundred and fifty businesses and trade organizations, including importers, steamship lines, international banks, and freight handlers, representing roughly thirty countries. It represented one-tenth of all office space in Lower Manhattan and housed banks from Germany, Japan, Chile and Taiwan; investment companies from Asia, Europe, South America; and even the China Chamber of Commerce (Gold, p.86).

All seven buildings had entrances both from surrounding city streets and from Austin J. Tobin Plaza, below which is the Trade Center's Mall. The mall served as the main interior pedestrian circulation level and shopping center, making it the largest indoor mall in New York State, with over fifty shops and restaurants. It was also a top

tourist draw, with observation decks, a simulated helicopter tour of Manhattan, and a famous restaurant, Windows on the World (Schneider, p.1).

The towers inspired awe and fascination. More postcards of the World Trade Center were sent each year than of any other building in the world (McQuigan p.1). Buildings #1 and #2 (frequently referred to, respectively, as the North and South Towers) were the renowned Twin Towers, each one measuring a truly staggering one thousand three hundred and fifty feet (Gold, p.86-7). The towers also embodied the American genius for *hucksterism*. The idea to make them the world's tallest buildings (which they were briefly after they opened in 1973, until the Sears Tower in Chicago topped them) was the idea of a Public Relations man, not Yamasaki. The buildings were thereby emblematic of our country's deepest aspirations. The World Trade Center was among the last to reflect something of the visionary ideals of progress and technology that defined the last century in America. How high can we build? How high can we fly? Can we reach the moon? (McQuigan p.1).

And they achieved a measure of magic as pop-culture icons. Where King Kong had carried Fay Wray up the Empire State Building in 1933, he took Jessica Lange up the World Trade Center in the 1976 remake. New Yorkers were spellbound when French tightrope walker Philippe Petit crossed the chasm between the two towers in 1974, and in 1975, a man jumped off, opened a parachute and drifted to a safe landing.

These towers did happen to be the tallest TWIN towers in the world for decades until 1997 with the construction of the Petronas Towers in Kuala Lumpur by world famous architect Cesar Pelli. The Petronas Towers topped the Twin Towers by just one

hundred and thirty-three feet (Thiel-Siling p.178). The duration of the Twin Towers' title as the world's tallest twin buildings is very significant because it further explains why people identify the towers as icons of architecture and commerce. The simple bravado of having built the two tallest buildings in the world (even if the record stood for just a brief time) made a definite statement to the rest of the world. In the chilly Cold War era, the attitude that this conveyed must have been offensive to many foreign nations and people.

Yamasaki's towers were monoliths whose slightly chamfered square floors rose without interruption from the sidewalk to the sky. The towers distinguished themselves structurally with their load-bearing exterior walls. The exterior grid formed by the floors and columns acted as a vierendeel truss in contrast to conventional steel-frame and curtain-wall construction.

"The architecture we build should give man an aesthetic and emotional fulfillment," Yamasaki once wrote (Thiel-Siling p.122). Commissions such as the Michigan Consolidated Natural Gas Company in Detroit (1958-63) showed him designing with period Miesian rectilinearity, lightened delightfully by diaphanous walls and screens. Whether critics have found the work Gothic, Islamic, or even organic, Yamasaki at his best has tastefully assuaged America's growing desire for something humane and tactile in straightforward modernism (Thiel-Siling p.122).

Contributing writer and critic for *Architectural Record* and *The New Art Examiner*, Charles L. Rosenblum, wrote that, in the World Trade Center, the architect fell short of his goals. He planned a five-acre plaza to promote street-level activity, and

designed a face-like exterior wall to reduce the scale, modulate light and shade, and minimize acrophobia. Unfortunately, the most notable quality of the buildings was its overbearing size and presence. Rosenblum notes that this was particularly apparent in the barren, windblown plaza, but also at a distance, where the tight columns of the curtain wall seemed opaque; any intricacy was overwhelmed by the exterior wall's uninterrupted run through to their full height (Thiel-Siling p.122). These complaints are extreme versions of indictments that have been leveled at many monoliths of the era, but they seemed particularly acute there.

