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From Steamboats to Snow White: How the Mickey Mouse Short Films Between 1928 and 1934 Resulted in a Shift from an Abstract to a Naturalistic Animation Style in the Disney Studios.

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Introduction

Entering a toymaker's workshop in a flash of blue light, a fairy walks up to the puppet propped up on a nearby workbench and says, "Little puppet made of pine, wake. The gift of life is thine."[1] The scene described above comes from Walt Disney's full-length animated feature film *Pinocchio,* which was released in 1940 and ran one hour and twenty-eight minutes in length. The story follows a puppet who is given life after Geppetto, the toymaker who created him, wishes upon a star. The movie continues on, following the adventures of Pinocchio until he eventually earns the right to become a real boy. Though *Pinocchio* did not bring in the crowds, its main character was closely linked with the studios' own technological and artistic process.[2]Between 1928 and 1934, a shift occurred inside the Disney Studios that changed its style and the place of machine imagery within their animation. Leaving behind the slapstick of Disney's early silent films, the studio quickly changed in a period of six years from shorts (shorthand for short films) to full-length features, like *Pinocchio,* depicting an idyllic animated world. The need for Pinocchio to become a real boy displays his original mechanical form as unnatural and in need of immediate change. The way that Pinocchio's human form is favored

[1] Walt Disney, *Pinocchio* (RKO Radio Pictures, 1940), animated motion picture, 88 min.
[2] Joel H. Amernic and Russell J. Craig. "Accountability and Rhetoric During a Crisis: Walt Disney's 1940 Letter to Stockholders." *The Accounting Historians Journal* 27, no. 2 (2000): 49–86. JSTOR. The film, though now very popular, did not live up to the fiscal expectations of its predecessor, *Snow White*, which had repaid its $1,500,000 budget within three months.

over his mechanical is a result of the studios' shift from the abstract silent shorts toward the naturalism of an illusionary fantasy world in the feature length films. The naturalistic style of Disney's full-length feature films, like *Pinocchio*, was developed over time and, I argue, was a result of the changes that occurred during Mickey's Golden Era. The start of Mickey Mouse's popularity marked a shift from the previous era of silent cartoons as the addition of sound drastically changed the possibilities of animation. Moving from the old gags of early 1920s, where comedy and chaos were the laws of the screen, the development of a naturalistic style came with a growth in animation and sound technologies. As these technologies evolved, which increased the detail possible in the shorts, so too did Disney animation adapt as it brought forth a style that worked to not just reference reality but parallel it.

Between 1928 and 1934, the Mickey Mouse short films were at the center of the Disney Studios' creation and development of animation technology. Beginning with Mickey's first sound cartoon, *Steamboat Willie*, in 1928, the studios ready acceptance of new technologies and techniques led to rapid developments in the field. Pulling from old narrative traditions and adding new advancements to them in the form of motion, sound, and new points of perspective, as well as the presence of living machines within the films, led to the establishment of an abstract style (which includes strictly synchronized sound, no attempt to imitate the weight or elasticity of the human body, but only to exaggerate for narrative and comedic affect) within the studio during the 1920s. However, moving into the 1930s, as the new advancements in sound and motion technologies continued to push the studio

onwards towards a naturalistic style. Shifting degrees of conflict in the acceptance of technology in American society occurred during the Great Depression. As a result the abstract style of the earlier shorts began to be pushed out in favor of a more naturalistic one.

In my argument, the terms *abstraction* and *naturalism* relate to the use of sound and motion technology in animation. The animation of this period was defined by the new integration of motion and sound. The ways that this marriage was used can display these two styles. Abstract style attempts to relate to reality but not to create an illusion of it. It is characterized by the viewer's ability to clearly see the techniques that are being used, such as strict Mickeymousing. The sound technique of Mickeymousing "consists in following the visual action in synchrony with musical trajectories and instrumental punctuations of action."[3] Lastly, there is the absence of any desire to imitate human physics, which relates back to popular animation techniques including squash and stretch, which works to imitate (or in Disney's short films exaggerate) the elasticity of the human body, as well as the rubber hose style (which depicts a character's body with rubber limbs, flowing curves, and no articulation in the form of hinged wrists or elbows.

In contrast, a naturalistic style primarily tries to create the illusion of an animated world that parallels our own. This is apparent in the weight given to the characters' bodies, the atmospheric, as opposed to highly synchronized sound, and

[3] Michel Chion, *Audio-Vision*, trans. Claudia Gorbman (New York: Columbia UP, 1994), 121.

the absence of living machines in the films. Characters, such as a taxi with a face or an anthropomorphic steam whistle, served as a blockade towards naturalism. As the existence of living machines is itself abstract, the pursuit of naturalism led to the expulsion of machine characters from the films.

Being an art form that is in itself the product of multiple different advances in motion and sound technology, the paradox of the Disney Studios is that technology became naturalized even as it was amplified in the shorts. This was apparent in the changing allocation of different degrees of animation styles, which showed that the machine characters began to receive lower, more abstract forms while Mickey and the other main characters were given the more natural and advanced techniques as the studio evolved into the 1930s. While the ways that the studio had moved toward a naturalistic style can be seen in the characters of Mickey and Minnie in 1933, the restrictions of black and white film and the boundaries of the illusionistic ability of the shorts (as they had unrealistic characters like animate machines with faces) led to their demise. While the field of animation studies has discussed Disney films at length, I believe that the importance of the early Mickey Mouse shorts in relation to the later feature-length films has been overlooked. My thesis claims that between 1928 and 1934, technological developments, along with cultural shifts in the acceptance of machines in American society, led the studio away from the abstract style of their silent films toward the naturalism that would work to create the illusion of the fantasy world of Disney's full-length feature films.

Disney's films, though widely popular as a form of entertainment, have not been thoroughly analyzed through a scholastic lens until the recent rise of animation studies. During the 1930s, with the introduction of Technicolor, and later with the start of his full-length feature films, the Disney Studios' animation style began to be a subject of interest. This is particularly evident in *The Art of Walt Disney*, by Robert D. Field, published in 1942.[4] The first book covering the animation of Walt Disney, it focuses on the processes by which animation from 1928 to the early 1940s was created. Though the work is highly subjective and glorifies Disney above his animators, it goes into great detail on the steps a work must go through before it is even approved as a final piece of film. Field's work was an exception in the field of animation studies. As it was not until the 1980s that this area of study really began to gain recognition as a possible academic field and not just a fandom subculture.

The 1980s saw a stream of animation research, but for several years it was incredibly difficult to get these essays accepted into scholarly publications. Even in media journals animation studies could not find a home as these mostly focused on live-action motion pictures.[5] So while members of the newly developed Society for Animation Studies (SAS), founded by Henry Deneroff in the late 1980s, held annual conferences (starting in 1989) on animation studies, the essays those conferences

[4] Field, Robert D. *The Art of Walt Disney*. London: Collins, 1944. Print.
[5] Furniss, Maureen. *Art in Motion: Animation Aesthetics*. Sydney: John Libbey, 1998.

presented had problems finding journals that would accept articles on animation.[6] This resulted in the underdevelopment of the field as it was not able to circulate in academia. The problem was addressed in 1991 by the creation of the *Animation Journal*, which was the "first peer-reviewed publication devoted to animation studies."[7] The journal publishes history, criticism, and theory related to all forms of animation, and the wide variety of fields represented in this journal are still present in animation studies to this day.

Looking at the predominant academic disciplines that have informed papers presented at the SAS conferences over the years, one can see the large array of fields that practice animation studies and also the ones left out. Many of the papers come from media and popular culture studies (in part due to the influence of media studies departments, which helped to legitimize the academic study of popular forms of entertainment), but a good number also come from scholars of sociology, film history, film theory, and feminist studies.[8] Another noteworthy area of academia whose papers occasionally make their way into the SAS conferences and the field of animation studies is art history, which tends to be a rarely present minority. However, the wide variety of fields, paralleled by the large array of animation techniques and styles, means that there is no heterogeneous approach to this field. Even the definition of animation itself, which I argue changes with the

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[6] Pilling, Jayne, ed. *A Reader in Animation Studies*. Sydney: John Libbey, 1997. xiv.
[7] Furniss, *Art in Motion*, 4.
[8] Ibid., 3.

period in which it was created and the technique and materials used, is up for debate in the field of animation studies.[9] Though there is a lack of consensus in the field, the wide variety of disciplines involved has led to a large and varied selection of works over recent years that approach animation studies from multiple angles, which means that there are always new outlooks.

This wide variety of disciplines parallels the large range of animation that can be found in such journals. I have focused on a small period in the animation of Walt Disney Studios because of the need to maintain clarity in a field that is incredibly vast. First, it was of great importance to begin my research with and found my thesis on strong animation historiographies, which I found in *Art in Motion* by Maureen Furniss and *A Reader in Animation Studies* by Jayne Pilling.[10] Both cover a wide array of animation techniques and time periods, allowing for a deeper look into the field of animation studies. In fact, Maureen's discussion of cel animation helped me develop a better understanding of the method and how to explain it to a viewer unfamiliar with animation studies.

Second was the need for accounts of this specific time period in the Disney Studios' history, which led to the use of several biographies of Walt Disney. This area was a mixed bag, however, for while this was the main place in which I could find detailed descriptions of the changes in the studios' technology and techniques over time, a few of these works were biased since their publishers were the Walt

[9] Pilling, *A Reader in Animation Studies*, xiv.
[10] Furniss, *Art in Motion* and Pilling, *A Reader in Animation Studies*

Disney Studios' publishing house, Hyperion. However, works published by the Walt Disney Company are able to use images of stills and scripts that are hard to find in other books and nearly impossible to see in person. It was in *The Art of Walt Disney: From Mickey Mouse to the Magic Kingdoms and Beyond* that I was able to see for the first time the full script for *Steamboat Willie.*[11]

Third, with my concern with the relationship between sound and motion, I needed to bring in works relating to sound in animation and film. In sound theory I found Michel Chion to be incredibly insightful. His work on sound in live-action cinema has been used in the analysis of sound and music in animation repeatedly in recent years.[12] His discussion of film sound in contrast with other works analyzing cartoon music, helped me to see the shifts in sound that occurred in these shorts. To further strengthen my thesis, I pulled in both primary and secondary sources that dealt with cultural changes in the acceptance of machines in American society between 1928 and 1934. In particular, I found newspaper articles that displayed the growing robot hysteria in the 1930s, which I will discuss in chapter two.

Finally, due to the dominant position of the Disney Studios within the field of animation studies, I was able to use works focusing on the company to add to my understanding of the development of animation. This brought in a wide variety of eminent figures in the world of animation studies, including scholar J. P. Telotte, who discussed Mickey and his bounds, or lack thereof, to a conventional world in his

[11] Finch, Christopher. *The Art of Walt Disney: From Mickey Mouse to the Magic Kingdom and Beyond*. New York: Abrams, 2011.
[12] Ibid., xv.

work *Animating Space*;[13] Donald Crafton, who deftly brought in multiple fields, including some art historical methods in his work *Shadow of a Mouse*; and Karen Beckman, who in her work *Animating Film Theory* works the marginalized area of animation into the more broadly accepted study of film.

Though my research in animation studies has shown that the feature length films of the of the Walt Disney Studios (including *Pinocchio)*, as the main representative of American animation due to their mass popularity, have been thoroughly dissected, I have found the discussion of the early shorts of Mickey Mouse to be lacking. While his earlier work is sometimes examined, particularly animation before the creation of Mickey Mouse such as Oswald the Lucky Rabbit, the time period directly before the shift to full-length feature films is rarely a topic in animation studies.[14] It is mentioned often only in passing, and when this era is described in greater detail, it is usually in one of the many Disney biographies, which focus on the history of the studio and not the art of the short films themselves.

The structure of my thesis will consist of two chapters that will each analyze two Mickey Mouse shorts from the 1920's and the 1930's. Chapter one will discuss the short films *Steamboat Willie* and *Plane Crazy.* Both results of the early

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[13] Telotte, J.P. *Animating Space: From Mickey to Wall-E.* Lexington: The University Press of Kentucky, 2010.

[14]Neal Gabler, *Walt Disney: The Triumph of American Imagination*, (New York: Knopf, 2007), 106. Later, on February 2, 1928, Mintz renewed his contract with Universal, providing for three more years of Oswald cartoons. Unbeknownst to Walt Disney, in finalizing the deal with the distributor, Mintz had given Walt no rights to Oswald, thus leaving Disney with no recourse to regain him.

integration of sound into animation, the two shorts show the American conflict of whether or not to accept the presence of machines in society during the 1920s, the two films being produced only a year apart. Changes in the studios' structure, film distribution, and integration of new technologies, particularly the introduction of recorded sound, all worked to create an abstract style. The increase in American leisure time, contrasted with the mechanization of the workforce, new perspectives created by technology, and reliance on old techniques and narrative traditions, will help to explicate the creation and growth of animation in this period as well as the limits to the naturalistic style in the 1920s.

Chapter two will focus on the two short films, *Traffic Troubles* and *Mickey's Mechanical Man*. Moving into the 1930s, the culture of the Great Depression, the rise of the debate of man versus machine, and the evolution of sound and animation techniques in the Disney Studios lead to an allocation of separate styles to different characters. Here we see the abstract being assigned to the machine and the natural to Mickey Mouse. Though the naturalistic and narrative possibilities of Mickey had reached new heights, the limits of black and white animation would eventually lead to the demise of the shorts, as the studio moved on to the greater naturalistic possibilities of Technicolor, full-length feature films in 1934.

The separation of the two chapters of this thesis is not only created by the two pairs of films being discussed, but also by the different time periods in which the shorts were made and how the cultures and technological advancements of these two decades influenced the films' styles and depictions of anthropomorphic

machines. The first chapter will analyze the two films *Steamboat Willie* and *Plane Crazy,* which were developed in the late 1920's. These two shorts display the beginnings of and early advancements in the marriage of motion and sound in animation as the abstract styles of the silent films were adapted to new sound technologies while the 1920s conflict over the place of machines in society led to a changing depiction of Mickey Mouse in relation to living machines.

Chapter One: The Limitations of the 1920's and the Desire to Hang on to the Past, While Embracing Modern Technologies

The studio move towards *Pinocchio* and other full length feature films, represented a major shift in Disney's strategy. Prior to this development Mickey Mouse was still the studios' main money pot and the studio was grappling with the style it wished to portray. This design was influenced by the depiction of living machines in the shorts. Living machines can be described as personified mechanic characters that can either move of their own volition or have anthropomorphic features. The existence of these creatures is an abstract one. The 1920's witnessed a conflict between free time and the more mechanized work force, which made its way into Disney's short films. As the populace had more leisure time, films grew in prominence. It was in these early shorts that Disney grappled with the new technologies of motion and sound in his efforts to test the boundaries of animation.

The two films in this chapter follow an abstract style as they contain Disney's first sound short, *Steamboat Willie,* and Mickey's first film, *Plane Crazy* (to which sound was later added). The early development of motion and sound technology within the Disney Studios was placed onto old formats of narrative and expression that quickly evolved as Mickey did. In this chapter I will discuss how the abstract style of the silent films adapted to these new technologies and the culture that influenced the ways in which machines would be displayed in the films. Within just a year's time, this style would change with the development of new uses of sound

and motion technologies as we will see with the shift between *Steamboat Willie* and *Plane Crazy*.

The Technological Evolutions and Cultural Shifts that Lead up to the Mouse

Before getting to 1928 and the first Mickey Mouse sound cartoon, it is necessary to see how motion and recorded sound technology had evolved in the years prior, when we later discuss how these advancements affected the animation style of the studio. The history of animation can be traced back to its early efforts to make single images narrate a sequence of movement over time. One well-known ancestor of modern animation is the zoetrope. Invented in 1834, it was a rotating drum that the viewer spun.[15] The viewer would look through one of the many slits to see the several frames of images on printed paper that covered the interior circumference. As the device was spinning, the viewer would look straight ahead to see the optical experience created, which was itself animation. This illusion of movement was accomplished by the material between the viewing slits, which moved in the opposite direction of the images and created a shutter.[16] Early projected animated films would begin with a still image that would suddenly move. An early trick film was an adaptation of Winsor McCay's popular comic strip *Little*

[15] Bordwell, David, and Kristin Thompson, *Film Art: An Introduction* (New York: McGraw Hill, 2010), 9.
[16] Ibid.

Nemo.[17] These early trick films appeared to marvel at their own ability to bring a drawing to life, often showing the animator's creation of the image (as in *Little* Nemo).[18] As animation technology progressed over time, trends began to appear in America.

By the mid-1910s, American animation production was dominated by the techniques of cel (short for celluloid) and paper.[19] The four films I will analyze in this thesis are products of cel animation. As the form of animation used by the Disney Studios, it is necessary to learn about this techniques and the possibilities and boundaries of it in this time period. The cel had a massive impact on the animation industry and was patented by animator Earl Hurd in 1914.[20] A cel is a transparent sheet on which objects are drawn or painted for animation. During the first half of the 20th century, cels were made up of cellulose nitrate and camphor. Due to the substances highly flammable nature it would later be replaced (with cellulose acetate). Cel animation works like this: "foreground moving images are drawn onto cels, which can be layered and placed over a background drawing or painting."[21] Animators created a drawing on paper, the drawing was transferred onto a cel, the cel was colored in with ink, and finally it was photographed against a set background.[22] Following the film tradition of twenty-four frames per second,

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[17] Scott Bukatman, *The Poetics of Slumberland: Animated Spirits and the AnimatingSpirit* (Berkeley: U of California, 2012), 5.
[18] Bukatman, *The Poetics of Slumberland*, 5.
[19] Furniss, *Art in Motion*, 16
[20] Ibid., 19.
[21] Ibid.
[22] Ibid., 18.

each photograph made up one frame or one cel (or one combination of cels). Disney was believed to have done eighteen frames per second in his full-length feature films unless the scene called for special detail, in which case the frame number would be upped.[23] Cel and paper gained a hold on the American animation industry for a number of reasons. A central motive for this was that the techniques called for an assembly-line production system. This cut costs and sped up production, allowing for creative animators to focus on initial designs and the less skilled workers to complete repetitive tasks.[24] These two techniques would adjust to the narrative storytelling practice of the Walt Disney Studios.

