

## ‘Move as if Alive’: The Kinematograph as Unstable Technology of Movement and its Impact on the Spectator

Gert Jan Harkema

### Abstract

*This article argues that the kinematograph, at the time of its introduction (1896-1897), was a technology of movement before it was a method of representation. Drawing on (or, in conversation with) Tom Gunning’s observations on the image of energy, I propose that the discourse around the early moving pictures signifies a mixture of two paradigms on movement: one mechanical-dynamic and one post-mechanical or energetic idea of movement. The multiple paradigms involved destabilized the understanding of the kinematograph. Therefore, in the conclusion, I offer possibility to rethink spectatorship in-between these paradigms on movement.*

**Keywords:** Early film history; film technology; the kinematograph.

At the time of its introduction in 1896, the kinematograph was as much a technology of movement as a method of representation.<sup>1</sup> The cinema, in this respect, was a *machine* before it became a screen.<sup>2</sup> While many agree that these devices combined the attractions of movement and photographic realism, we are still short on understanding how movement was comprehended and perceived by audiences in the 1890s. By offering a close reading of the popular discourse surrounding the introduction of projected moving images in Chicago between 1896 and 1897, this paper argues that the perception of moving image machines was affected by a paradigm shift in the understanding of movement and energy that occurred right before the turn of the century. The catchphrase “move as if alive”—which appeared also as the title of an extensive *Chicago Tribune* piece on Edward Amet’s magniscope—referred to more than the attraction of “life-like” realism. It also entailed an association with at least two different ideas of movement as a fundamental element in the world.

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<sup>1</sup> André Gaudreault proposes that the term kinematograph covers the “appareil de base” (the base apparatus), such as the cinematograph, the vitascope, and the magniscope. As Gaudreault explains, the kinematograph was the generic term for moving image machines that appeared in the late 1890s while it signified the use of moving pictures in a pre-cinema context as part of a variety of cultural practices. In “The Culture Broth and the Forth of Cultures of So-called Early Cinema,” in *A Companion to Early Cinema*, eds. André Gaudreault, Nicolas Dulac, and Santiago Hidalgo (Chichester: Wiley-Blackwell, 2012), 15-17.

<sup>2</sup> Ian Christie, *The Last Machine: Early Cinema and the Birth of the Modern World* (London: BFI, 1994).

In a recent article, Tom Gunning argues that at the time of its introduction cinema presented “an energized and animated image, not only portraying this new world [of modernity and electricity], but demonstrating its motive force.”<sup>3</sup> While Gunning’s notion of an *energy image* reaching beyond realism is valuable, I will propose an alternative interpretation by concentrating on a major alteration in society’s conception of energy and movement as it emerged over the course of the late-nineteenth century. Coverage of moving picture attractions in Chicago’s popular press at the time shows that the kinematograph was associated with two paradigms of movement: a mechanical-dynamic concept of motion and the post-mechanical or energetic (electromagnetic) idea of movement. In these two different ways, movement was considered a fundamental force that the viewer, the pictures, the machine, and the outside world collectively took part in. These various and often contradictory conceptions of motion operative at the time potentially destabilized the viewer’s understanding and perception of the newly introduced moving picture machine.

Chicago audiences in particular might have been sensitive to the changing discourse on movement while perceiving the newly introduced kinematograph. The city became synonymous with a particular kind of technological modernity, where the gospel of progress of the “mechanical arts” and “applied science” prevailed.<sup>4</sup> Chicago had successfully hosted the 1893 Columbian Exposition in Jackson Park and by 1896 the downtown area had more electrical lightning and novel forms of mobility (e.g. elevated railroads and electrical cable cars, etc.) than any other city in the United States. This article will extensively draw on newspaper material from Chicago in order to outline the discourse on movement in relation to the kinematograph. While the 1890s newspaper press was notoriously sensationalist and liberal with the truth, these publications adequately addressed the contemporary experiences of their audience, hence they are valuable as evidence of popular ideas and beliefs.<sup>5</sup> Through a detailed study of *The Tribune*’s “Move as if alive” article alongside other sources, the first section of this essay concentrates on movement as mechanical-dynamical flow, while the second part focuses on bursts of movement and electricity as potential sources of disruption. I conclude by briefly reconsidering the spectator’s position, away from one that is passive and immobile, towards one that is phenomenologically involved in the movement and thus part of the spectacle.

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<sup>3</sup> Tom Gunning, “Animating the Nineteenth Century: Bringing Pictures to Life (or Life to Pictures?),” *Nineteenth-Century Contexts* 36.5 (2014): 460.

<sup>4</sup> Donald Miller concludes in *City of the Century: The Epic of Chicago and the Making of America*: “By 1893 [...] Chicago had the busiest and most modern downtown in the country” (New York: Simon and Schuster, 1996), 16. Leo Marx reminds us that the word “technology” did not enter the American discourse before 1900 while concepts as “applied science” and “mechanical arts” had an ideological connotation of progress. “Technology: The Emergence of a Hazardous Concept,” *Technology and Culture* 51.3 (July 2010): 561-577.

<sup>5</sup> As Michael Schudson writes “Life was a spectacle as never before for many, and the [New York] *World* spoke faithfully to that experience of the many.” In *Discovering the News: A Social History of American Newspapers* (New York: Basic Books, 1978), 119.