In fact, most New Yorkers didn't seem to warm to the design of the towers, which were deemed both brutal and bland. And yet, in the aftermath of the tragedy on September 11, 2001, journalists and everyday native New Yorkers began to express their seemingly newfound feelings toward the World Trade Center and what it meant to them personally.

In an article Cathleen Mcguigan wrote for *Newsweek*, she shared her own personal feelings towards the two towers. Mcguigan comments, that for her, best of all was seeing the buildings from afar: the Twin Towers anchored the skyline at the southern end of Manhattan Island, a counterpoint to the classic older skyscrapers uptown. "When you got any distance from them, they read as solids, as powerful as the [Great] Pyramids..." She also recounts, "you could see them from midtown, sparkling in the distance on a sunny day. If you got lost way downtown, where the streets jig and jog off the grid, you could always look up and find the Twin Towers to orient yourself..."

Maybe it wasn't our favorite building, but it was always there. Now it's not (McGuigan p. 1)."

On February 26, 1993, the world witnessed the first attack on the World Trade Center. The attack was led by a single well-honed terrorist, Ramzi Yousef, who became the leader of a dedicated group of Afghani revolutionaries, former Afghani soldiers, fellow believers, braggarts, and followers. From evidence presented at his trial, Yousef led many to believe that he had been practicing for the 1993 WTC bombing for most of his adult life. In preparation, he built and exploded a bomb on a Philippine airline, killing one. He poured over flight schedules, scheming to bomb a dozen U.S. flights simultaneously. But the evil deed for which he became famous—the 1993 bombing of the World Trade Center—fell far short of his grandiose dreams. Using \$3,000 worth of commonly found ingredients, they fashioned a homemade bomb, loaded it into a rented Ryder van and drove it from Jersey City, through the Holland Tunnel and into the World Trade Center's underground parking garage. The bomb was detonated causing a tremendous fireball to shoot up the airshaft and shaking the foundations of the World Trade Center, but did not cause any part of the buildings to collapse. Apparently, it was a closer call than anyone would have liked to have thought. Later, Yamasaki told jurors that if the Ryder van had been left closer to the poured concrete foundations, they would have succeeded in bringing the buildings to the ground (Tyre, p. 1).

Yousef would explain that he and his band targeted the Trade Center for several reasons. It was the symbol of America's wealth and commerce and, in their minds, was

filled with the hated Jews. Most of all, Yousef and his band wanted to kill thousands. The terrorists bragged that they wanted the American people to feel terror (Tyre p.1).

On September 11, 2001, America realized that it was perceived as the rooftop elite by some international communities; by individuals who felt that the world needed to be restored to their sense of equilibrium. That morning, a Boeing 767 from Boston, American Airlines Flight 11 bound for Los Angeles, took off at 7:59 a.m. and headed west, over the Adirondacks, before taking a sudden turn south and diving down toward the heart of New York City. Meanwhile American Flight 757 had left Dulles; United Flight 175 left Boston at 7:58, and United Flight 93 left Newark three minutes later, bound for San Francisco (Gibbs, p.1).

The first plane hit the World Trade Center's North tower at 8:45 a.m., ripping through the building's skin and setting its upper floors ablaze. People thought it was a sonic boom, or a construction accident. As the gruesome rains came, people in the streets all stopped and looked, and fell silent (Gibbs, p.1).

United Airlines flight 175 that left Boston at 7:58 a.m., went passed the Massachusetts-Connecticut border, made a 30-degree turn, and then an even sharper turn, swooping down on Manhattan to impale the South tower at 9:06 a.m. (Gibbs, p.1).

The first crash had changed everything; the second changed it again. Anyone who thought the first was an accident now knew better. This was a war, and the system responded accordingly. The city buckled, the traffic stopped, the bridges and tunnels were shut down at 9:35 a.m. as warnings tumbled one after another; the Empire State Building was evacuated, and the Metropolitan Museum of Art, the United Nations. First

the New York airports were closed, then Washington's, and then the whole country was grounded for the first time in history (Gibbs, p.1).