A key element in the change that occurred in the Disney Studios between 1928 and 1934 was a result of the introduction of recorded sound to film. Recorded sound came about at the same time as the moving picture. Back in 1877, Thomas A. Edison developed the phonograph, which allowed for the mechanical recording and copy of sound.[25] Though others had developed various recording devices, Edison's was the first to be able to reproduce the recorded sound. Along with his assistant W. K. L. Dickinson's invention, the Kinetoscope, which made short 35-mm films, Edison planned to display films to individual viewers.[26] Though projectors had been in existence for years, Edison did not develop a system to project his films onto a screen at first because he believed that movies were a passing fad.[27] Edison did

[23] Ibid., 20.
[24] Furniss, *Art in Motion*, 18.
[25]Bordwell and Thompson, *Film Art*, 455.
[26] Ibid.
[27] Ibid., 456.

eventually abandon Kinetoscopes and form a production company in order to produce films for theatres.[28]

Drawing from such areas as moving panoramas and early photography, film technology continued to develop as companies competed over the expanding theatre market. As films developed, they left their vaudeville and tableaux skits behind for a narrative format. Edwin S. Porter was one of Edison's directors and among the first to show narrative continuity and plot development within a film. His early work *The Great Train Robbery*, made in 1903, developed a narrative design in film. Lynne Kirby argues in *Parallel Tracks* that the cinema and the railroad shared a special kinship as they both offered a new visual perception and the promise of a journey to somewhere else.[29] Of note is her mention of cinema and the railroad's ability to situate their viewers as simultaneously static and in motion.[30] With the break from the layout of the play, where the illusion can be shattered if the viewer sits in a spot where he or she can see the actor waiting in the wings, cinema keeps the viewer in this illusionary world and constantly moving through it.

The illusion of cinema was only enhanced by the addition of recorded sound. The history of sound in relation to film began with non-embedded sound. This came in the form of bandleaders who would decide what the best music was for the film.[31]

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[28] Ibid., 458.
[29]Lynne Kirby, *Parallel Tracks: The Railroad and Silent Cinema* (Durham: Duke University Press, 1997), 2.
[30] Kirby, *Parallel Tracks*, 2.
[31] David Suisman, *Selling Sounds: The Commercial Revolution in American Music* (Cambridge: Harvard University Press, 2009), 260.

This autonomy soon came to an end in the 1910s when film companies began sending out cue sheets with their films.[32] These were an early attempt at some form of synchronization between sound and images as the sheets designated specifically what music should be played and when. Sound accompaniments for films began as snippets from popular songs, the use of which had no legal ramifications for the film companies.[33]

These popular songs and easily executed sound effects made their way into Disney's early short films, though they came in the form of recorded sound.[34] When it came time for Walt Disney to choose a sound recording device to create and reproduce the music for his films, he avoided the most popular choice of the time, the disc.[35] In 1926, the Vitaphone was patented by Warner Brothers in order for sound to accompany films.[36] The Vitaphone electrically recorded sounds that were then reproduced on a disc.[37] Allying himself instead with shady distributor Pat Powers, whose sound system had dubious legality as it was a clone of the Phonofilm sound recording system patented by the De Forest's company (who were too weak financially to challenge Powers on patent infringement). Disney used the Power's Cinephone to record the soundtrack for *Steamboat Willie*.[38] To achieve synchronized sound, Disney had a ball printed on both the soundtrack and the film that rose and

[32] Suisman, *Selling Sounds*, 260.
[33] Suisman, *Selling Sounds*, 260.
[34] Ibid.
[35] Gabler, *Walt Disney*, 120.
[36] Suisman, *Selling Sounds*, 261.
[37] Ibid.
[38] J.P. Telotte, *The Mouse Machine: Disney and Technology* (Chicago: University of Illinois, 2008), 26.

fell with the beat of the music, creating a visual signal for the band that recorded the sound to follow.[39] Since animation is made up of a series of images shot one frame at a time, as opposed to a continuous shot, it was easier to synch the sound with different frames.[40] So it was the technique of animation itself that allowed for an easier synchronization of image and sound as specific frames could be linked with specific sounds.

The techniques the studio employed allowed for an assembly line system that pushed out cartoons at an intense pace. Ub Iwerks and his animators created the primary drawings, in-betweeners transferred the drawings onto the cels, and women in the ink department filled them in.[41] The strict assigning of specific duties allowed the studio to crank out films like *Plane Crazy* (the silent version and first Mickey Mouse cartoon), which began production on April 30 and was finished on May 15 of 1928.[42] Cel animation became popular in the animation industry because, as Maureen Furniss states "these techniques lend themselves to a central component of Taylorism, an assembly-line method of production."[43]

A new part of work life in the 1920s, the assembly line had a great impact on American culture. Henry Ford's model could be seen across America as factories and other workplaces shifted to a more scientific and structured approach to their businesses. With workers moving more and more into industrial jobs, they found

[39] Gabler, *Walt Disney*, 123.
[40] Bordwell and Thompson, *Film Art*, 382.
[41] Gabler, *Walt Disney*, 114.
[42] Ibid., 115.
[43] Furniss, 18.

that their "workplace was an increasingly regulated environment, with mechanized assembly lines, scientific management, punch-clocks, and maxims of efficiency."[44] Though this increased production, it also led to a loss of the individualism of the worker, who became more of a cog in a machine. However, the loss of individualism in the workplace was mitigated by the larger amount of free time as Americans had "more leisure time than ever before—the workweek was shorter, the wages were higher, and a wealth of new entertainments like amusement parks celebrated and fostered these new freedoms."[45] The effects of cultural changes brought about through industrialization, urbanization, technological innovation, and economic growth could be seen in the films of the period. The economic growth of the 1920s was significant but not evenly distributed.[46] While agriculture remained depressed, the wages of factory workers in the cities rose substantially, with a nine percent increase in the 1920s.[47] Families followed the increased salaries to cities, where work provided statistically higher incomes but was also monotonous in structure. However, the increased prevalence of machines in American society was paired with an optimism brought about by advancements in technology and increased wages. The conflict of whether or not to accept machines in American culture grew out of an increasingly regulated workforce that nonetheless fostered optimism by way of increased wages and technological advancements in the 1920s. As the

[44] Kyvig, 26.
[45] Bukatman, *The Poetics of Slumberland*, 4.
[46] David E. Kyvig, *Daily Life in the United States, 1920-1940* (Chicago: Ivan R. Dee, 2002), 210.
[47] Ibid.

workweek shifted and leisure time grew, one of the most popular forms of entertainment on days off was to go to the local cinema.[48] Within 1920s film, a subcategory was rising in popularity in American life: the animated short.

As the first sound cartoon, *Steamboat Willie* marked a change in the animation industry as it set the early parameters for the use of sound in marriage with the moving image. This was where Mickeymousing started.

Steamboat Willie

Directed by Walt Disney, with a score assembled by several of the staff, including Wilfred Jackson and Bert Lewis, the short animated film *Steamboat Willie* (1928) was seven minutes and forty-two seconds long and marked the beginning of Mickey Mouse's rise to fame.[49] This notoriety came about due to the current animation techniques used in the film as well as the character's association with new sound technology.[50] In his first sound film, Disney portrayed his mouse as a steamboat crewman who has trouble with his captain, brings aboard a cow and Minnie Mouse, starts a band with animals as instruments, and gets revenge against an obnoxious parrot. Though the anthropomorphic animals are the main characters, the cast is also made up of regular animals, animate whistles, a crane, and the steamboat itself. The machines are animated (or given life) in the same abstract

[48] Kyvig, 91.
[49] Walt Disney, *Steamboat Willie* (Celebrity Pictures and Buena Vista, 1928), animated motion picture, 7 min. 42 sec.
[50] Furniss, *Art in Motion*, 24.

style as Mickey Mouse. In this section I will show how the style of silent cartoons had been adapted with the introduction of sound through the technique of Mickeymousing to create an incredibly abstract product. Mickeymousing in the early sound cartoon was "the exact synchronization of music and action", which worked to emphasize an action to better explain what was happening on the screen to the audience.[51] While there are some conflicts with the place of the machine in this short, the debate does not show any attempt at a removal of the machines, as the 1930's shorts will with the fact that Mickey Mouse and the steamboat are created using the same abstract style of animation. The main machine of the short, the steamboat, is like the plot, flowing steadily down the river. The horizontal movement of the steamboat and the film's linear narrative relate back to an early form of the moving image, the moving panorama, which had a genre tied directly to the steamboat; the river panorama.[52]

The first mention of the word panorama was in conjunction with a new spectacle in London in 1792, which the *London Times* described as a "360 degree painting taken from an elevated vantage point and allowing a visual survey that extended from the fore or middle ground to the distant horizon."[53] The panorama quickly gained favor across the pond and was seen as soon as 1795. The first permanent panorama rotunda for New York City came into being in 1804 and

[51] Goldmark, *Tunes for 'Toons*, 6.
[52] Angela Miller, "The Panorama, the Cinema, and the Emergence of the Spectacular," *Wide Angle* 18, no. 2 (1996). 46.
[53] Ibid., 35.

displayed the *Battle of Alexandria* by Robert Ker Potter.[54] However, stationary panoramas were more of a hassle to move and to display than moving panoramas, leading to their eventual decrease in popularity.

Moving panoramas consisted of two large cylinders that, when unrolled, would display a large canvas, generally eight to twelve feet high and often hundreds of feet in length.[55] This display usually occurred on a stage. Here we see the panorama linking to the cinema and the railroad as they all created a passive viewer looking at a framed image in movement. With the moving panorama, Angela Miller claims that there is "not only spatial extension but the passage of time and the grand sweep of history."[56] She related this ability of the moving panorama to its popularity in the United States as she claimed its ability to show a progressing historical scene fed Americans' need to organize their history according to their imperial dreams. Of the many subjects for the panoramas, battles were among the most popular, along with landscapes.

Another genre that found fame in the late 1840s was river panoramas. These consisted of an unfolding visualization of the continuous journey up/down a river. These in particular showed the narrative possibilities of the moving panorama. River panoramas showed an "unfolding temporal process, showing the regional part in relation to the national whole."[57] A prime example of this is John Banvard's

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[54] Stephan Oettermann, *The Panorama: History of a Mass Medium*, trans. Deborah Lucas Schneider (New York: Zone, 1997), 313.
[55] Miller, "The Panorama, the Cinema," 39.
[56] Ibid., 36.
[57] Miller, "The Panorama, the Cinema," 46.

Moving Panorama of the Mississippi River. This immense project had thirty-nine scenes of the Mississippi river, and as Banvard travelled, exhibiting the panorama, he continually added to it until it totaled twenty three scenes of the Ohio River and fifteen of the Missouri River as well.[58] The panorama displayed views of the rivers as a passenger on a steamboat would see them. It gained popularity quickly after it was first exhibited in 1846 and was even moved to London, where it was shown in a special viewing to the royal family at Windsor Castle.[59] There was a resurgence of interest in the panorama in the early 1880s, but the moving panorama eventually fell to the moving picture.

Though Banvard passed away in 1891 and his *Moving Panorama of the Mississippi River* was lost in this time period, the legacy of it remained in America (as can be seen in the horizontal narrative of *Steamboat Willie)*. Disney was born in 1901, making it impossible for him to have seen it in person, however, he moved to Kansas City with his family when he was nine years old.[60] Touring major cities across the country, it is possible that the panorama, or one similar to it, came to Kansas City, especially considering the city's placement on the Missouri River, which was later added to the panorama, gave it a connection to the city.[61] This means that it was plausible that Disney heard much about the panorama while he lived in Kansas City. This tradition of narration found in panoramas such as Banvard's is

[58] Oettermann, *The Panorama*, 328.
[59] Ibid., 330.
[60] Gabler, *Walt Disney*, 19.
[61] Oettermann, *The Panorama*, 328.

clearly shown in the plot and setting of *Steamboat Willie* through its cycling background and linear narrative.

Once the title screen shifts to the first scene, the viewer is shown a depiction of American machines in the form of the steamboat. Paralleling Banvard's *Panorama of the Mississippi River,* the viewer sees this steamboat traveling down a river in a similar manner. However, animations provide a new relationship between the characters and the background. In the first scene, the landscape is static and goes on a continuous loop so that it looks like the steamboat is moving. The background appears as a moving panorama with characters and machines moving across it (figure 1.1). The movement of the steamboat also comes in the form of its smoke stacks, which alternate going up and down.[62] They squash and then stretch, letting out a puff of smoke accompanied by a sound enhancing the action.

During the title screen sequence, before the first scene even starts, the music has already started. The short was linked to a strong musical tradition. "Steamboat Bill" is the first song to be played and is the song that Mickey whistles while driving the steamboat, tying in his actions with the music (figure 1.2). The song was created by Arthur Collins, a singer born in 1864, who was deemed "The King of Ragtime."[63] His song "Steamboat Bill" gained further popularity after inspiring Buster Keaton's 1928 silent film, *Steamboat Bill Jr*. This animated film was often seen as a parody of Keaton's film, and the title would be recognizable to an audience as *Steamboat Bill Jr.*

[62] Finch, 39.
[63] Suisman, *Selling Sounds*, 144.

had come out that same year.[64] The integration of the music in the short is even deeper when looking at the first page of the *Steamboat Willie*'s continuity script, which states that it "would be best if the music was arranged so that the end of a verse would end at the end of the title . . . and a new verse start at the beginning of the first scene."[65] Even though Arthur Collins's voice is absent from the music, by following the beat we can see that this note from the script was put into the film, as the verses break up the transition from the title screen to the steamboat landscape. By looking at the script, we can see that there was a codependency between sound and image. [66] Disney's limits of early recorded sound as it simply worked to enhance actions, like text did in silent films.

Descriptive sound changes into an early attempt at atmospheric sound as the scene moves into the cabin interior, where the music softens, giving the illusion of distance, making it one of the few scenes where aural context is used.[67] The definition I use for descriptive sound is factually grounded or formative rather than normative. On the other hand, atmospheric sound relates to both the physical and the emotion as it can be related to outside conditions (such as weather) or it can relay a distinctive mood for the scene. Here Mickey makes his first appearance in the short in the form of animation strictly synchronized to sound, which was termed

[64]Christopher Finch, *The Art of Walt Disney: From Mickey Mouse to the Magic Kingdom and Beyond* (New York: Abrams, 2011), 38.
[65] Finch, *The Art of Walt Disney,* 39.
[66] Finch, *The Art of Walt Disney,* 39.
[67] Telotte, *The Mouse Machine*, 27.

Mickeymousing.[68] A visual example for this can be seen in the first scene of *Steamboat Willie* where every single movement mickey makes is either times directly with a sound effect or a specific part of the soundtrack. Mickey is "whistling the chorus in perfect time to music…his body keeping time with every other beet", during this scene.[69] Given its name by is close association with the Disney practice of synchronization and the mouse himself, Mickeymousing was a novelty in 1928 as the close synchronization the technique provided was immediately capitalized on by other studios.[70] However, as time passed, the term took on a negative connotation as it began to be associated with sound and visual elements that "were deemed too tightly matched," which highly abstracted any short in which they were used.[71]

One of the ways in which this technique was made possible was by the use of a bar sheet.[72] A bar sheet is a "chart for each musical action or phrase—every toot and whistle and melody—linking it to a description of the screen action it was to accompany."[73] When the chorus of *Steamboat Bill* comes along, it is Mickey Mouse who is whistling along to the music, with his foot keeping beat.[74] The viewer can hear and see that the tapping of Mickey's foot is keeping with the beat of the song, as is the ship's wheel, which makes a cranking noise with each turn. In the script for

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[68]Chion, *Audio-Vision*, 121.
[69] Finch, *The Art of Walt Disney,* 39.
[70] Furniss, *Art in Motion*, 91.
[71] Ibid.
[72] Esther Leslie, *Hollywood Flatlands: Animation, Critical Theory and the Avant-Garde* (New York: Verso, 2002), 27.
[73] Ibid.
[74] Finch, 39.

Steamboat Willie, the second scene states, "At the end of every two measures he twirls the wheel which makes a ratchet sound as it spins."[75] The music in the film is tied in with the animation itself as the movement, the life of the characters is controlled to a degree by this integration of sound. Yet, at the same time, the sound is also controlled by the animation as it is linked solely (except for the music) to the actions of the characters.[76] This codependency, while a bolster of animation techniques before the integration of sound, was also an early hindrance as it limited the ability of characters to express themselves subtly and to develop a natural style. This limitation was created by the abstract and exaggerated use of motion and sound in this period. The short relies on emphasized actions to create the plot and animate the character, which displays how the short is still entrenched in the abstract style during this time period.

To add extensive actions while sticking to a lower budget, the studio used several popular short cuts in cel animation. These shortcuts fall under the category of limited animation, which is a practice in which parts of a cel are reused in continuous frames so an animator does not have to redraw every frame. During Mickey Mouse's initial scene in which he is captaining the steamboat, his head remains in place throughout several frames along with his left foot. This allowed animators to focus on other aspects of motion in the scene as his right foot taps, his cheeks puff up as he whistles, his arms spin the wheel, and his torso swings back

[75] Ibid.
[76] Chion, Audio-Vision, 121-122.

and forth with the song. The stability of his head while the rest of his body moves is a key example of how early animation techniques, especially when coupled with a low budget, produced an abstract result.

As Mickey pulls a cord to sound the steam whistles, the film transitions up to the top of the cabin. With the whistles we see, as with the steamboat, a form of animated technology. James Lastra brings up this issue in his work *Sound Technology and the American Cinema.* "From one direction, then, the human served as a model and ideal for the mechanical. From the opposite direction, the mechanical began to threaten the very idea of the 'human' upon which it was based."[77] This will become an issue in later shorts when technology is given a different animation style than that of the main characters, separating their significance. However, these faceless characters are also tied to the music as their whistles adhere to the beat of the song. The puffs of steam they let out when they whistle are enhanced by the addition of musical notes in the steam. Sound in early animation works as an aural clue as to what is occurring on the screen. Coming right out of the period of silent films, where visual actions were exaggerated to explain the film to the audience, these sound shorts show reliance on these old techniques even though they no longer have to with the addition of sound. This is the first instance in the film in which sound itself is animated in the form of visual music notes.

[77] James Lastra, *Sound Technology and the American Cinema: Perception, Representation, Modernity* (New York: Columbia University Press, 2000), 218.

Mickey plays captain for a while until the real captain, (an early version of Pete, a stock character that often played Mickey's nemesis in the shorts) in the form of a large cat, takes back the wheel. In order to get Mickey's attention and pull him away from the wheel, Pete pulls on his torso and swings him around, which results in Mickey's torso stretching out to over three times its original size (figure 1.3). In order to repair his stomach, Mickey grasps his elongated torso and squashes it back into the area in which it once resided, where it returns to its original state (figure 1.4). The malleability of the animated figures shows how images in animation are in a constant state of mobility. Animism itself is giving life and movement to something, for Bukatman states that it "spoke to an inherent dynamism of form: everything was in the process of becoming something else; the world was mobile, in all senses of the word."[78]

This malleability of the characters is related to the technique of squash and stretch (seen earlier with the smoke stacks and Mickey's torso). Requiring the use of exaggerated forms, it is an animation style commonly used in Disney's early short films.[79] The motion of these characters in the beginning relied on this method (as it was the process most commonly used at that time), which allowed for animated characters to go through a bout of intense slapstick humor and come out unscathed. This is in relation to the main characters, the animals, and the machines (which would eventually become the main recipients of this style as naturalism began to the

[78] Bukatman, *The Poetics of Slumberland*, 107.
[79] Furniss, *Art in Motion*, 77.

take over the films). There are shifts over time in the ways that machinery is displayed in Disney's films. It is in his full-length films, where the slapstick humor is mostly gone, that characters take on a more solid (as opposed to rubber) state and Disney now shows a more naturalistic animation style. In these films a mouse might turn into a coachman, but a steamboat will not move on its own in abstract ways as squash and stretch is no longer in use at this point. This technique relies heavily on metamorphosis as it transitions one shape to another. Sergei Eisenstein termed this metamorphic quality used in Disney films and other animated shorts in this time period as plasmatic.[80]

When comparing the animation style of all the characters, it can be noticed that Mickey is given the same flexibility as the animals and the machines through the use of squash and stretch. A particular example of the movement of the steamboat is when it docks at the pier. When the steamboat lifts up its rear end and drops it to perfectly park at the pier, the movement is reminiscent of the scene in which the captain (Pete) stretches Mickey's torso. The plop movement of the boat uses the same techniques that can be seen in Mickey's elongated torso. The fact that both Mickey and the machine are given the same level of abstract animation and that their movements are so similar shows how conflicted this early period of animation was in the acceptance of machines. The steamboat is given the same quality of animation as Mickey, so its movements would appear as important as his.

[80]Oksana Bulgakowa and Dietmar Hochmuth, eds., *Sergei Eisenstein Disney*, trans. Dustin Condren (Berlin: Potemkin Press, 2011), 20.

However, this equality is challenged by the fact that the boat is being driven by another character, which places man in control of the machine during the short film.

The sound that accompanies this scene both adds to and conflicts with the actions. As the captain pulls Mickey's torso, the action is accompanied by a sound similar to a rubber band being pulled (the sound is called ratchet in the script).[81] This adds a physicality to the idea of stretch which, though not following earthly laws, seems to support the abstract laws of this fantasy world. However, conflict between sound and image arises when Mickey tries to put himself back together. Here the sound of a torso being squashed back into place is a drum. In this instance, the sound provided does not add any aural context to the action described.[82] It is not natural sound that, through association with the action, enhances the sound through reference to reality. Instead it merely exaggerates an action in an abstract manner. After rearranging himself, Mickey falls down the stairs, gets stuck in a bucket, and meets the only speaking character in the film, a parrot.

The film consists of mostly nondiegetic sound, which is "sound whose audiovisual source is not the space-time of the scene depicted onscreen."[83] Examples would be voice-over narrators or musical accompaniment. This displays the reliance on the soundtrack before the introduction of main character dialogue, which will be a layer of naturalism later on. Nondiegetic sound makes up most of

[81] Finch, *The Art of Walt Disney,* 39.
[82] Telotte, *The Mouse Machine*, 27.
[83] Michel Chion, *Film, A Sound Art*, trans. Claudia Gorbman (New York: Columbia UP, 2009), 480.

Steamboat Willie, but there is a specific instance of diegetic sound, which is sound that the viewer is led to believe the characters can hear.[84] In *Steamboat Willie* the parrot is the only character who speaks. The parrot enters the scene to speak in two instances: after Mickey escapes the bucket and at the end when Mickey is forced to peel potatoes in the galley (figure 1.5). His words, however, are hard to distinguish. The original exposure sheet to the scene for the film states that he says, "Hope you don't feel hurt big boy," when he enters the two scenes.[85] After the second time, instead of throwing a bucket at the parrot in retaliation, he throws a potato and sends the bird crashing into the river. The bird then expands it dialogue and says "Man, Overboard!" and then Mickey laughs, ending the film.

It is of interest that an animal known for its ability to repeat what its owner says (a sort of living recording device) is the only talking character in the film. Though given a strong tool of possible naturalism, a voice, which Mickey does not have, the parrot appears abstracted. Like a phonograph, a parrot merely hears a sound and then repeats it. This recording is not the parrot's own voice or personality but simply a mechanical repetition of someone else's. Here we see the conflicting place of the machine in the early Mickey Mouse shorts as it would appear that machines are being naturalized by an animal taking their place, but at the same time, the animal is also being mechanized by its repetitive and abstract nature.

[84] Chion, *Film, A Sound Art*, 474.
[85] Walt Disney, *Steamboat Willie.*

Another character that acts as a type of sound device/machine is the goat who eats Minnie's music sheet for *Turkey in the Straw.*[86] Here again we see music come to life (as it did with the steam whistles), a common occurrence in the short, as it leaps from the sheets, escaping the goat's mouth and hitting the deck of the boat (figure 1.6). This occurs during the fight between the steam whistles. As they each let out a whistle, musical notes accompanied their puffs of steam, giving form to music. With the goat the interesting thing is that the music is actually given physical weight. While the musical notes from the steam whistles had just floated in the air, the notes from the sheets hit the ground with force, giving them a presence in the short. The notes are given a physical presence through animation and synchronized sound. As another instance of abstraction in the short, we can see that the strict synchronization of image and sound exaggerates movement and sound in an unnatural manner. The sound goes beyond the close association with image in this scene, which makes it so tied with actions that it almost seems tangible, actually taking on a physical presence in the short. This moves past the abstraction of Mickeymousing, which held onto traditions from old silent films where musical cues were needed for live bands, and shows how the short is marrying old and new techniques in a highly abstracted manner. Once the goat has finished his lunch, the film will soon shift its musical soundtrack from "Steamboat Bill" to "Turkey in the Straw."

[86] Finch, *The Art of Walt Disney,* 46.

When Minnie realizes that the goat is eating her music, Mickey attempts to grab the guitar from the goat. But the goat wins the tug of war with Mickey, and the goat swallows the guitar. When Minnie is distressed about missing the boat as well as finding her belongings at the mercy of a hungry goat, she shows her agitation by the use of dashes appearing in a circle around her body (figure 1.7). These dashes appear as if they are being emitted from Minnie like rays from the sun. This depiction of distress is used by other characters in the film as well, making it a common depiction of emotion in the film. By the use of these lines, emotion is given to objects that are unable to express it in other ways.

It appears as a kind of notation, which, with the added image of the lines emanating from a character whose mouth is open wide, indicates the presence of a sound. This is not to claim that silence cannot also display emotion or context, as will be seen when it is later employed in *Plane Crazy.* As sound is just being integrated into animation, it is interesting where the animators chose to add sound and where they kept it out. The choices seen in this short reflect an old tradition of gag cartoons that the animators were pulling from. When these shorts were silent, the depiction of a character's intense emotions, a hard thing to represent when animators made on where to integrate sound and where to keep it out reflected the limitations not only of recorded sound but of animation techniques in this period. It seems this old practice of notation would stay for a while. It is especially useful for objects that lack faces. This is seen when the steam whistles realize one has missed his queue and when the hook realizes it has lifted up Minnie's skirt and then

proceeds to pull it back into place. It is a sign not only of emotional agitation but physical contact that cannot be accurately displayed (using this level of animation) without it. With this limited animation, the exaggeration of emotions and actions in abstracted ways is necessary for plot developments as the studio has not advanced enough to display these scenes in a subtle and naturalistic manner.

When the goat had devoured the music sheet, Mickey opens its mouth and Minnie cranks its tail, turning it into a living phonograph (figure 1.8).[87] It is of interest that instead of having an actual phonograph aboard the ship to play, Disney uses an animal as a machine. This puts machines in a conflicting place with animals in the shorts, as they are shown in anthropomorphic fashion with same animation style as the mouse but are at the same time naturalized by the use of animals in their place.

The conflicting place of machines in society could be seen in the differing opinions on the use of mechanical sound in society during this period. There were varied viewpoints on the integration of these new machines into American culture, and two groups were at the forefront of this: the boosters and the purists or "humanists."[88] The boosters viewed phonographs as "a vehicle for positive social change" while the purists felt that objects like player pianos were completely "incompatible with the nature of music as art."[89] While the goat was the only animal

[87] Telotte, *The Mouse Machine*, 28.
[88] Suisman, *Selling Sounds*, 242.
[89] Suisman, *Selling Sounds*, 242-243.

turned into a musical machine, several other animals were turned into musical instruments. Here we can see the transformation possibilities in animation as a duck is turned into a bagpipe, a cat is able to produce a siren-like sound, and a pig becomes a wind instrument.[90] Mickey plays xylophone riffs on the cow's teeth as well.[91] The instrument used here is of interest because "the xylophone was a much-used instrument in the soundtracks of these early shorts, providing good opportunities for visual puns; almost any more or less regular group of solid objects—the ribcage of a skeleton for example—could double as a xylophone."[92] Here the sound not only drew from film and musical traditions but from the tradition of animation gags.

After Mickey finishes with a bow, the final scene of the film brings the return of Pete, who stops the music. He brings back the work and ends the play. Mickey attempts to escape, but Pete grabs him and throws him into the kitchen, where a potato bin is located. Mickey is left in the kitchen to peel potatoes. Here we see him puff up in agitation (figure1.9). He seems to be letting loose a sigh but instead the sound that escapes his lips is a whistle. This instance parallels the whistles on top of the steamboat, which also puff up and let loose a whistle from their metal lips. This, once again, places Mickey in relation to a machine, another sign of their conflicting place in the shorts as at this time Mickey takes on the characteristics associated with

[90] Telotte, *The Mouse Machine*, 29.
[91] Finch, *The Art of Walt Disney,* 50.
[92] Ibid.

a mechanism. The steam whistles also release a cloud of air filled with actual musical notes, but when Mickey whistles, including in the first scene, the sounds he produces are not animated into musical notes. This is because he is directly connected to the musical soundtrack in even his own breathing. The script in scene two calls for Mickey to take "in breath at proper time according to music."[93] This animation of sound into tangible musical notes only occurs with animals that are transformed into musical instruments and the parts of the boat that are given life. This tendency shows an allocation of more abstract principals to the characters who do not represent humanity, though this separation is still slight.

While both the characters and the machines are animated, the way in which this is done and the sounds used to describe their actions separates them. Mickey is so integrated with the sound that his body literally moves along with it. This turns him into a conductor of sorts, giving him authority over musical instruments and machines. While the goat internalizes the music, it is only through Mickey's inspiration that it is able to be externalized. Mickey throughout the *Turkey in the Straw* scene, recognizes and releases the musical potential for every found object and animal that he sees.[94] The machines are not given this same level of autonomy but react to the actions of Mickey (with Mickey pulling the cord for the whistles and telling Minnie to crank the goat's tail) and also Pete (who is the one driving the ship once Mickey goes back down to the deck). The ways in which machines are

[93] Ibid., 39.
[94] Telotte, *The Mouse Machine*, 28.

personified but then controlled or represented in the forms of animals, along with the very integration of sound into animation, show a conflict in the acceptance of new technologies in American society. As technologies were pushed into the shorts, some were naturalized as animals took these machines into themselves, transforming themselves into imitations of technology in animal form. Yet at the same time, some machines were given the same movements and animation styles as Mickey, further conflicting the relationship between man and machine in the short films. This replacement of actual technology with animals relies on the mainstream knowledge of these new technologies that the cartoons reference (like the goat and the phonograph) but also presents the conflict over their integration into American society as the viewer is only shown a reference and not the actual machine.

In this short, Disney is grappling with the new addition of sound into his films. This is apparent in how he packs as much of it in as he can. He is also playing with new narrative possibilities as he pulls from the tradition of the panorama and ragtime music to add to the story of his films. Yet as he is conjoining conventional ways of doing things with new technology, conflict arises with the question of how anthropomorphic machines should be integrated into the shorts. Disney will continue to adjust to the new possibilities of sound and develop the studios' animation style, as we will see in the short film *Plane Crazy.*

Plane Crazy

I will be analyzing the short film *Plane Crazy* was rereleased with sound in1929.[95] Running six minutes in length, the film shows Mickey as he attempts to follow his hero Charles Lindbergh into the skies with catastrophic results. *Plane Crazy* was originally created in 1928 as a silent animated film. It was only after the success of *Steamboat Willie* that sound was added to previous silent projects, including *Plane Crazy* and *The Gallopin' Gaucho*.[96] The narrative structure of the film is affected by this different relationship between animation and sound as well as the different uses of perspective caused by the presence of the plane. Though Mickey is the main character of this short, the attention is on the planes as they are not only Mickey's focus but also the cause of chaos and the object which brings the viewers themselves into the narrative. The place of the plane in society, however, is contested throughout the film as it is praised as a mechanical marvel and yet humanized, leaving the way it compares with Mickey different than that of the steamboat in *Steamboat Willie*. Now shifting that caused problems as the steamboat served as a narrative device, while the plane works as a constant antagonist. In this section I will analyze how *Plane Crazy* built off of the Mickeymousing of *Steamboat Willie* but also began to depart from it in the use of sound and motion technology,

[95] Walt Disney, *Plane Crazy* (Celebrity Pictures and Buena Vista, 1928, sound version 1929), animated motion picture, 6 min.
[96] Gabler, *Walt Disney*, 125.

leading to a new development perspectival views and a new relationship with the place of the machine in the shorts.

The film was originally screened in May of 1928 but did not get a mass distributor.[97] It was eventually re-released in 1929 with the addition of sound. Though it did not gain popularity with the public until sound was introduced, the plot focused on a popular American icon. In 1927, Charles Lindbergh made a solo flight from New York to Paris.[98] He became the first man to be in New York one day and Paris the next. He was a symbol of American mobility and a representative of the possibilities that new transportation technology provided. It is this Machine Age icon that Mickey attempts to emulate in *Plane Crazy*. However, there is conflict over the acceptance of this new technology in the short.

Unlike in *Steamboat Willie*, the title screen is not punctuated with a soundtrack. It's only in the first scene when the characters are introduced that the compilation of popular songs and odd sounds begins. The place of sound in relation to animation is immediately different in this short when considering the way in which it was created. *Steamboat Willie* was completely codependent work that relied on both animation and sound to give its characters life and move its panoramic narrative along. Since he was working with an existing short, Carl Stalling went about composing the soundtrack for *Plane Crazy* in a completely different manner. He stated that he had "the cartoons showing in the theatre where I

[97] Gabler, *Walt Disney*, 114.
[98] Ibid., 112.

worked, so that I could decide what music would be appropriate."[99] The production process of the film did not parallel that of *Steamboat Willie*, in which actions in the script were immediately assigned a sound. An example of this can be seen in the script when discussing the blowing of the steam whistles: "When he finishes last measure he reaches up and pulls on whistle cord above his head (use fife to imitate his whistle)."[100] In contrast, the soundtrack in *Plane Crazy* seems to be in a game of catch up with the animation and yet also a progression in the narrative abilities of sound. Unlike in *Steamboat Willie*, a new use of sound is present in the form of the newly established genre of cartoon music, which, though a new technique in animation sound, is still highly abstracted as it is still synchronized not only with actions but also with context and plot.

To analyze the interesting ways in which sound interacts with characters and assists the narrative in this film it is important to note what made up the soundtrack. Carl Stalling composed the soundtrack by bringing in a number of popular songs of the time and patching them together in a way that he believed fit the film.[101] The first scene of the short pans out from a cow's behind as we are given the illusion of it moving forward with its back to the viewer. The setting is a compilation of various farm animals and woodland creatures who are hard at work

[99] Daniel Goldmark and Yuval Taylor, eds., *The Cartoon Music Book* (Chicago: Cappella, 2002), 61.
[100] Finch, *The Art of Walt Disney,* 39.
[101] Goldmark, *Tune for 'Toons,* 39.

attempting to assemble a plane. The backdrop for this is a barn, behind which is a country landscape.

Unlike *Steamboat Willie*, which only contained two songs and several noises that helped to further emphasize actions, *Plane Crazy* contains a plethora of songs and sounds. The score featured a catalog of several familiar public domain tunes, including "Ruben, Ruben," "Yankee Doodle," "Dixie," "Hail to the Chief," "Oh Where, Oh Where Has My Little Dog Gone?" and "Rock-a-Bye Baby."[102] Songs like "Ruben, Ruben," "Yankee Doodle," and "Dixie" were traditional American folk tunes while "Oh Where, Oh Where Has My Little Dog Gone?" and "Rock-a-Bye Baby" were popular nursery rhymes.[103] Lastly, "Hail to the Chief" is the official Presidential Anthem of the United States.[104] This period saw the beginning of a catalog of songs that American animators pulled from for soundtracks. The types of songs used to describe certain scenes in an animated short were called cartoon music. This canon of music would continue on all the way to present day, where you can still see a slowly falling character and hear "Rock-a-Bye Baby" in the background. Cartoon music remains abstract and quite similar to Mickeymousing as it exaggerates an action or emotion in the film. Along with this quilt of songs were numerous sound effects that were added to the short. One such sound effect is actually the first sound of the film, a cow's moo.

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[102] Ibid.
[103] Ibid., 40.
[104] Ibid., 39.