Even as the President addressed the nation during a press conference, the second front opened. Having hit the country's financial and cultural heart, the terrorists went for its political and military targets. An American Airlines jet swooped in, aiming for the Pentagon. The plane caught an edge of its wing on the helicopter pad outside of the Pentagon, cartwheeling itself into the building (Gibbs, p.1).

But that was not all; there was a third front as well. The flight that had taken off at 8:01 a.m. from Newark, N.J., bound for San Francisco passed south of Cleveland, Ohio, and then took a sudden, left turn and headed inexplicably back into Pennsylvania, where it would crash, missing what many believe was supposed to be Camp David or the Capitol (Gibbs, p.1).

The tower's structural strength came largely from the 244 steel girders that formed the perimeter of each floor and bore most of the weight of all the floors above. Steel starts to bend at 1000 pounds. The floors above where the plane hit—each floor weighing millions of pounds—were resting on steel that was softening from the heat of the burning jet fuel, softening until the girders could no longer bear the load above (Gibbs, p.1).

The south tower collapsed at 10, fulfilling the promise of Ramzi Yousef eight years before. The north tower came down 29 minutes later, crushing itself like a piston. The towers themselves were reduced to jagged stumps; some described the atrium lobby arches looking like a bombed out cathedral (Gibbs, p.1).

In an article written for *TIME Magazine*, Nancy Gibbs explains that, "The Twin Towers of the World Trade Center, planted at the base of Manhattan island with the Statue of Liberty as their sentry, and the Pentagon, a squat, concrete fort on the banks of the Potomac, are the sanctuaries of money and power that our enemies may imagine define us. But that assumes our faith rests on what we can buy and build, and that has never been America's true God (Gibbs, p.1)."

"The twin towers stood for America in the same way that Big Ben stands for England," said Angus Kress Gillespie, author of the 1999 book Twin Towers: The Life of New York City's World Trade Center. "If you're trying to poke America in the eye, this is the way to do it (Schneider, p.1)." Darton agrees with Gillespie. He said that the destruction of the landmark made "an excellent target to impact the maximum amount of psychological trauma (Schneider, p.1)."

In the aftermath of the terrorist attacks, native New Yorkers and fellow Americans expressed their concern for the end of the World Trade Center during media interviews:

"I have always understood the significance of the place, the politics of its construction, and I even felt ambivalent about the implications of the financial empires it housed. They were never pre-eminent in my mind as I admired the structure and the skyline but they were never completely out of my mind either. I was looking at structure, a magnificent sculpture. It was a visual anchor, a guidepost. It was an icon. It was not a symbol (McIntosh, p.1)."

“I realized that for some people the World Trade Center was a symbol. A symbol they despised. A symbol so strong in their minds that they would kill themselves and thousands of innocent bystanders to destroy it. I always felt ill at ease at the target I knew it had become. I dreaded the thought that this could happen, and I never spoke of it (Schneider p.1).”

Every city cataloged its targets; residents looked at their skylines, wondering if they would be different in the morning. The Sears Tower in Chicago was evacuated, as were colleges and museums. Disney World shut down, and Major League Baseball canceled its games, and nuclear power plants went to top security status; the Hoover Dam and the Mall of America shut down, and Independence Hall in Philadelphia, and Mount Rushmore (Gibbs, p. 1). It was as though someone had taken a huge brush and painted a bull's-eye around every place Americans gather, every icon we revere, every service we depend on, and vowed to take them out or shut them down, or force us to do it ourselves.

Though everyone wanted to be prudent, there weren't a lot of suspects to round up. Bin Laden was responsible for the attacks on U.S. embassies in Kenya and Tanzania. Three weeks prior to September 11, he told an Arab journalist he would mount an unprecedented attack on the U.S. By Tuesday afternoon, Government agencies had picked up at least two electronic intercepts indicating the terrorists had ties to bin Laden (Gibbs, p.1).

As patriotism swelled, Gibbs reported that the day threatened to loop Americans into “the kinds of barbaric blood feuds from which we've always been able to stay away.

People lashed out, getting angry at our not very humble foreign policy, complaining about a culture of ironic detachment that made us unmoved by a threat that was very real. (Though in the immediate aftermath of the attacks, pollsters found that by a huge proportion, 80%, Americans were ready to go to war, and prepared for the body bags that go with it.)” In answer to her own question about what should America do now, she suggests, “What else but build new cathedrals, and if they are bombed, build some more. Because the faith is in the act of building, not the building itself, and no amount of terror can keep us from scraping the sky (Gibbs, p.1).”

Whatever the outcome, it is clear that some things have changed forever. The attacks will become a defining reference point for our culture and our imagination.

By 10:30 a.m. the morning of September 11, four tourists from the Czech Republic were reported to be at the Empire State Building, buying up all the postcards with pictures of the World Trade Center on them. “Soon there will be no more of *these* cards,” one of the four explained (Gibbs, p.1).

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CONCLUDING STATEMENTS ABOUT MODERN ARCHITECTURAL ICONS & THE MEDIA

Of all the classical forms of art, architecture is the one most involved with our daily lives. Specific building types have been developed throughout the ages to accommodate all of our activities and needs: houses, schools, factories, offices, commercial buildings, churches, hospitals, museums, theaters, sports facilities, airports, etc. Very often we are not aware of them as architecture, but take them for granted and use them as the necessary adjuncts of life. Certain structures possess characteristics that distinguish them from the rest of the built environment. Sabine Thiel-Siling, in the book Icons of Architecture: the 20th Century, says that what attracts greater attention to certain structures is the fact that “they stir the emotions, are admired, loved, and accepted; or conversely, they are rejected. It is at *this* juncture that architecture becomes a socially relevant topic, and one begins to speak of quality and aesthetics, functionalism, construction, and innovation (Thiel-Siling, p.9).”

In the light of the conditions prevailing at the end of the nineteenth century, which were largely brought about by the Industrial Revolution, the twentieth century has witnessed more rapid developments in all fields of technology—including architecture and building technology—than ever before in our human history (Thiel-Siling, p.9). Now, at the beginning of the twenty-first century, it’s important to look back on the past century’s built forms, structures, styles, and types; the people who designed them, the people who built them, and the media that promulgated or criticized them. In doing this, we should reflect upon the way our society defines itself both nationally, and more

importantly, as witnessed by the tragedy on September 11, 2001, how we define ourselves globally.

To say that the media is solely responsible for a building's advancement as an architectural landmark, an icon, or—even more elusive—a symbol, would be a rash conclusion. Instead of looking at the media as an active force of promulgation, think of it as a measuring stick; divorce media from having an audience. For instance, the more we are affected positively or negatively by architecture, the more critics will write about it, the more the media (as purely a group of writers) will focus its attentions on it. Therefore, the media's response to a structure within their built environment is nothing more than a reaction to that built environment, and in this light, not responsible at all for the world's perception of that structure.

However, what happens when we introduce the idea of an audience that will receive and then ingest those very same ideas and thoughts expressed by the journalists—and more pertinently—by film? Considering that there is no way for everyone in the world to experience a specific structure, it becomes clear that the global perception of a building must be based largely upon the media's response. Most of the world had never actually seen the World Trade Center in person, and yet people all over the world had a concept of what the building stood for.

Journalists and reporters began asking questions about this global perception of the World Trade Center after September 11, asking why the World Trade Center was perceived as an icon of architecture and as a symbol of capitalism and commerce. It was as if they were attempting to place much of the responsibility for this tragedy on the

media, and indirectly on themselves. An honest attempt at self-criticism perhaps, and not completely untrue, but, if we get nothing else out of this research, realize that this could not have been prevented. The problem is very complex; the fault falls on the perception of the terrorists who committed the atrocity (or really the social influences that produced the terrorist's mindset) just as much it does on our own society for what we have produced in our built environment as well as the culture we have fostered.

So, what does all this mean? It means that there really is nothing we can actively do, or conversely, not do, that would prevent such tragedies from happening at different points in our history. We do need to be more aware of the forces we wield and exactly what those forces are, because we should never stop defining ourselves. Humans, like all elements, are a mixture of creative and destructive tendencies. We will continue to strive and utilize our abilities of expression—often failing along the way with a backwards step—but hopefully always arriving closer to defining the truth.

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