After seeing the animals in their comedic attempts to complete their work on the plane, the screen moves into a close up. This close up is framed circularly, paralleling it with the film technique, fisheye (figure 1.10). It is in this scene, in which Mickey attempts to change his appearance to match that of Lindbergh, that we see the addition of isomorphism. Michel Chion defines isomorphism as "a similarity of movement between the sound and the movement it represents."[105] An example of this in early animation might be the sound of a character walking up a flight of stairs being accompanied by an ascending musical figure. In this case what is being imitated here is the actual ascent as opposed to the sound of the ascent. Chion continues on to say that "animated film is the privileged province of this sound-image relation."[106] In *Steamboat Willie*, this abstract style occurs as Mickey turns the pages of the book. Instead of hearing the sound of flipping pages, the audiences hears the bow of a violin drawing across the strings in conjunction with the flipping pages. What is compared here is the movement of the pages and the bow across the strings by the abstract use of sound.

In *Plane Crazy* most of the sound effects are abstract. This can be seen in Mickey's close up when he licks his finger to turn the page of the book and the sound is that of a cowbell. This adds to the greater abstraction of *Plane Crazy*, which is not only present in its use of animation but in the lack of illusionary qualities in its sound effects.

[105] Chion, *Audio-Vision*, 121.
[106] Ibid.

After finding the desired image of Lindbergh in his "How to Fly" book, Mickey imitates his appearance and then moves over to the plane. When Mickey reaches the plane, the choice of soundtrack adds to the interactions. While he is shaking hands and waving at the crowd, "Hail to the Chief" is playing. The part which comes next in the soundtrack is another innovation seen in this film: the use of silence. *Steamboat Willie* had a constant soundtrack, but with *Plane Crazy*, Carl Stalling added periods of silence with additions of some sound effects to create a sense of tension before a big event (like during Mickey's first take off as the dog is being wound up and the plane flips and rolls until finally crashing into a tree).[107] This shows a slight move toward naturalism as it lessens the abstract synchronicity of the sound that Mickeymousing developed.

After the crash, the dog engine and Mickey Mouse emerge unscathed, while the plane is in a heap of rubble. Two important elements in this scene are the use of an animal as the heart of a machine, and the immortality of cartoon characters. With the increased integration of technology into American life as well as the innovations in animation and sound that Disney was quickly adapting to, the use of an animal as opposed to a mechanical engine is of note (figure 1.11). The plane is only animate once it is in flight (or moving, since it does not actually get off the ground), it is only able to move once the engine is added and another character spins the propeller. Scott Bukatman found that an interesting facet of animation was that "animated

[107] Finch, *The Art of Walt Disney,* 39.

drawings provided something that the stop-motion objects and trick effects did not: character. Not only did an image move, but the animated figures seemed to possess personalities—they were not simply lively but living."[108] Bukatman goes on to define characters in animation as "disobedient machines" as they break from the assembly line process of animation with their exuberant nature that is not easy to contain.[109] While Mickey and the dog engine have character, the faceless airplane has life but no character, unlike the steam whistles in *Steamboat Willie*. This is a telling example of the different lives given to different characters in Disney's shorts as the faceless plane is essentially lifeless until a personified dog becomes its engine.

The first plane hits a tree with a large crashing sound and breaks into pieces. In reality, if the plane was in such bad shape, then the pilot and the engine would be injured as well. However, this is not earth but a cartoon fantasy world with different laws. One of those laws is that machines can be destroyed and characters can't. Mickey is essentially depicted as "indestructible, one might almost say immortal." Mickey's rubber hose body seems impervious to harm after the first crash. His abstract body bounces away from the crash with an isomorphic sound resembling a bat hitting a baseball (figure 1.12). Isomorphic sound as defined by Michel Chion creates "a similarity of movement between the sound and the movement is represents."[110] Even the sound of his body hitting the ground displays his immortality as you don't hear bones crunching but merely a sound that reinforces

[108] Bukatman, *The Poetics of Slumberland*, 5.
[109] Ibid., 6.
[110] Chion, *Audio-Visual,* 121.

the abstractions of his body, removing him from the rule of natural laws and physical harm. Jayne Pilling argues that the character rubber hose–style consists of the following:

> An assemblage of drawings of rubber-like tubes: two for the legs, two for the arms and a bigger one for the trunk. The head was a resilient ball and thus one of the many circles (e.g. also the palms of the hands, the belly and the ears) which facilitated the task of the cartoonist.[111]

Though the plane moves in a fluid, almost rubber-like motion quite similar to Mickey's gestures, its animation style does not retain that resilience due to the object it depicts. It is only the living, not the lively characters that manage to escape unbruised (unless the bruise is for comedic effect).[112] This scene displays an early separation between the depiction of man and machine in the shorts.

Moving on to his second plane, Mickey constructs this one out of a Model T, stretching and pulling on pieces that appear like rubber or putty in his hands (figure 1.13). Mickey's love interest, Minnie, arrives with a good luck horseshoe and joins him in his second attempt at flight. It is on this flight that the animators displayed the new visual perspectives that the invention of the plane had afforded. At this time the plane was a monumental new form of technology and transportation as it had the "ability to reshape the most basic element of human experience—its physical

[111] Pilling, *A Reader in Animation Studies*, 114.
[112] Bukatman, *The Poetics of Slumberland*, 5.

link to the ground below."[113] With this freedom of flight came new possibilities of vision and perspective.[114] The fact that Disney was playing with this new ability is seen from the second the plane begins to chase the cow (later developed into a stock character known as Clarabelle the Cow). A one point perspective is established with the center point being directly in front of the cow (figure 1.14). The feeling of depth is further enhanced by the hills along the road. The lines of the hills and the lines of the road converge on that center point in front of the cow and create a basic image of depth and perspective. Depth is also enhanced by the trick of making the audience think that the plane is catching up with and then passing underneath the cow. This was a camera trick that was used "frequently in *Plane Crazy,* characters move to or from the "lens" in wide-angle distortion while the background also rapidly recedes or approaches."[115]

After Minnie and Mickey take off, the plane gets out of control and he falls out. Mickey finally manages to get back aboard the plane, after a few failed attempts at grabbing onto the cow's udders to pull himself up. Once there, the wheel comes off and the perspective changes drastically. The plane and characters disappear as the film puts the viewer in the cockpit as the plane bounces off the telephone poles and finally flies off into the clouds, where Mickey and Minnie take the reins again. The depth in this scene is created using the same type of road as before to create

[113] Jason Weems, "Looking Up, Looking Down, Looking Out: Visual Angles on American Art." *American Art* 25, no. 1 (2011): 2–10. JSTOR.
[114] Weems, "Looking Up, Looking Down," 3.
[115]Donald Crafton, *Shadow of a Mouse: Performance, Belief, and World-Making in Animation* (Berkeley: U of California, 2013), 171.

perspective. However, the feeling of movement, the way in which the audience twists and turns with the plane or with the line of vision that follows the plane is due to unbalance (figure 1.15). Don Graham, who was a director of the new expanded the Disney Studios' classrooms, used the term to describe a feeling of movement generated by a sense of disturbance.[116] As the perspective shifts and depth is added, viewers follow the line of sight as they try to mentally balance the scene, resulting in a feeling of movement.[117] This feeling of movement is emphasized and yet also abstracted by the sound effect used in this scene. The same sound is used when the plane bounces off the poles, flies up into the air, and comes towards the screen. This sound is similar to that of a slide whistle, a high-pitched sound that is lengthened and intensified according to the actions in the scene.

While this sound emphasizes the movements of the plane, it also works against this new integration of perspective and movement as this sound is isomorphic and does not add to the illusion of a plane bouncing off of poles (when the plane hits the poles the whistle merely raises in pitch). This scene brings the conflict of the place of machines in film and society to a new area as the perspective places the audience inside of the cockpit. So while being transported perceptivally by a cartoon plane, they are also transported by the technology of animation itself and the camera which projects the film onto the screen. The technological aspect of

[116] Crafton, *Shadow of a Mouse*, 155.
[117] Ibid.

animation, contrasted with the place of machines within the plot of the short films, is something that Disney's shorts constantly grappled with.

This is one of the ways in which the relationship between the audience and the animated film had changed between *Steamboat Willie* and *Plane Crazy*. As the viewers are placed into the cockpit, they are given a different perspective of the film (figure 1.16). The addition of this new perspective creates a new narrative style as the audience now has a part within the film. As an abstract cartoon world, it need only represent not imitate reality. Also, it is important to note that isomorphic sounds, while not the sounds a viewer would expect with a specific action in reality, are still sounds that the viewer has heard. As such, though they might not relate to the action portrayed in the short when seen in reality, they do create an indirect parallel as the viewer will recall the sound. The ability of the animated short to appropriate different connections the viewer has (whether visual or audial) to the laws of an animated world allows for a deeper connection between the viewer and the film. Bukatman describes the escape from this abstract world "in an early Disney cartoon like *Plane Crazy* comes at the end, when the film is over and the real reasserts itself. Until then, one is immersed in an animistic world of metamorphosis, flexibility, and possibility."[118] This new combination of technology creates an even more immersive viewing experience than the panorama, as it places the audience in a new relation to the screen.

[118] Bukatman, *The Poetics of Slumberland*, 205.

Back in the sky, Mickey finally steadies the plane and then sends it through several loops (even appearing to twist the plane into a knot at one point) to win a kiss from Minnie. As Minnie jumps from the plane, Mickey loses control and crashes his second plane of the day. These two planes, however, were quite different, even though their movements were similar. The first plane's life was very short as it quickly crashed into a nearby tree. On the other hand the second plane stays around much longer, which allows it to unleash chaos upon the farm and nearby roads. The destruction of the second plane is more dramatic and brings in the new narrative and sound techniques present in *Plane Crazy.* As the viewer sees the plane spinning as it nosedives, the screen cuts to a vertical viewpoint of the landscape below, which is another perspective only possible due to the innovations in aerial technology (figure 1.17).[119] Another strong difference between the two planes is their hearts: one is animal and one is mechanical. Instead of a wind-up wiener dog as an engine, the second plane uses the engine (and transformed body) of a nearby Model T. The sounds they create also differ, as the first plane's take off is devoid of music and the only sound effects are a whirring noise as it spins around, scratching noises as the wings of the plane scrape the ground, a crash as it hits the tree, and the final clunk as Mickey lands nearby. The second plane's windup and the chaos that ensues from it are highlighted by the soundtrack, which in this scene consists of a mix of "Yankee Doodle" and "Dixie." Though the second plane is the more mechanically sound one

[119] Weems, "Looking Up, Looking Down," 3.

(without the addition of the wiener dog) and does eventually get off the ground, it causes more problems for Mickey than the first one. It is also of interest that the more technological form of transportation is shown as being more hazardous to the barnyard animals and the nearby country roads. These two different planes show a conflicting relationship between the acceptance of new technology and people's inability to comprehend it on its integration into American society.

Though animated before *Steamboat Willie*, *Plane Crazy* shows a more innovative animation style due in part to the views provided by the presence of a machine in the film. It is the plane that allows for new viewpoints that humanity would never have been able to see, both in American society as well as in the short film itself. The presence of a machine then actual drastically changes the perspective of the film, while its presence at the same time causes havoc for the characters, a main sign of the conflict between man and machine in the shorts in this time period. The use of perspective and isomorphic sound bring a new depth to the narrative while at the same time abstracting the film. In a period where culture was changing drastically with the move to the cities, the changing workplace environment, the new forms of mobile technology, and the increased amount of leisure time, Americans were being pulled in different directions. Sound itself in the short seems to represent shifting possibilities as it moves from descriptive to atmospheric to isomorphic (going from naturalistic to abstract). The change in the narrative style allowed for the audience to be even more engulfed in the illusion of the screen than in the moving panorama. As planes crash to the ground and mice jump out of them

unharmed, a hierarchy of life is starting to be established, which will foreshadow a strict allocation of different styles of animation to different characters.

Conclusion

With the new combination of recorded sound and animation, Disney grappled not only with the multiple uses for these two subjects but also with the new narrative possibilities they provided. Disney borrowed from the deep history of the panorama, and particularly the moving panorama's legacy in the United States, which built a strong narrative tradition in America. *Steamboat Willie* built on this narrative structure and expanded it with the addition of sound. The invention of synchronized sound led to the popularity of Mickey Mouse and even led to the creation of the term Mickeymousing in relation to the sound techniques used in Disney's early Mickey Mouse shorts. Only a year later, technology continued to evolve, and *Plane Crazy* embraced the new possibilities of recorded sound in narrative. As the invention of airplanes gave the world a new outlook on vision and perspective, Disney toyed with these new angles in his short as he displayed a vertical view of a farm which is devoid of depth due to the angle, challenging the audience.[120] These new perspectival techniques also worked to entrench the audience even more in the abstract world that the shorts established. Yet even as all

[120] Weems, 3.

these new forms of technology greatly influenced the shorts, they can also be seen inside them in animated form.

As sound and motion technology developed over time, so too did the place of the machine in Disney's short films. These machines, though animate, started to have a lower quality of animation than Mickey Mouse. Among the machines with active personalities are the three steam whistles in *Steamboat Willie.* As they interact with each other they move and even show lines of distress when the last whistle misses its cue. They even expand the opening where they emit the steam in a way that mimics a mouth with a shocked expression. While their structure does resemble a face, with the liplike opening, it is not until his later films that Disney begins to give his machines faces of their own. This was an attempt to further humanize the machines in a period when their place in society was not just met with conflicting feelings, as in the 1920s, but was strongly opposed.

Chapter Two: The Separation of Man and Machine in the Allocation of the Abstract and Natural Styles

Moving into the 1930s, the studio would experience a dramatic shift in animation style as new technology and the cultural upheavals brought about by the Great Depression made their presence known in the short film. As the conflict of man versus machine shifted to a strong rejection of machines with the loss of jobs to them and the robot hysteria of the 1930s, the place of living machines in the short came into question. As the naturalistic style developed in the studio, the living machines with their abstract existences became an obstacle for that naturalism in the shorts. The two short films I will discuss in this chapter, *Traffic Troubles* and *Mickey's Mechanical Man* will show a growing separation in the allocation of styles, which displays the eventual pushing out of living machines. This will be seen as machines are given the old, abstract and less labor-intensive forms of animation while Mickey is shown using the newest naturalistic techniques.

As new technology made its way into the lives of American people, new innovations were occurring at the Disney Studios, in part due to their improved financial position along with the influx of experienced New York animators.[121] The early 1930s witnessed many integral changes in the studio, which led to an evolution of naturalism. This progress was eventually made possible after several

[121] Bob Thomas, *An American Original: Walt Disney* (New York: Hyperion, 1994), 109.

switches between film distributors until one with a higher budget to support the continued innovation of animation and sound techniques was found and finally solidified its contract. The new ability to create higher-quality animation and recorded sound began a shift away from the abstract style of comedy and chaos, leading to a more naturalistic style of animation and recorded sound. Now, when I say abstract sound and animation, I refer back to my definition in the introduction and the characteristic of referencing reality but not working to parallel it, which, by contrast, the naturalistic style does.

As the style of the studio kept developing the issue now was where its continued growth would lead the studio in the 1930's. While the Great Depression took hold of American culture and the debate of man versus machine reached new heights with the continued integration of technology into everyday life, the studios' financial freedom grew resulting in the continued development of motion and sound technology and with it, a naturalistic style.

Within a period of only two years, drastic cultural shifts were occurring outside of the studio as the Great Depression began in late 1929. With this significant economic fall came a great change in what consumers purchased, and yet the cinema remained a popular leisurely past time. The technological and economic growth in the 1920s led to the spreading of innovations, such as the automobile, throughout America. In the 1930s, due to the past growth of the previous decade, these innovations were even more prevalent in American culture than ever before. However, there was a cultural contradiction in the form of technology's larger

presence but inability to pull America out of the depression. A source of concern for the American people in the past decade, the worry turned to paranoia in the 1930s as jobs disappeared and machines continually replaced them. However, this fear was contrasted with the optimistic hopes for the future created by further integration of machines into everyday life that was displayed at the Chicago World's Fair of 1933.[122] This led to mixed feelings on the place of machines in society, which was made even more present in Disney's short films of the 1930s.

The plots of the two shorts I will discuss in this chapter, *Traffic Troubles* and *Mickey's Mechanical Man*, focus on the automobile, which creates chaos in the film and on American roads, and a robot, the representation of the possible future of the machine surpassing mankind. The abstract style given to these machines, when contrasted with the naturalism given to Mickey and Minnie, show that the conflicting place of machines in the shorts of the 1920s had shifted into a strict separation of styles. The obstacle that living machines posed to naturalism would foreshadow the studios' move away from the black and white shorts of Mickey Mouse toward the increased potential of naturalism that was possible in Technicolor, full-length feature films.

[122] Cheryl R. Ganz, *The 1933 Chicago World's Fair: A Century of Progress* (Champaign.: U of Illinois, 2012), 3.

Cultural and Technological Shifts That Lead the Studio Away From Abstraction

As the economics of America shifted between 1929 and 1934, so too did the internal affairs of the Walt Disney Studios, which would lead to a shift in the 1930s towards a naturalistic style in animation and sound. Of particular note were the changes in this short time frame, between three different distributors, who all allowed the studio different amounts of creative freedom. With the new contract that Columbia established, Walt Disney hoped that this new distributor would "afford enough financial independence so he could devote full energies to improving the quality of the cartoons."[123] However, financial troubles still found their home in the Walt Disney Studios, and his new distributor did not give him the amount of artistic freedom with the shorts that he had expected.

It was the labor cost that resulted from experimenting with higher-quality animation that had Walt Disney constantly on the brink of financial crisis, not just his distributors. It was under the new contract with United Artists that Disney began to branch out in his animation in the form of the Silly Symphonies, in which he also began working with color. These ended up being practice trials for his full-length animated films.[124] The Silly Symphonies were a series of animated short films released between 1929 and 1939 that, with the integration of sound, showed animation as a whimsical accompaniment to a musical score. As distributors and the

[123] Thomas, *An American Original*, 103.
[124] Barrier, Michael, *The Animated Man: A Life of Walt Disney*. Los Angeles: University of California Press, 2007, 89.

financial situation of the studio changed during this period, so too did their animation style and development of recorded sound.

As the Mickey Mouse cartoons became more successful, the studio had an influx of new employees to meet the increasing demand for more shorts.[125] With all this new talent coming in, Walt Disney began to set increasingly high standards for the Mickey Mouse cartoons and the Silly Symphonies."[126]

Three techniques that were integrated in the studio to improve the animation quality of Mickey Mouse cartoons in the early 1930s were pencil testing, cycle testing, and the use of storyboards. Pencil testing was first used to test an "isolated action within a scene when the animator came up against some new problem and wanted to see how effectively—or otherwise—he was handling it before going on."[127] The second method of testing cycles, which often consisted of a background that repeated to create the illusion of movement, "was useful since a mistake on a cycle would be seen on the screen over and over again."[128] Lastly, there was the introduction of storyboards, which at the time consisted of a large fiber board, four feet by eight, on which sketches were pinned.[129] This allowed the animators to see how actions progressed and adjust different sketches until they

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[125] Ibid. In the 1930s, veteran animators and story men left the New York cartoon studios to join the Walt Disney Studio at Hyperion. Among them were Dave Hand, Rudy Zamora, Tom Palmer, Ted Sears, Bert Gillet, Jack King, Web Smith, and Ben Sharpsteen. Along with the loss of Ub Iwerks to Pat Powers, the studio also lost Carl Stalling to another studio. The music department was taken over by another new addition, Bert Lewis. Frank Churchill also joined the studio as a pianist-composer.
[126] Thomas, *An American Original*, 109
[127] Barrier, *The Animated Man*, 74.
[128] Ibid.
[129] Thomas, *An American Original*, 111.

could see a complete story play out on the board. These techniques lead to possibilities of a more naturalistic style as the movements could be seen and then reworked as much as was needed, allowing the studio to shift from the trend of relying on squash and stretch to depict movement and begin to add volume and weight to their characters. However, even with these improvements in technique coming into the studio, their financial limits under Powers and Columbia led to issues with the final product. Throughout 1930 and 1931, the cartoons that emerged from the Walt Disney Studios were riddled with glitches. These errors, such as when a "character departed sharply from its standardized appearance for a scene or two," would have been easy to spot, but they were not fixed due to the repair being too expensive.[130]

In 1932, after Walt Disney had switched to United Artists, he began to give new orders to his animators, which would lead to a move toward naturalism. He had the artists begin to shift away from the abstract rubber-hose animation, which was basically "action that curved excessively in the direction of the movement."[131] This technique had been overused in the animation industry during the early 1930s due to its ability to suppress the jitter that was always a hazard when a stiff vertical line animated across the screen.[132] This was a result of limited animation that used fewer frames to display an action, resulting in a choppy appearance. The lack of

[130] Barrier, *The Animated Man*, 82.
[131] Ibid., 87.
[132] Ibid., 88.

fluidity between frames was compensated by the use of curved lines and circles which most characters consisted of in this time period, as the curves were able to escape this shakiness. Soon, however, the studio started to move away from this practice. Disney gave his animators orders to start making their "animation drawings as rough sketches, rather than finished drawings, and to make pencil tests of the roughs."[133] This meant that the animators didn't have to throw away clean work when an action didn't fit with a scene. These techniques would later, coupled with increased revenue from United Artists, make their appearance in the Mickey Mouse shorts because the animators had to shift from focusing on an individual sketch or frame and broaden their scope by seeing the entire set of frames as an action/movement.[134] This pushed the focus more on creating fluid and naturalistic movements. Walt Disney was quoted in 1956 as saying, "The hardest job was to get the guys to quit fooling around with these individual drawings and to think of the group of drawings in an action. They couldn't resist when they had a drawing in front of them that they had to keep noodling."[135] As they adjusted to this new technique, the quality and style of the animation began to change. The abstract styles of rubber-hose bodies and Mickeymousing fell to naturalistic movement with solid bodies and understandable dialogue. As the animation adapted to the new financial opportunities of the studio, so too did the use of recorded sound.

[133] Ibid., 87.
[134] Ibid., 88.
[135] Barrier, *The Animated Man*, 88.

In 1930, new offices were constructed, and in 1931, a new two-story animation building and sound stage were completed, which would give the studio more freedom to experiment with sound and would lead to a shift away from the strict synchronization of the earlier shorts.[136] With the integration of a recording studio into the complex, Disney had more control of the sound used in the shorts. As sound in the shorts adapted over time, Disney decided upon a policy of the integration of sound and animation. [137] This rhythm differed from the strict musical note then action present in the early shorts, for now the characters began to flow along with the music. This will be apparent when discussing the piano scene from *Mickey's Mechanical Man*, in which Mickey plays the piano as he coaches his robot boxer. There his movements are no longer strictly synchronized with the soundtrack. With Disney's new policy on sound integration, the studio had institutionalized the "collaboration between director and composer" by 1933.[138] Along with the differing synchronicity to sound, dialogue also came to play a larger part in the shorts, which would increase naturalism. Though Disney's dream of making a series of live-action shorts, "dialogue comedies," in addition to his

[136] Thomas, *An American Original*, 109.
[137] Barrier, *The Animated Man*, 70. In the summer of 1929 he ordered that "'from now on all action [in the *Mickey Mouse* cartoons] will be set to a definite [rhythm] and we will have no more straight action to a mere musical background' – that is, the Mickey Mouse cartoons would be as thoroughly synchronized as the Silly Symphonies."
[138] Lea Jacobs, *Film Rhythm After Sound: Technology, Music, and Performance* (Oakland: University of California Press, 2015), 77.

cartoons was never fulfilled, his voice was used more and more in his shorts, leading to more dialogue and more naturalistic possibilities for the shorts.[139]

Walt Disney was the voice of Mickey Mouse for most of the 1930s short films, and he also voiced most of the other male characters within the cartoons. The voice of Minnie Mouse was that of Marcellite Garner, who was a member of the ink and paint staff at the studio.[140] Walt Disney's voice spoke for Mickey, letting the viewer hear the nervous, flustery falsetto—a line of dialogue was often preceded with a shy "heh-heh-heh"—that was the voice of Mickey Mouse.[141] With the addition of longer lines of dialogue, as opposed to just a parrot repeating a phrase or an occasional whispered "okay" from Minnie, a new realm of naturalism was possible for these characters as they were now given the ability to not only gesture, grunt, and whistle but to have detailed conversations. Dialogue along with sound effects and music track began to be mixed into a more natural use of sound sometime in 1930.[142] The combination of multiple sound effects, clearer dialogue, and evolved recorded sound in general led to new possibilities for naturalism in the studio. This increased narrative ability and the overall development of the character of Mickey Mouse (as his flustered and high-pitched voice soon became synonymous with his character) was contrasted with the growing use of cartoon music (an abstract form of recorded

[139] Barrier, *The Animated Man*, 71.
[140] Ibid., 117-118.
[141] Thomas, *An American Original*, 108.
[142] Jacobs, *Film Rhythm After Sound*, 64.

sound that follows the same principles as Mickeymousing) not only in the studio but in the American animation industry as a whole.

The genre of cartoon music could be seen as early on as 1929 with *Plane Crazy,* which uses the classic descriptive chorus falling, "Rock-a-Bye Baby," in conjunction with Minnie's slow descent to the ground with her bloomers parachute. As the use of recorded sound within the studio took on a more naturalistic approach, the use of cartoon music was merely an evolution of the practice of Mickeymousing. Cartoon music works in the same vein as it pulls on well-known tunes, associating them with specific actions, scenes, or characters in order to emphasize and explain what is taking place. This shift to cartoon music in the studio came about through the work of Carl Stalling, who created the soundtrack for *Plane Crazy*, and the effect of his eventual leaving of the studio. As Stalling went to work for Warner Brothers, whose library of popular music was royalty free, he had a new field of music open up for him while the Disney Studios, limited by the royalties that Warner Brothers had obtained, "had to go back to the nineteenth century, to classical music, to 'My Old Kentucky Home,'" which were royalty free.[143] The use of classical music in animation has become synonymous with cartoon music due to the wide ability of the classics to be manipulated to fit the actions of the characters on the screen. "By using the so-called light classics, a cartoon director could isolate and focus on particular musical gestures," which consisted of melodies or chord

[143] Ibid., 44.

progressions, "one at a time."[144] Though this synchronicity has evolved now into a much larger genre, it still retains that basic synchronicity that abstracts the short films.

Though the Great Depression did not put a stop to the massive number of people coming to the cinema for double features and cartoons, it did drastically affect American culture. The mechanization of the workforce in the 1920s, coupled with the massive layoffs of the Great Depression, created discord among the American populace, regarding the place of the machine in society. Contrasted with hopes of a future of mechanized utopia argued in the Chicago World's Fair of 1933 came extreme paranoia of machines, which was emphasized in the robot hysteria of the 1930s.[145] This idea of contemporary society being thrown into chaos, as the presence of robots or other thinking machines did in articles from this period, was a popular trope for movies in the 1930s. "In the early 1930s film tended to portray contemporary societies thrown into chaos, whether because of the emergence of gangsters, the presence of zany figures such as Groucho Marx, or the arrival in New York of King Kong."[146] The cultural upheaval of the Great Depression was integrated into the depiction of machines in the short films of the early 1930s.

Only seven months after the re-release of *Plane Crazy* (with sound), a monumental shift in American culture was occurring that would affect the audience

[144] Ibid., 110.
[145] Cheryl R. Ganz, *The 1933 Chicago World's Fair: A Century of Progress,* (Chicago: Illinois UP), 18.
[146] Kyvig, *Daily Life in the United States*, 100.

of the shorts. In September and October of 1929, stock prices declined significantly.[147] Then, on Monday, October 28, a mob of investors decided it was time to sell. Unable to stop the slide, and with an excess of sellers to buyers, banks and brokerage houses saw prices drastically drop.[148] And as brokers found themselves with stocks that were steadily decreasing in value, a financial panic to sell while some value could still be recouped spread from Wall Street to banks all across the country.[149]

As employers and companies left behind the optimism brought on by the growth of the 1920s, they instead began to prepare for difficult times. This led to massive bouts of layoffs, which led to fewer consumers purchasing goods and services, and the cycle went back to even "more cutbacks, larger layoffs and more unsold goods and services."[150] This downward spiral continued to feed on itself, and as it did, conditions grew worse and the national mood became cynical. As America lost faith in its economic system, the mechanization of the workforce, paired with high layoff rates, led to the heightening of the debate of man versus machine. A side result of this conflict was the robot hysteria that occurred in the 1930s. This fear was focused on machines surpassing, rising up against, or even destroying mankind. Articles can be found in newspapers and magazines across the country in the early 1930s telling tales of robots turning against their makers, petitions for robots to be

[147] Ibid., 216.
[148] Ibid.
[149] Ibid.
[150] Ibid., 218.

removed in some way, and warnings about robots that would soon take American jobs. An article that showed this trend appeared in the *Salt Lake Tribune* on October 23, 1932 (figure 2.1).

Titled "Shot by the 'Monster' of His Own Creation," the article tells a highly dramatized account of Harry May's accident with his robot.[151] Covered with illustrations that are reminiscent of sci-fi novels of the period, the article tells a tale of a robot having a mind of its own and rebelling against its creator. The text states that when the gun had been loaded, the robot went against May's orders, stood, and shot him, though not fatally, since May managed to block his throat with his hand, leading to the shattering of it, but keeping him alive. This highly fictionalized account has some interesting additions, especially in the form of certain quotes, one of which is very telling of the tension between man and machine that society felt at that time. The text says that May stated that he always had a feeling that his robot, which the article names Alpha, "would turn on me some day."[152] The actual record states that during a test in England in 1932, the inventor was setting up the gun, which the robot was supposed to shoot, when it misfired, not shooting him, but burning him in the process. This tale displayed the growing paranoia of machine in society, leading to a shift in their depiction within the Mickey Mouse shorts.

As the depression led to a plummet in the countries average annual income, it also led to a common desire to escape these unpleasant conditions. The movies,

[151] "Shot by the "Monster" of His Own Creation." *The Salt Lake Tribune* 23 Oct. 1932: 45. Print.
[152] "Shot by the 'Monster,'" *Salt Lake Tribune*.

were a constant destination for those looking to separate themselves from the trials of their everyday lives. So while wages dropped, the increased demand for films, led to an increased demand for Disney's short films. This led the company into one of its most financially stable time periods.

The drastic changes to the studio in the avenues of sound and animation, in part due to new financial freedoms and new techniques, allowed for the growth of a naturalistic style. However, though new possibilities for the use of naturalistic techniques in shorts were now within the grasp of the studio, this did not mean they would be applied universally to all characters. As naturalism grew and developed, the man versus machine culture of the 1930s became a factor in the depiction of animated technology within the shorts. This could be seen not only in the actions of the characters in the shorts but also in the very use of animation and sound as well. One short, *Traffic Troubles*, gives a look into the chaos of America's new road and automobile culture, questions the place of machines in society, and shows the beginning of the strict allocation of different animation styles to different characters.

Traffic Troubles

In my analysis of *Traffic Troubles* I will discuss the place of the automobile in America in the 1930s. It can be seen in the short that it was not a new machine (or robot) being newly integrated into society but something that was established as a major mode of transportation for many Americans. Though a commonplace

machine, the automobile, represented by Mickey's cab, is where we see the beginning of the allocation of more abstract animation and sound techniques to machines while the shift to a more naturalistic style is present in the character of Mickey Mouse. It is the combination of both of these shifts that shows the beginning of the shift towards naturalism in Disney's short films and foreshadows the eventual departure of living machines.

At seven minutes and fourteen seconds long, the short begins with Mickey Mouse as a taxi driver trying to drive through congested and run-down city streets. It was in 1931, when American roads were still on their way to being mended, gasoline was cheap, drivers crowded the streets, and an organized system to test driver competency was not yet fully developed or widespread, that *Traffic Troubles* was released. The chaos the automobile brought was contrasted with the growing popularity and dependency the American people had on it. The growth of the automobile in the 1920s and its continued use in the 1930s set up the automobile as a familiar machine for society, which (though sometimes a bringer of chaos) would parallel Mickey's cab, depicted as a pet in the short.

Though automobiles had been around for more than a quarter century, it was not until the 1920s that they started to become a central factor in the lives of everyday Americans.[153] Automobile ownership grew exponentially during this decade as in 1920 barely one household in three possessed a car, but in 1929 four

[153] Ibid., 27.

families in five owned one.[154] In fact, outside of the impoverished South, automobile ownership was fairly evenly distributed across the country. "According to a 1927 survey, fifty-four percent of families in cities over ten thousand owned a car, while sixty percent did in towns under one thousand; farmers were even more likely to have a car or truck."[155] As the car was gaining a constant presence in American everyday life during the 1930s, the integration of the taxi into the short is important in that it is not depicting a miraculous machine of the future but a common form of mobility that many Americans relied on.

With lower incomes, it is understandable that sales of automobiles, among other expensive commodities of the time, dropped significantly. "In 1929 Americans purchased four million and four hundred and fifty-five thousand new cars, but during the following decade only an average of two million one hundred and forty two thousand new automobiles were sold per year."[156] However, a reduction in the purchasing of cars did not correlate with a lessening in the use of them. In fact, during the 1930s, Americans were driving more than ever before. "Although the number of cars on the road increased by only one-seventh by 1939, gasoline consumption increased by one-fourth."[157] It was in reality due to this economic depression that cars were chosen over electric streetcars and interurban light railways as the popular mode of transportation. A wide amount of Americans had

[154] Ibid.
[155] Ibid.
[156] Ibid., 225.
[157] Ibid., 225.

already purchased cars in the 1920's and the price of gas was cheap, this coupled with the inability of the public transports to deal with the financial difficulties of the Great Depression, led to the continued popularity of the automobile.

What's more, the 1930s witnessed a gradual disappearance of electric streetcars and interurban light railways in many cities as the use of automobiles and buses increased.[158] Not only did the Great Depression significantly reduce ridership of electrified public transportation, but it also made the idea of higher fares to make up lost earnings unthinkable.[159] With gas prices incredibly cheap and many American families already owning a car that they had purchased in the previous decade, it made more financial sense to use automobiles as their main form of transportation. As the automobile grew in popularity and use, the roads began to feel the effects. It was not until the 1930s that highway construction began to significantly increase with the help of the federal government, as a means of stimulating economic recovery.[160] Taxes were imposed on gasoline sales in order to assist road construction and maintenance. [161] Yet even with a tax added to the price of gasoline, it still remained an incredibly low-cost item. With a large number of American drivers taking to the streets, the issue of competency was a large one. It was not until the 1930s that the practice of drivers taking examinations before

[158] Ibid., 70.
[159] Ibid.
[160] Ibid., 49.
[161] Ibid., 50.

obtaining a license would become widespread.[162] As such, chaos on the road and traffic jams were a common occurrence for American drivers.

The short film opens up to a scene that the film's title aptly describes as Mickey tries to find a person in need of his taxi in the midst of congested traffic. Traffic was an early annoyance that came with the innovation of the automobile and was commented on as early as 1902 by *Atlantic Monthly* essayist Charles M. Skinner. He saw "a multiplication of the dangers and bothers of street traffic through increased speed in the cars, blown-out fuses, broken wires, and charged rails."[163] The first shot displays this pandemonium as Mickey and his taxi are seen at the front of a large group of cars that are all sandwiched between the two sides of the road, moving slowly inward to create depth. This use of one-point perspective is an early attempt at the creation of depth in some of Disney's early short films. This technique had been modified to create the illusion of a character moving backwards or forwards while remaining in the same place. There were new possibilities for depth and perspective at this time, and the Disney Studios was making full use of them. Movement was given to the scene by the backward movement of the landscape, not the forward movement of the figures. The cycle used in this scene is mirrored on both sides of the receding road that we see Mickey driving down, towards the viewer. The image used on both sides shows a city block with buildings

[162] Ibid., 51.
[163] Richard Rhodes, ed., *Visions of Technology: A Century of Vital Debate About Machines, Systems and the Human World* (New York: Simon and Schuster, 1999), 38.

of varying heights, a sidewalk, and a parked car. This image shrinks in size as it moves inward, which gives the illusion of depth. This cycle is then mirrored on the other side of the road, surrounding Mickey with tall, repetitive buildings whose uniform aspects create an oppressive atmosphere. This new urbanized landscape that Mickey finds himself in is far from the farmyard and seems static and stoic. The adaptation of roads to the automobile was another issue of note for Skinner as he saw it as "the disfigurement of streets and injury to roads worked by the erection of poles, the stringing of wires, the cutting of pavements, the lopping of shade trees, and the blight of vegetation due to escaping currents."[164] This symmetrical background creates a backdrop of uniformity that contrasts greatly with the traffic in the foreground.

As Mickey calls out, "Taxi! Taxi!" each call corresponds to a car cutting in front of him. With his attention on the sidewalk as he tries to pick up a passenger, the cars move past him closer and closer until he returns to the center and two cars pass by him at the same time, squeezing his taxi and himself in the process (figure 2.2). Here, oddly enough, in a scene where Mickey is being squished, we see abstract style in the form of squash and stretch being separated from the character of Mickey Mouse himself. For it is not Mickey's body that squishes down but his taxi. The squeeze only goes tight enough to just match the width of Mickey. So the first close up of Mickey with his taxi automatically shows that Mickey's body has been

[164] Rhodes, *Visions of Technology*, 38.

naturalized and solidified while the living machine has remained a rubber-hose creature.

Along with the improved upon technique of cycle backgrounds and the different usages of squash and stretch, this opening scene also introduces some of the new uses of sound in Disney's early 1930s cartoons. Full lines of dialogue, while now present in the Mickey Mouse shorts, were still new to them. Because producers were unsure how to make dialogue stand alone, we can see a reliance on synchronized movement and sound that attaches the dialogue to the melody, almost like a lyric to a song. Mickey, now with full dialogue, is able to call out "Taxi! Taxi!" Disney's order to his animators in 1929 to deeply synchronize music and movement is shown here in a more evolved form as we see Mickey as the stimulant for the sounds. His gestures and dialogue are in time with the beat of the music, as are the movements of the cars that pass him by. However, the beat does not seem to be coming from the background but from Mickey himself as he appears as a sort of conductor of traffic. Raising his hands like he is directing an orchestra right before the two cars squish him, he responds verbally to the squeeze with, "Hey! Hey! Hey!" Here we see how dialogue has now not only been used to add context or dimension to a scene but to add to the atmosphere (an aural environment produced by the sounds in the film, such as the sounds which establish the chaotic city street in *Traffic Troubles).* When Mickey cries out "Hey! Hey! Hey!" he is not singing, yet his words act like song lyrics as they conform with the tempo of the scene while still standing above it (especially concerning volume as his voice is louder than the

sound of the passing cabs). His dialogue appears almost as atmospheric sound as his voice enhances and emphasizes the chaos of the scene. The naturalism of sound in the short is heightened by the studios' increased ability to create atmospheric sound techniques. With Mickey's popularity so tied to the integration of recorded sound with film, his voice took on many musical tones, and he was often depicted creating music (he is often seen playing the piano).[165] Here, however, there is an interesting combination of music and dialogue that has a strong theatrical feel to it.

This well-timed dialogue continues with Mickey's first passenger, who calls back to him, "Taxi! Taxi!" In this scene we can see once again how squash and stretch, while still consistently used, is now allocated to different characters.[166] His passenger is a large pig, dressed in expensive clothes, with a pocket watch, cane, and top hat. The enormous girth of the passenger stretches the inside of the cab, and Mickey has to push in the parts of the passenger that are sticking out from the window (figure 2.3). The way the back of the cab stretches relates to the rising popularity of closed cars (meaning that the sides, top, and back were not exposed to the elements). As people were coming to depend on their cars in all sorts of weather, there was a quick shift from only 10 percent of the cars on the road being closed in 1919 to 83 percent of the cars being closed in 1927.[167] A less expensive alternative to have a closed car was a canvas covering, which is what Mickey's cab is.[168] This can

[165] Barrier, *The Animated Man*, 69.
[166] Ibid., 84.
[167] Kyvig, *Daily Life in the United States*, 32-33.
[168] Ibid., 32.

be seen when the pig first enters the car and it stretches to accommodate him and later in the short when the top falls down and Mickey runs up the canvas top like a flight of stairs. The abstract technique of squash and stretch has now been allocated to secondary and minor characters as well as machines.

As we can see a shift in the use of animation techniques in this scene, so too can we hear a shift in the use of sound. The music disappears completely from this scene; instead we are given the background noise of the honking cars that have been blocked as Mickey stops his car in the middle of the road to pick up his passenger. This is the beginning of Disney's attempt to create a "normal sound environment," as opposed to his usual musical Mickeymousing.[169] A normal sound environment would contain realistic sounds that create a more naturalistic environment whereas Mickeymousing does not require this but in fact relies on synchronization of sound and motion to create its abstract environment. Disney is still in the practice of using diegetic sound, sound which the film leads us to believe is happening in the space-time continuum depicted in the scene.[170] For now, while the use of sound had progressed significantly since *Steamboat Willie*, it would remain diegetic, for the most part, until his full-length feature films. [171][172]

[169] Telotte, *The Mouse Machine*, 30.
[170] Chion, *Film, A Sound Art*, 474.
[171] Ibid., 480-481. Disney does not begin to use nondiegetic sound regularly until films like *Cinderella*, in which he uses a narrator, which adds to the fairy tale storybook theme of his films.
[172] Telotte, *The Mouse Machine*, 30. It is only occurs when a progression in the storytelling element in Disney's films that narration, or nondiegetic sound, is added. This ties in with the use of fairytales for the full-length feature films as they come from a literary tradition, which brings in the use of a narrator, often further emphasized by the film starting off with a book representing the fairy tale.

Going back to the honking cars, there is a sudden disconnect between sound and image, since there are no visual cues to the sounds being made. In earlier shorts the synchronization relied on direct actions: so if a car honked, then the viewer would also see the honking as opposed to hearing it (like the moving and puffing smoke stacks in *Steamboat Willie)*.[173] However, now sound, along with image, was a part of the background.

Characters, as well, could now be turned into backdrops, as we see the taxi shift from active to immobile. When the pig passenger enters the car, its eyes look back towards him, and its expression is one of distress as the passenger's weight is actually enough to tip the car back, lifting its front wheels off the ground. This is one of the first instances in this short in which the life and personality of Mickey's cab is displayed and we can see the animation of technology. However, in this scene, there are certain instances in which the cab's face freezes and becomes a piece of the background (figure 2.4). One instance is when Mickey is pushing the passenger in through the window. Here you can see that the cab darkens and the area that Mickey is pushing is highlighted, showing where movement is occurring. This is an odd occurrence because none of the other characters ever become a piece of the landscape. Even when Minnie is riding in the cab and the attention is on Mickey, the viewer can still see her moving around. This practice of changing objects from mobile to static background images is present as far back as *Steamboat Willie.* In the

[173] Walt Disney, *Steamboat Willie*.

short, when the "Turkey in the Straw" sheet music lands in front of the goat, the shades of the sheet darken, indicating that it has become part of the background. As the goat uses his tongue to pull the paper into its mouth, the object lightens and becomes a moving object once again. It appears that when a living machine is not moving, it cannot retain that life. In reference to the terms of life and personality which I have used repeatedly in this chapter, personality is something that even early silent Disney cartoons had, but life is related back to abstraction versus naturalism and relating to reality, as opposed to naturalism and the illusion of life. This scene gives us one of the first instances in which the life of the cab is depicted as not being equal to that of Mickey.

As the scene shifts and the cab becomes background once again, a traffic cop comes up to confront Mickey, and an interesting dialogue ensues. While the previous uses of dialogue had shown how synchronicity, while still a core factor in the shorts, had shifted, this use shows how dialogue itself has evolved in the shorts. Moving past one word responses from Minnie (such as in *Plane Crazy* when she responds with a whispered, "Okay."), there is now a fully-fledged dialogue, though this one appears to be a one-sided discussion.

Mickey is now capable of forming full sentences in Disney's short films. When the Traffic cop (an early version of the stock character Pete, who also appears as the captain in *Steamboat Willie*) comes up to Mickey, he begins asking him questions, and when Mickey attempts to respond the cop yells, "Shut up!" This continues on for a couple more questions, which go unanswered because the cop keeps telling

Mickey to shut up as he starts to answer, until the cop finally tells Mickey to scram, and he drives off in his taxi. This scene is not only interesting due to the fact that the sentences of the cop are understandable (unlike the parrot in *Steamboat Willie*) but also because Mickey's words are not. The studio was capable of having Mickey speak clearly but choose not to in this scene, which helps to develop Mickey's personality. It is his mumbling and shaking knees that give a new level of naturalism to Mickey Mouse as the viewer is able to see a stronger representation of emotion, this time in the form of nervousness (figure 2.5). As we see dialogue developing in the shorts, it creates new opportunities for naturalism, one of which is how character and emotion can be evoked through different forms of speech, even mumbled speech.

Michel Chion described emanation speech in his book *Audio-Vision.* That is speech "which is not necessarily heard and fully understood."[174] While Mickey's mumblings as he faces the intimidating traffic cop are hard to decipher, they are, at the same time, illuminating Mickey as a character. This indiscernible speech, according to Chion, becomes "a kind of emanation of the characters, an aspect of themselves, like their silhouette is—significant but not essential to mise-en-scene and action."[175] Though Mickey's mumbling is not integral to the narrative of the short, it is, in combination with his shaky knees and falsetto voice, an additional

[174] Chion, *Audio-Vision*, 177.
[175] Ibid.

facet of his personality that has been made possible by the evolution of naturalistic recorded sound.[176]

As Mickey leaves the cop, stuttering a goodbye, he makes it along the rough road, which is filled with a comical number of potholes and puddles, to park on a city block, losing his passenger along the way. As Mickey's taxi tries to nudge in-between the other two cars, its touch seems to bring the other machines to life as their faces move and begin to show their annoyance at the taxi's intrusion. To get the car ahead of it to move, the taxi bites the rear of the other car. The car responds by releasing a large plume of smog into the taxi's face as it tries to use its fender to block the incoming exhaust. In retaliation, the taxi opens its jaws to bite the other car again, but Mickey puts a halt to the action saying, "Uh-uh-uh" (figure 2.6). This scene gives the taxi anatomy similar to that of a horse with its jaw structure as well as how its neck droops when it is scolded by Mickey. However, this personification uses limited animation techniques of squash and stretch to personify the taxi, showing the allocation of abstract styles to the cab. Mickey, even in this chaotic city, has control over his taxi, his machine.

Here we see technology being humanized even as its presence is amplified in the shorts. The addition of teeth humanizes the machine, and it is Mickey's dialogue that stops the car, resulting in an emotional reaction from the car. In 1934, Lewis Mumford released a book entitled *Technics and Civilization* that dealt with

[176] Gabler, *Walt Disney*, 154-155.

humanity's relationship with the machine.[177] This was released into a culture where people were losing their jobs in an already dwindling market, to machines. He predicted that we would come to control machines as humankind matured, and this claim led to a lot of debate in the 1930s.[178] It is important to note that Mumford's claim is that humanity will gain control of machines in the future, which means that it does not have control of them in that present time. The naturalization of machines took away some of their power and aided in the controlling of them in these shorts.[179] The personality the taxi is given is one of a trained pet. After Mickey gets his mechanical pet under control, he realizes that his passenger is gone, and Minnie arrives as the second passenger.

Minnie's arrival brings music and a change in the landscape. As in *Steamboat Willie*, Minnie brings a song sheet and a musical instrument with her, this time an accordion (figure 2.7). Though the song sheet is blank, research (consisting of listening to lists of the popular songs of America in the early 1900s) has led me to conclude, not only through the lyrics but also the melody of the song, that it is "In My Merry Oldsmobile" by Billy Murray from 1905.[180] This use of cartoon music in the short is important in that it is a more abstract form of sound associated with a machine, the cab. The song describes the car and synchronizes to its movements as

[177] Rhodes, *Visions of Technology*, 121.
[178] Ibid.
[179] Michael North, *Machine-Age Comedy* (New York: Oxford UP, 2009), 58.
[180] Suisman, *Selling Sounds*, 144. Billy Murray was a popular phonograph artist in the early 1900s who was a member of Victor's Black Seal series, which included other artists such as Henry Burr, Vess Ossman, and Arthur Collins.

it drives down the road. The use of strong synchronization in this scene shows another separation between the animation styles of Mickey and his cab through their relationship to sound, with the cars being more abstract (with its strict synchronicity and descriptive soundtrack) and Mickey (though he still has some synchronization) takes on a more natural version of sound with his enhanced dialogue. The abstract use of cartoon music was a habit of man y composers, including Carl Stalling, who, though no longer in charge of compositions at this time, used this popular song in scenes involving automobiles.[181] This practice carried on in the Disney Studios as they use Murray's song, with the tempo sped up, to transition the scene from the city to the country. This practice of adjusting the tempo to fit the actions of the characters in the scene was a common practice used in cartoon music at the time.

As Mickey and Minnie play along to the song with the car horn and Minnie's accordion, the taxi joins in, dancing with the soundtrack. When the scene shifts once again to one-point perspective, the viewer sees the rear of the car, which wiggles with the beat of the song, almost like hips, until it gets a flat and the music stops (figure 2.8). It is not Mickey or Minnie's response to the flat that the film pans to but rather that of the taxi itself. Once again taking on animalistic characteristics, the car whines, lifts up its foot, and licks it like an injured animal. Here we once again see the personification of the taxi along with the possibility for naturalism, which is

[181] Barrier, *The Animated Man*, 74.

shown in its expressive face (figure 2.9). Shifting from the living machines in the 1920s, the naturalistic techniques have evolved so that characters can be more expressive, but the studio is applying these more labor-intensive techniques to different characters. The pet car, while able to express emotion in a more naturalistic format when observing the close-up of its face, is shown in the rest of the short in almost entirely abstract techniques. The animation possibilities of the car that are not realized separate it from previous depictions of living machines and show where naturalism is headed.

After some of Mickey's attempts to re-inflate the tire with first an air pump and then a pig, a snake oil salesman appears and ignores Mickey's lack of interest in his product and pours it into the taxi's engine. When the taxi goes berserk (as machines constantly do in Mickey Mouse cartoons) and Mickey chases after it with Minnie helplessly stuck inside, the honking of the car is different than the honks of the city cars. Michel Chion states that isomorphism occurs when "the point is not to imitate the noise produced by the thing, but to evoke the thing's movement" with a sound that explains the movement.[182] This honk seems isomorphic as it evokes the movement of the car's mouth, and it is important to note that the mechanical sound of the horn is replaced with one that appears more like the sound of an animal. This animalistic nature of the sound, and the taxi, is only highlighted by the area from which it is emanating, the taxi's mouth (figure 2.10). This is evident by the opening

[182] Chion, *Audio-Vision*, 121.

and closing of the car's mouth as well as the use of lines emerging from that area (an abstract technique that we have seen before used to indicate the presence of sound). There is a contrast here between the continued humanizing of the car coupled with its loss of control. As the taxi goes berserk, Mickey loses control of his machine and the order of owner and pet that was previously established begins to fall apart. The threat of the loss of control is shown by the car's devolution. Its previous ability to move, to some degree, by its own volition (even morphing its wheel into a hand to block the smog) is taken away, which again relates back to the need to control machines as it loses its previous autonomy with its loss of controlled expressive motion. This stampede does not end well for the car as it ends up losing its wheels and means of movement and then lands on a cow that then takes it (along with Mickey and Minnie) through a barn (or henhouse, since they emerge from the structure with several chickens) and runs right into a corn silo.

The crash is hidden entirely by feathers (figure 2.11). If you slow down the footage, you see the odd group seem to disappear into the solid wall of the silo, then a couple clouds appear with feathers in them. These feathers continue to scatter until they black out the screen completely. As they start to recede, the characters return to the scene minus one. After the farm animals walk off, Minnie and Mickey shake off some of the feathers they are now covered in and cluck at each other, ending the short. However, in the bottom left corner of the scene we see a pile of rubble with a strategically placed steering wheel on top of it.

The remains of the taxi are not treated as a dead body but as a mangled pile of wreckage, a sign of the impact that the car sustained (figure 2.12). Though there were several instances in the short in which the body of the taxi was morphed to appear humanoid (including how its tire turned into a hand to cover its mouth when the snake oil made it hiccup and when it stood up on its two back wheels to walk over a puddle in the road) these were only small parts of its anatomy that temporarily imitated that of a human, it never completely physically mimicked one. The personification of the taxi, its placement as Mickey's pet, its ability to merge into the background when immobile, and the disappearance of its face among the rubble the crash left behind display that there has been a shift in allocation of different animation styles. Though Mickey still retains his immortal qualities as a cartoon character immune to harm (the only signs of the effects of the crash on Mickey and Minnie are their new feather coats), it is not by squash and stretch that his body is able to survive but the allocation of more natural techniques to main characters, which is now being established in the Disney shorts. Mickey's life never disappears for a second, but a machine, a taxi, cannot always have this life. Even though the humanizing of it allows it to be controlled, it is not, deep down, a natural being. So while Mickey drives the short, the taxi only has importance when it adds to the scene and is given movement. The rest of the time it fades into the background.

The question then is, when the machine's form is made to mimic a human in its entirety, what animation and sound styles will it be depicted in? The robot contrasted greatly with the popular automobile, a commonplace machine that many

average American relied upon. Unlike the everyday cab, the unknown and uncommon robot attempts to mimic a human. Moving on we will see in the next short film, *Mickey's Mechanical Man*, which, unlike *Traffic Troubles*, does not depict a commonplace form of machinery but a robot, the symbol of a feared future of machines surpassing mankind.

Mickey's Mechanical Man

Building off of the man versus machine debate, the shift from abstract to natural style, and the allocation of different levels of animation, *Mickey's Mechanical Man* shows the studios' failure in their success as the shorts reached their highest level of naturalism and the continued growth of this style would move into other series and films. Showing new possibilities of naturalism in the close-up scenes of Mickey and Minnie, the characters are highly contrasted by the abstract machine, which is created using old animation tricks and brings back Mickeymousing. Shifts in the studios' focus and binding contracts made in the 1930s altered the course of the studio giving it increased finances. This resulted in the possibilities for greater detail and experimentation. The allocation of abstract and naturalistic techniques and different levels of life to different characters shows the change towards a naturalistic style, leaving the abstract behind. *Mickey's Mechanical Man* shows the shift towards a completely natural style as the machine takes on entirely abstract forms. Coupled with the changing animation style, the robot (a cause of hysteria in

the 1930s) shows the climax of the man versus machine debate in the Mickey shorts, where the natural(Mickey works as a representative for the style with his grounded body, natural human elasticity, and removal from the Mickeymousing of the past) wins and machines are eventually destroyed.

The term robot did not become widely used in America until the early 1930s, even though the play it originated from was released in 1921.[183] *R.U.R.* or *Rosumovi Univerzální Roboti* (Rossum's Universal Robots) was created by Karel Čapek.[184] Though written in Czech, by 1923 the play had been translated into thirty languages, including English. This play introduced the term *robot* to the English language and science fiction as a whole.[185] Machines that could be mistaken for men and think for themselves, Čapek's robots eventually grow tired of their servitude to humanity, revolt, and destroy mankind. When the term robot made its way into American society, it became a part of the man versus machine debate and developed the robot hysteria of the 1930s, which could be seen in dramatized articles across the nation, including the account of Harry May's shooting robot.

In contrast to this fear of the machine were those who argued that machines could never think and therefore would never be able to surpass mankind. One such man was Jack Dempsey, a cultural icon of the 1920s and the heavyweight boxing champion. After his retirement from the ring, Dempsey claimed that he could "whip

[183] Jana Horakova, "RUR—Comedy About Robots," ed. Július Gajdoš, *Disk I/2005—Selections from the Czech Journal for the Study of Dramatic Art* (2005): 86.
[184] Horakova, "RUR," 86.
[185] Horakova, "RUR," 87.

any mechanical robot" in an article from *Modern Mechanix and Inventions* in the April issue of 1934.[186] In the article, Dempsey states that "no matter how perfect the machine might be, it lacks a brain, and the most killing of all blows is worthless when not delivered at just the crucial second."[187] Dempsey and the Harry May article show the varying approaches to the idea of robots in the 1930s, which were both shaped by the debate of man versus machine. As these cultural shifts were occurring outside of the studio, several changes were simultaneously happening in the studio that would lead it down a path toward the eventual demise of the Mickey Mouse shorts.

There was only a two-year period between the release of *Traffic Troubles* and *Mickey's Mechanical Man*, but major shifts occurred during this period that would lead to the studios' final move into a naturalistic style and the eventual erasure of the abstract style of the old shorts of comedy and chaos. While still in the heart of the Great Depression the studio itself prospered from this economic downfall as people flocked into theatres looking for escape. With Mickey's continued popularity in the early 1930s and Disney's new contract with United Artists, the company was experiencing one of its more financially stable periods.[188] This financial steadiness allowed for even further development of animation and sound techniques, which led to increased naturalistic possibilities in the shorts. The issue of where these new

[186] Jack Dempsey, "I Can Whip Any Mechanical Robot," *Modern Mechanix and Inventions*, April 1934, 50.
[187] Dempsey, "I Can Whip Any Mechanical Robot," 122.
[188] Barrier, *The Animated Man*, 89.

techniques should be applied, however, is even more apparent in *Mickey's Mechanical Man.*

Mickey's Mechanical Man is a seven-minute film that tells the tale of a coach (Mickey) and his mechanical boxer (Champ the robot) as they must deal with the robot's glitches (it goes berserk when Minnie honks her car horn) and fight the opponent (The Kongo Killer) to win the match.[189] While the short did display how far the studio had come in the past five years in the field of animation and recorded sound, it also showed where the studio had started in 1928. While Mickey and Minnie display a more natural style than in any of the earlier shorts, the robot character is completely abstracted as it is created using old animation techniques. As one of the last black and white Mickey Mouse cartoons, we can see the shift occurring in the way that technology is displayed in Disney films right before the preparation started for *Snow White and the Seven Dwarves* as well as how much the studios' animation style had evolved since *Steamboat Willie.* [190]

The short opens up with a circle shot, as is common in many of the Mickey Mouse cartoons, and the first image shown is a poster announcing the fight. Here we see a jump in narrative technique as the plot is basically explained to the reader the second the film begins. Moving into the training room, the scene depicts the robot practicing for its boxing match on a safe hanging from the ceiling by a chain with an image of the Kongo Killer on the front of the safe. Coaching the robot is Mickey, who

[189] Walt Disney, *Mickey's Mechanical Man* (United Artists, 1933), animated motion picture, 7min.
[190] North, *Machine-Age Comedy*, 79.

urges the boxer on by singing and playing the piano. Mickey's cheers contains lyrics like, "Get in there and fight!" and "Sock him!"[191] All of Mickey's words and the movements of the boxer are synchronized to the music. However, Mickey himself is not strictly synchronized like in earlier shorts. Here he seems to flow and move with the music as opposed to moving in direct correlation with every note. In the place of Mickey's Mickeymousing, the robot now takes his position. While the Mouse displays the new natural relationship between sound and animation that had occurred over the past two years, the robot goes all the way back to the abstract synchronized action of *Steamboat Willie*, where every punch is punctuated by a note in the soundtrack.

Mickey's shift in style can be seen in comparing past version of himself playing the piano, which he did repeatedly. In fact, the very act of playing piano is something that the studio felt Mickey did too often.[192] As the creator of music in many of his short films, Mickey is often depicted playing an instrument, and in most cases, this comes in the form of a piano. An example of this is the Mouse's solo in the short *The Opry House* from 1929 (figure 2.13).[193] The animations on the keys as Mickey hits them are the same in both films, but the animation for Mickey has changed. His body has become more solid and grounded. The terms solid and grounded relate back to my earlier definition of natural animation, as the first

[191] Walt Disney, *Mickey's Mechanical Man*.
[192] Gabler, *Walt Disney*, 154.
[193] Walt Disney, *The Opry House* (Columbia Pictures, 1929), animated motion picture, 7 min. 25 sec.

shows that the characters has volume and the second is a description of a character who now has weight, both of which were not elements of characters drawn with older animation techniques (like squash and stretch and the rubber-hose style). Instead of Mickey's arms elongating to reach the keys, it is his stool which carries those qualities in *Mickey's Mechanical Man* (figure 2.14). The stool uses the rubber-hose style and squash and stretch to move to the beat of the song that Mickey plays. Mickey and Minnie both have a more solidified form as evidenced by their dialogue scene after the robot's first episode.

This scene has the most naturalistic animation of Mickey and Minnie in the short as the act focuses in on their conversation. As Minnie laughs at the robot's glitch, her eyelashes flutter, and she even has eyelids that blink (figure 2.15). While the eyelashes will stay throughout the short, the eyelids disappear as the animation is stripped down for more packed scenes and more dramatic movements. Along with the added detail in the scene due to the use of more frames per second, the characters also move in a more fluid motion than they do throughout the rest of the short (this can be seen as Minnie waves her hands and Mickey raises his in consternation). Their forms are also more solidified in this scene than in the others. This is particularly evident when Mickey grabs Minnie's arm as she honks the horn again. His attempt to stop her fails, but the reaction of him pulling her arm is not that Minnie's arm stretches to three times its length but that it moves down with the force of Mickey's grasp (figure 2.16). This scene displays new depictions of human elasticity, which before could only be achieved (though in exaggerated form) with

the techniques of squash and stretch. Though far from our own laws of physics, the reactions of the main characters bodies to touch are relaying an attempt by the studio to continue down a path toward a more naturalistic animation style.[194]

Another prominent note is that this dialogue scene is devoid of music or any other sound than the voices of the characters. Dialogue has taken on a more prominent role as it doesn't need to be timed with music for added effect but can work solely with animation to make its point (this is highlighted by Minnie's lines as her lips purse along with her opening and closing mouth, not only showing that she is speaking, but that she is teasing Mickey). This brings the possibilities of naturalism to a new level as emotions are not just shown by lines emitting from the characters (though that is used in this short in congruity with other actions) but by more subtle facial gestures like Mickey's lowered brows when he is annoyed with Minnie laughing at his robot's fall.

The music only starts up again when the horn is honked for a second time and the robot begins to move. While Mickey has moved away from movements synched to sound, the robot's very existence appears to be tied to the music as it only moves when it is present and is unconscious when it is not. The life that the robot is given is shown as even more abstracted than that of the taxi. Though his body mimics a human form and he has a face, his face is less detailed and expressive than the taxi. There are no close-ups of the robot's expression to show his emotions

[194] Gabler, *Walt Disney*, 176.

to the audience (as there was in *Traffic Troubles* when the taxi got its flat tire bandaged up by Mickey and the camera zoomed into a close-up of the taxi sighing in relief). The pet-like aspect attached to machinery in Disney's shorts is no longer present. For while Mickey does chase after the robot and has even named him Champ, the robot cannot reciprocate these emotions, leaving it incapable of forming the same type of emotional bond that was seen in *Traffic Troubles*. The issue of ownership of machines in these shorts is highlighted in this film by Mickey's attempt to control machines, which helps to humanize him.[195] The difference between Mickey and the Kongo Killer, who represents the beast in the film, is his control. The name and appearance of Champ's opponent is interesting in the fact that it references a well-known character of the period, King Kong. The film *King Kong* followed the trend in 1930s cinema of showing "contemporary societies thrown into chaos."[196] Kongo Killer is an uncontrollable beast who is held back by manacles before the fight and released only when the bell is rung. Mickey on the other hand is shown with the ability to have dialogue with Minnie, his movements are more controlled, he has a more grounded physical form, and he has the ability to manipulate machines. His ability to control technology is evident when the viewer sees him begin to "play the piano and, by playing it, to direct the mechanical man."[197] However, this human ability to control machines is put into question as it is

[195] North, *Machine-Age Comedy*, 80.
[196] Kyvig, *Daily Life in the United States*, 100.
[197] North, *Machine-Age Comedy*, 80.

only the horn glitch that allows the robot to win, which is not of Mickey's own doing.[198] This creates an issue as to whether Mickey really is a representation of humanity controlling machines and shows the continued problems in representing technology in Disney's shorts as living machines work as an obstacle to the progress of naturalism. This issue of technology within animated films is only highlighted by Champ himself as he is shown as the most abstract character in the short through the use of old animation techniques.

As the robot boxer moves back and forth practicing for its upcoming match, it moves with the jittery characteristics reminiscent of older Disney shorts. However, the truly chaotic nature of the robot is shown when Minnie arrives in her car and honks her horn. As the robot loses its mind at the sound of the horn, it spins and twirls, with the different sections of its body (head, torso, legs, waist, and arms) all moving in different directions. The robot not only causes chaos in the training studio with its episode, but the animation of it is chaotic itself as it uses a convoluted combination of earlier animation techniques, which make the character more abstract. This abstraction of the robot through the use of older animation techniques is seen even more clearly during the boxing match. This madness is fully realized only when the horn is honked for the third time, in an attempt to revitalize the robot and win the fight.

[198] Ibid., 81.

When Champ gets back on his feet he really isn't standing. Instead he is a swirling mass of gears and metal with boxing gloves attached (figure 2.17). This swirling is highlighted by the use of lines that indicate circular movement (figure 2.18). Here we see animation break down to old techniques of cycles and clones.[199] A cycle is when several images are looped from the first to the last to give the impression of a continuous movement. Clones are seen as the robot is suddenly able to "double, triple, and quadruple its arms." This effect can be achieved simply by duplicating these elements as they are drawn (figure 2.17). This is done with the use of limited animation, which requires less labor and time, displaying that Mickey is given more priority than his robot. The robot is also able to come apart and attack with the different sections of its body, something that Mickey surely could no longer do. The robot is not hindered by a solidified form but instead has the same freedom of earlier Disney cartoons because it does not bear the burden of believability, which Mickey now carries as the character is subjected to more techniques to increase naturalism. Champ seems to be a symbol of the old gags and tricks of early animation (seen when his spinning arms turn into lines to indicate fast movement as he flies above the stage and when a glove emerges from his mouth and punches the Kongo Killer straight in the face).[200]

However, this freedom from reality did not mean that Champ was free from the confines of early recorded sound. In fact, unlike with Mickey's earlier fluidity

[199] North, *Machine-Age Comedy*, 82.
[200] Barrier, *The Animated Man*, 73.

with the soundtrack, the robot's abrupt movement's correlate with sound effects and the music being played, leaving his movements tied directly to Mickeymousing. The music used is also indicative of past animation practices as it uses popular cartoon music.[201]

With the integration of sound into animation, certain practices began to become commonplace. In *Mickey's Mechanical Man* we can see trends of cartoon music synchronized with the robots actions as opposed to those of Mickey Mouse. An example of this occurrence is during the boxing match, where the robot's punches are timed to Franz Liszt's "Hungarian Rhapsody No. 2" (figure 2.19). The practice of modifying classical music for cartoons was often used to justify the animations "essentially cyclical and repetitive nature."[202] In the 1930s the song was already well integrated into the animation industry as it was not only used widely in other animation studios, such as Fleischer and Warner Brothers, but in the Disney Studios as well. In the Mickey Mouse cartoon *The Opry House*, the song Mickey plays on the piano is Liszt's "Hungarian Rhapsody No. 2."[203]

The match ends with Champ defeating his gorilla opponent, who's more solidified body is no match for the robot's chaotic fighting style, and Mickey's

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[201] North, *Machine-Age Comedy*, 81. What came to be called cartoon music were universally recognized songs used in cartoons in specific instances. A popular song at the time, and one that continued to be popular with other cartoons throughout the years, was Franz Liszt's "Hungarian Rhapsody No. 2." Though the song is well known today through use in films and televised cartoons, it was also well known in the 1930s as Franz Liszt's tours in the nineteenth century had brought his music to the attention of the American public, and this attention only heightened with the later introduction of recorded sound.
[202] Ibid., 81.
[203] Walt Disney, *The Opry House*.

mechanical boxer exploding into a million pieces. One section of the robot that remains slightly intact is its torso and left arm, which the referee holds up, along with Mickey's right arm, when he announces the winner (figure 2.20). In *Traffic Troubles*, when the taxi crashed and was left as a heap of rubble next to a corn silo, the face disappeared. This is not the case with *Mickey's Mechanical Man* as the robot's face is still intact and several parts of its body, which are strewn across the boxing ring, are still identifiable. While the explosion is hidden in a cloud of smoke similar to how the taxi crash was hidden with smoke and feathers, the destructive aftermath is not. Instead of a conveniently placed steering wheel to show that the machine is no more, this robot's body parts and gears are shown to the viewer.

The difference in these death scenes shows how technology had shifted in the Disney Studios. Though animated, Champ is not given the same life as past machines (even though it is a form of technology that is meant to imitate the human form). This is due to the lack of an expressive face, the lack of sympathetic interaction between Mickey and his machine, and finally the contrast between the more naturalized Mickey and the abstract robot. Cultural influences as well desensitized the viewer to the robot as the man versus machine debate in the shorts came to a close with its scattered remains on the floor of the boxing ring. As the studio moved forward, they shifted towards a more naturalistic animation style that hid the technology behind the productions. The robot does the opposite of this, clearly showing the animation techniques used to create it. The end of Champ and this short marked the beginning of the end of Mickey Mouse, black and white

cartoons, the old gags and chaos of early animation, and the abstract depiction of animate machines. Soon to replace it would be the magic and fairy tales in Disney's full-length feature films.

Conclusion

Over the course of these two short films there have not only been drastic shifts in technology (in both sound and animation) but also in the integration of that technology within the animation style depicted on screen. As the possibilities for naturalistic animation grew so too did the naturalism of Disney's main characters. However, the animation style of the humanoid machines that accompanied them were increasingly abstracted as evidenced by the allocation of older animation and sound techniques to them as well as their increasingly unsympathetic deaths.

Epilogue: The Erasure of the Living Machine for the Fairy Tale World

Only a few months before the distribution of *Mickey's Mechanical Man*, the Disney Studios released *The Three Little Pigs*, a Silly Symphony whose featured song "Who's Afraid of the Big Bad Wolf?" gained musical popularity along with the short as a whole. Besides its innovative new uses of Technicolor, the short film also appealed to audiences from a cultural perspective. Many viewers and critics considered the short film to be an allegory of overcoming the Great Depression. Under the presidency of Franklin Roosevelt, the public turned the cartoon of "two carefree but shortsighted pigs and their hard-working, far-sighted brother into a parable of suffering and triumph (with the wolf as the economic adversity) the industrious little pig as the embodiment of President Roosevelt's New Deal Program."[204] Disney denied the cartoon's connection to the Great Depression, but his claims did not change the public's view of the piece.[205] Regardless, the naturalistic animation and sound style in the short were an indication of where the studio was headed, whereas *Mickey's Mechanical Man* was an indication of what they were leaving behind.

The shift from black-and-white film to color was just another step in animation innovation, but it left the Mickey Mouse shorts behind. So the character

[204] Gabler, 185.
[205] Ibid.

that had played an integral part in the development of the studio would no longer be the central part of its continued growth. In 1934, the studio shifted to full-length films when it began work on *Snow White and the Seven Dwarfs*. Although machines had brought chaos to humans on screen and animation had slowly begun to evolve so that the techniques behind it were hidden from the viewers, the studio would soon exchange materials and mechanics for naturalism and thorough illusion in the full-length feature films.

Drastic aesthetic changes during intense cultural and technological shifts are what I claim are the hallmark of this time period in the Disney Studio's history and the catalyst for Disney's move to full-length films. *Steamboat Willie* and *Plane Crazy* held on to the animation styles of the past while integrating technology that would change the future of animation. As sound was incorporated into the shorts, it was done so in an abstracted form, such as Mickeymousing and cartoon music. The first two films were produced in a time period when the place of machines in society was in question. Contrasting the mechanization of the workforce with the freedom of leisure time provided by the changes in the working environment and the optimism of American technological advancement in the 1920s, the cultural shifts can be seen. In the first two films, there is no clear separation of styles that favors a human representation or a living machine.

It is not until the 1930s that a clear separation of styles begins to emerge. The second chapter of my thesis highlights my claim that as technology advanced, it was naturalized. The increased personification of living machines in the shorts

(with the addition of faces to their characters) is contrasted with the strict allocation of abstract animation and sound styles to these characters. The movement of the studio toward naturalism can be seen in the dialogue scene from *Mickey's Mechanical Man*. This scene, compared with the others in the short, displays where the allocation of new technology and the growth of the studio is headed—namely, toward naturalism. The shifting depiction of living machines can be seen not only in their styles but also in their unsympathetic deaths when linked with the new cultural acceptance of machines in society at the beginning of the Great Depression.

Although my thesis concludes with the preproduction of *Snow White and the Seven Dwarfs* in 1934 which would lead to the rise of full length feature films like *Pinocchio,* the application of the terms "abstract" and "natural" (as defined in my thesis) to animation beyond that time requires further evolution in our understanding of the terms. The definition of animation can alter with the changing technology applied to it. So I find myself asking several questions: What is abstract versus natural in the field of computer animation? How does an art form based on technological development in its early years become redefined when pen and paper are replaced with mouse and screen? Of course, animators are still integral to the process, but with the advent of technology, their skills need to change. How has the style of the Disney Studios shifted between the cel animation of the 1990s and the computer animation of today? Can these two periods even be compared in terms of style or just in the forms of technological development? Finally, there is the question of the future of the Disney Animation Studios. With the rivalry with their

sister company Pixar, competition from DreamWorks, the move towards live action with the acquisition of Marvel and the Star Wars franchise, the question of where this animation studio is headed is up in the air.

Illustrations

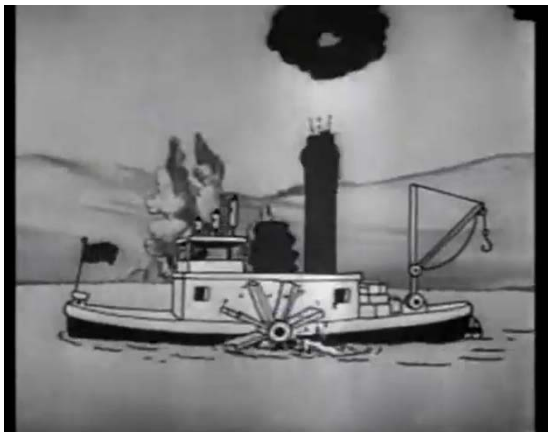


Figure 1.1: Opening scene, *Steamboat Willie,* (Disney Brothers Studio, distributed by Celebrity Production, 1928), animated short film, 7 min. 42 sec.

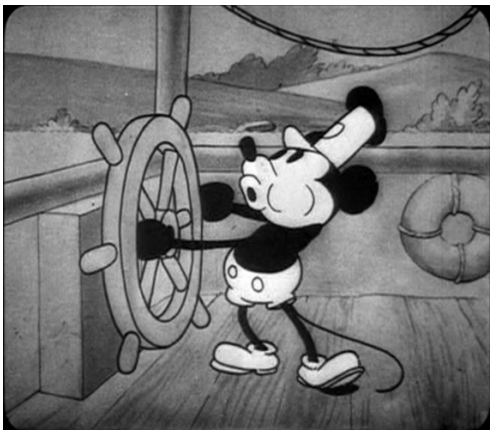
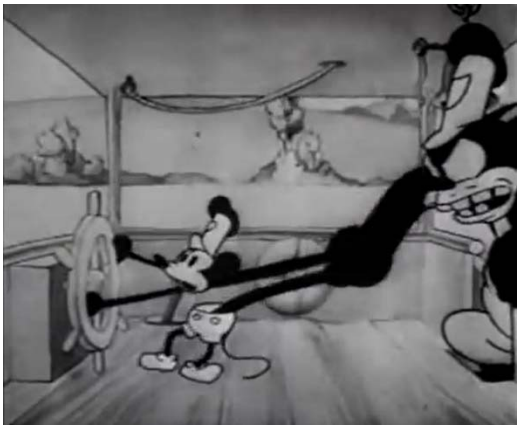


Figure 1.2: Opening scene, *Steamboat Willie* (Disney Brothers Studio, distributed by Celebrity Production, 1928), animated short film, 7 min. 42 sec.



Figures 1.3 and 1.4: Squash and stretch scene, *Steamboat Willie,* (Disney Brothers Studio, distributed by Celebrity Production, 1928), animated short film, 7 min. 42 sec.

Figure 1.5: The parrot, *Steamboat Willie* (Disney Brothers Studio, distributed by Celebrity Production, 1928), animated short film. 7 min. 42 sec.

Figure 1.6: Musical note crumbs, *Steamboat Willie* (Disney Brothers Studio, distributed by Celebrity Production, 1928), animated short film, 7 min. 42 sec.

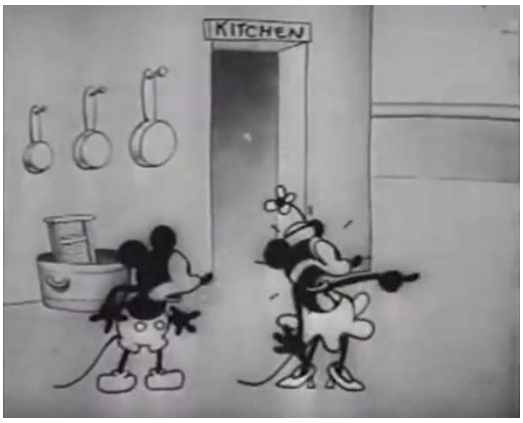


Figure 1.7: Minnie's distress, *Steamboat Willie* (Disney Brothers Studio, distributed by Celebrity Production, 1928), animated short film, 7 min. 42 sec.

Figure 1.8: Goat phonograph, *Steamboat Willie* (Disney Brothers Studio, distributed by Celebrity Production, 1928), animated short film, 7 min. 42 sec.

Figure 1.9: Mickey's sigh, *Steamboat Willie* (Disney Brothers Studio, distributed by Celebrity Production, 1928), animated short film, 7 min. 42 sec.

Figure 1.10: Mickey imitating Lindberg, *Plane Crazy* (Disney Brothers Studio, distributed by Celebrity Pictures, sound version 1929), animated short film, 6 min.

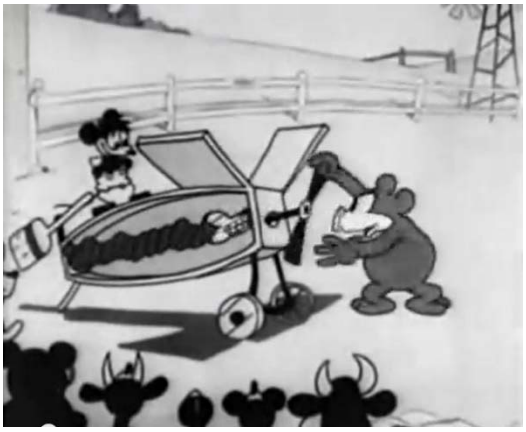


Figure 1.11: Dog engine, *Plane Crazy* (Disney Brothers Studio, distributed by Celebrity Pictures, sound version 1929), animated short film, 6 min.

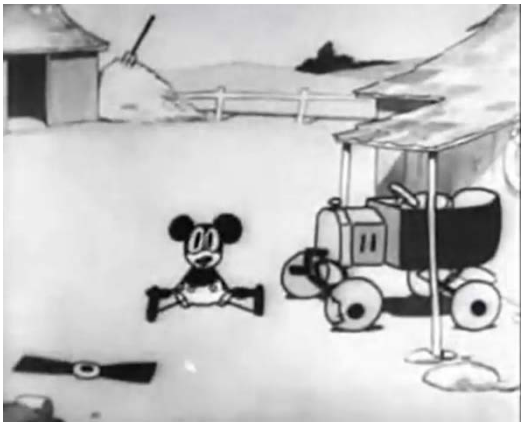


Figure 1.12: Mickey after the first crash, *Plane Crazy* (Disney Brothers Studio, distributed by Celebrity Pictures, sound version 1929), animated short film, 6 min.

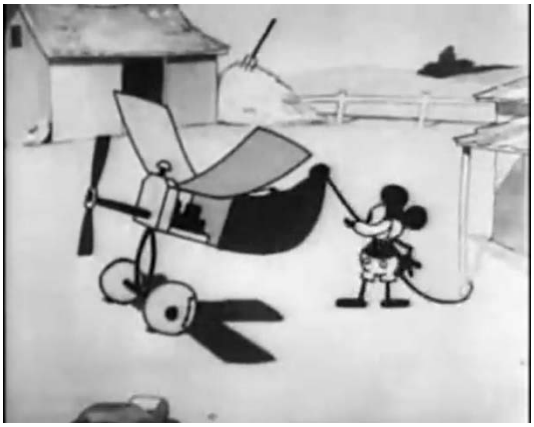


Figure 1.13: Model T transformation, *Plane Crazy* (Disney Brothers Studio, distributed by Celebrity Pictures, sound version 1929), animated short film, 6 min.

Figure 1.14: Cow chase, *Plane Crazy* (Disney Brothers Studio, distributed by Celebrity Pictures, sound version 1929), animated short film, 6 min.

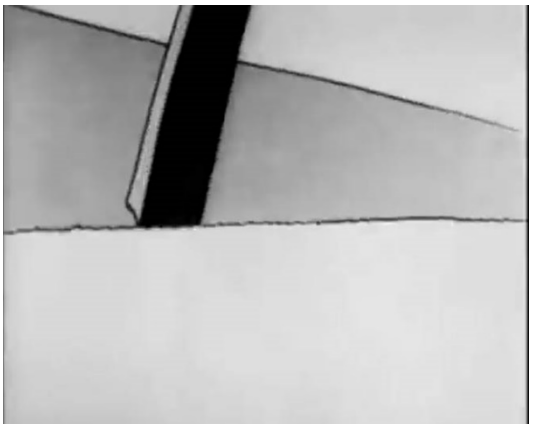


Figure 1.15: Plane bouncing unbalanced off the poles, *Plane Crazy* (Disney Brothers Studio, distributed by Celebrity Pictures, sound version 1929), animated short film, 6 min.

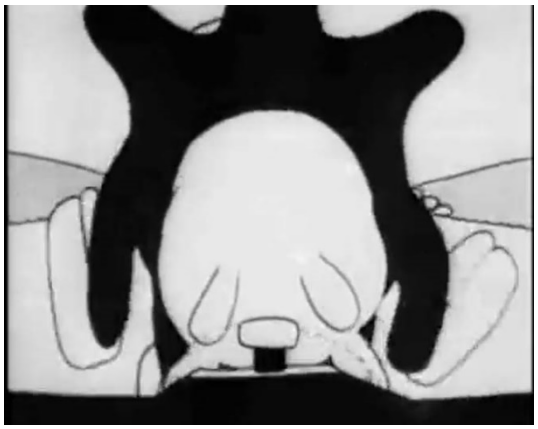


Figure 1.16: Audience in the cockpit, *Plane Crazy,* rerelease with sound in 1929, Disney Brothers Studio, Distributed by Celebrity Pictures, 6 min, animated short film.

Figure 1.17: Aerial view during second crash, *Plane Crazy,* rerelease with sound in 1929, Disney Brothers Studio, Distributed by Celebrity Pictures, 6 min, animated short film.

Figure 2.1: "Shot by the 'Monster' of His Own Creation." *The Salt Lake Tribune*, October 23, 1932.

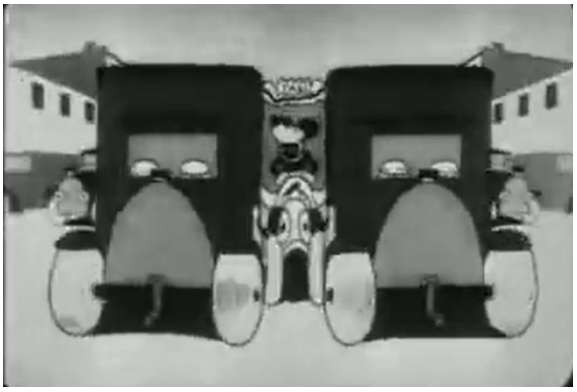


Figure 2.2: Opening Scene, *Traffic Troubles* (Walt Disney Studios, Distributed by Columbia Pictures, 1931), animated short film, 7 min. 14 sec.

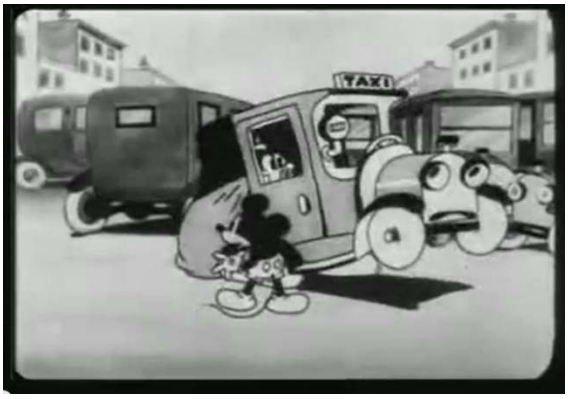


Figure 2.3: New passenger, *Traffic Troubles* (Walt Disney Studios, distributed by Columbia Pictures, 1931), animated short film, 7 min. 14 sec.

Figure 2.4: Taxi becomes background, *Traffic Troubles* (Walt Disney Studios, distributed by Columbia Pictures, 1931), animated short film, 7 min. 14 sec.

Figure 2.5: Mickey's shaking knees, *Traffic Troubles* (Walt Disney Studios, distributed by Columbia Pictures, 1931), animated

Figure 2.6: "Uh-uh-uh", *Traffic Troubles* (Walt Disney Studios, distributed by Columbia Pictures, 1931), animated short film, 7 min. 14 sec.

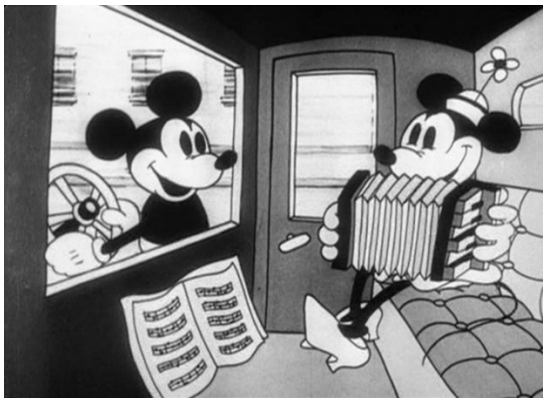


Figure 2.7: Minnie arrives, *Traffic Troubles* (Walt Disney Studios, distributed by Columbia Pictures, 1931), animated short film, 7 min. 14 sec.

Figure 2.8: Driving down a country road, *Traffic Troubles* (Walt Disney Studios, distributed by Columbia Pictures, 1931), animated short film, 7 min. 14 sec.

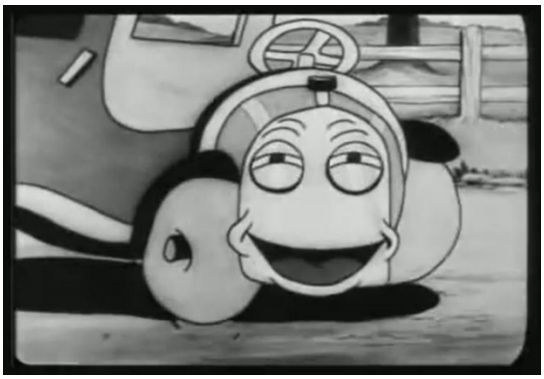


Figure 2.9: The taxi's expressive face, *Traffic Troubles* (Walt Disney Studios, distributed by Columbia Pictures, 1931), animated short film, 7 min. 14 sec.

Figure 2.10: Cab honking, *Traffic Troubles*, 1931, Walt Disney Studios, Distributed by Columbia Pictures, 7 min. 14 sec., animated short film

Figure 2.11: The crash, *Traffic Troubles* (Walt Disney Studios, distributed by Columbia Pictures, 1931), animated short film, 7 min. 14 sec.

Figure 2.12: The steering wheel*, Traffic Troubles* (Walt Disney Studios, distributed by Columbia Pictures, 1931), animated short film, 7 min. 14 sec.

Figure 2.13: Piano solo, *The Opry House* (Walt Disney, distributed by Columbia Pictures, 1929), animated short film, 7 min. 15 sec.

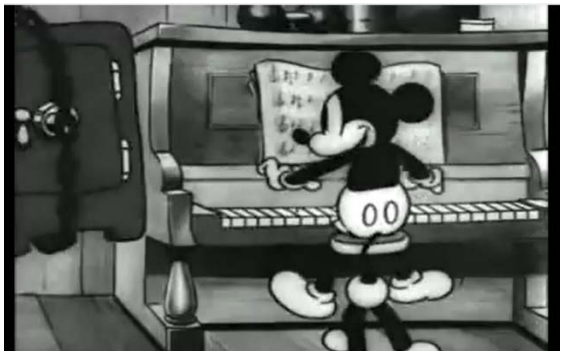


Figure 2.14: Mickey on the Piano, *Mickey's Mechanical Man* (Walt Disney, distributed by United Artists, 1933), animated short film, 6 min. 49 sec.

Figure 2.15: Dialogue Scene 1, *Mickey's Mechanical Man* (Walt Disney, distributed by United Artists, 1933), animated short film, 6 min. 49 sec.

Figure 2.16: Dialogue Scene 2, *Mickey's Mechanical Man* (Walt Disney, distributed by United Artists, 1933), animated short film, 6 min. 49 sec.

Figure 2.17: Champ goes berserk, *Mickey's Mechanical Man* (Walt Disney, distributed by United Artists, 1933), animated short film, 6 min. 49 sec.

Figure 2.18: Helicopter, *Mickey's Mechanical Man* (Walt Disney, distributed by United Artists, 1933), animated short film, 6 min. 49 sec.

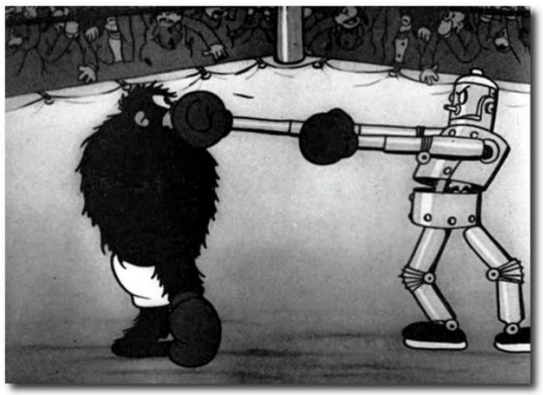


Figure 2.19: Synchronized punches, *Mickey's Mechanical Man* (Walt Disney, distributed by United Artists, 1933), animated short film, 6 min. 49 sec.

Figure 2.20: Winners, *Mickey's Mechanical Man* (Walt Disney, distributed by United Artists, 1933), animated short film, 6 min. 49 sec.

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