## ‘Life-Like’ Beyond Realism

Similar to coverage in other US cities, a recurring claim in the Chicago press about the arrival of the vitascope, the cinematograph, and the magniscope, was the moving picture’s life-like resemblance. The Chicago newspaper *The Inter Ocean*, for example, introduced the vitascope as reproducing “an exact scene from life.”<sup>6</sup> Meanwhile, the cinematograph could represent “with a realism which no word picture could.”<sup>7</sup> Motion was the fundamental element of this life-likeness. A reviewer in *The Tribune* describes the moment of first seeing movement as follows: “At first focus the view suggests the stereopticon, but in an instant it is given life, motion, and coloring.”<sup>8</sup> The newspaper headline relating to Amet’s magniscope, “Move as if Alive,” can be seen as another variation on this motif. Yet, these claims of life-likeness did not entail a perfect moving picture, nor did audiences seem to mistake the representation for reality.<sup>9</sup> Images were in black and white (or hand colored), silent, and often contained significant flicker. Frequently, technical failures disrupted the show, and these instances were mentioned in the papers as well.<sup>10</sup> Therefore, it is more likely that the comment about ‘life-like’ movement entailed an engagement with a broader notion of movement in modernity.

What was ‘life-like’ was not necessarily a duplication of movement in appearance, but movement as energy, as a flow, as effect, and as a possible disruptive force. Looking at the reception of Lumière films in another context, Pasi Väliäho, like Gunning, concludes that “the so-called lifelikeness and emotional force at issue here is not so much about what films show but more about the movement and twitching of the cinematographic image itself.”<sup>11</sup> The movement of the kinematograph thus “appears like an energetic field that directly involves our bodily dynamics.”<sup>12</sup> Hence, it is this energy, a vitality transgressing the borders of the screen and the machine, which made the early moving image so life-like. While Väliäho focuses only on the image, the technology of the moving picture machines and the profilmic reality can also be included in this schema of movement. Just as the “Move as if Alive” article portrays Edward Amet’s routine of filming in the Chicago streets, mechanically developing his films and

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<sup>6</sup> *Chicago Inter Ocean*, July 5, 1896.

<sup>7</sup> *Chicago Inter Ocean*, October 4, 1896.

<sup>8</sup> *Chicago Tribune*, July 5, 1896.

<sup>9</sup> In terms of the illusion of reality, the discussion about the approaching train and its spectators diving away in fear—“cinema’s founding myth”—remains unresolved. As Martin Loiperdinger argues, “no one has yet proven the existence of a panic among the audience for the cinematographic locomotive pulling into the station of La Ciotat.” Meanwhile, Stephen Bottomore used the trope of the “panicking audience” that mistook the representation for reality as an indication of the spectator’s trouble with perspective. Martin Loiperdinger, “Lumière’s *Arrival of the Train*: Cinema’s Founding Myth,” *The Moving Image* 4.1 (2004): 89-118. And Stephen Bottomore, “The Panicking Audience?: early cinema and the train effect,” *Historical Journal of Film, Radio and Television* 19.2 (1999): 177-216.

<sup>10</sup> The *Chicago Tribune*, for example, writes on August 11, 1896 that a show with the phantoscope at the Great Northern Roof Garden should be considered a failure and a disappointment.

<sup>11</sup> Pasi Väliäho, *Mapping the Moving Image: Gesture, Thought and Cinema Circa 1900* (Amsterdam: Amsterdam University Press, 2010), 94.

<sup>12</sup> Väliäho, *Mapping the Moving Image*, 18.

projecting them in front of an audience, movement was equally present in the camera-machinery, the development of film, the projection device, the images on screen, and the bodies of the spectators. As I will explain below, the multiple discourses on movement and the energy involved shaped audiences understanding of the newly introduced cinematograph as an attraction that could arouse a potentially disruptive viewing experience. Contrary to previous forms of kinetic attractions, movement could now be mechanically stored and projected while maintaining an existential bond with the profilmic reality.

### **Mechanical Procedures: Amet and His Magniscope**

After the vitascope and cinematograph's introduction in Chicago during the summer of 1896, several accounts of moving picture shows describe movement as a process, as an ongoing entanglement between representation and reality. Movement, in this respect, functioned as an existential bond that secured a kind of truth. "Every movement of the picture is perfect to the life," as *The Tribune* reviews the cinematograph in October 1896.<sup>13</sup> The same newspaper notes that through details and motion, the vitascope communicated "the general character of the natural scene."<sup>14</sup>

Meanwhile, coverage of the machines themselves maintained a kind of conundrum. The cinematograph, for instance, is described by *The Inter Ocean* as "a huge magic lantern, provided with a clockwork for the moving of the continuous roll of photograph negatives."<sup>15</sup> Similarly, the vitascope is portrayed in *The Tribune* as a "clockwork for moving the photographs before the lens," and, at an earlier occasion "a remarkable manipulation of scientific forces."<sup>16</sup> But soon after these early reviews of the moving image machines, newspaper pieces appeared that explain how this complex machinery inside the camera and the projector 'works'. In a way, these newspaper articles try to unwrap the cinematograph's entanglement with reality. The Lumière device, for example, was defined as a "marvelous little machine" that is "easily described," even though the writer wrongfully attributes the stability of the projected image to the distance between the photographs.<sup>17</sup> In these articles movement is depicted as a *process*. Motion was not only something that appeared on the screen, but it was also located in the apparatus of projection, as much as it was present in the film strip and its recording. Indeed, motion on screen is only the end result of a series of mechanisms and procedures. In this manner, the articles address movement at multiple levels and stages.

The "Move as if Alive" article also addresses motion as a process and as an element that defines the various stages of recording, developing, and projecting film. The piece meticulously follows the production of the moving pictures, with the objective to exhibit "the little transparencies" within the process. The writer states that while everybody knows how the images

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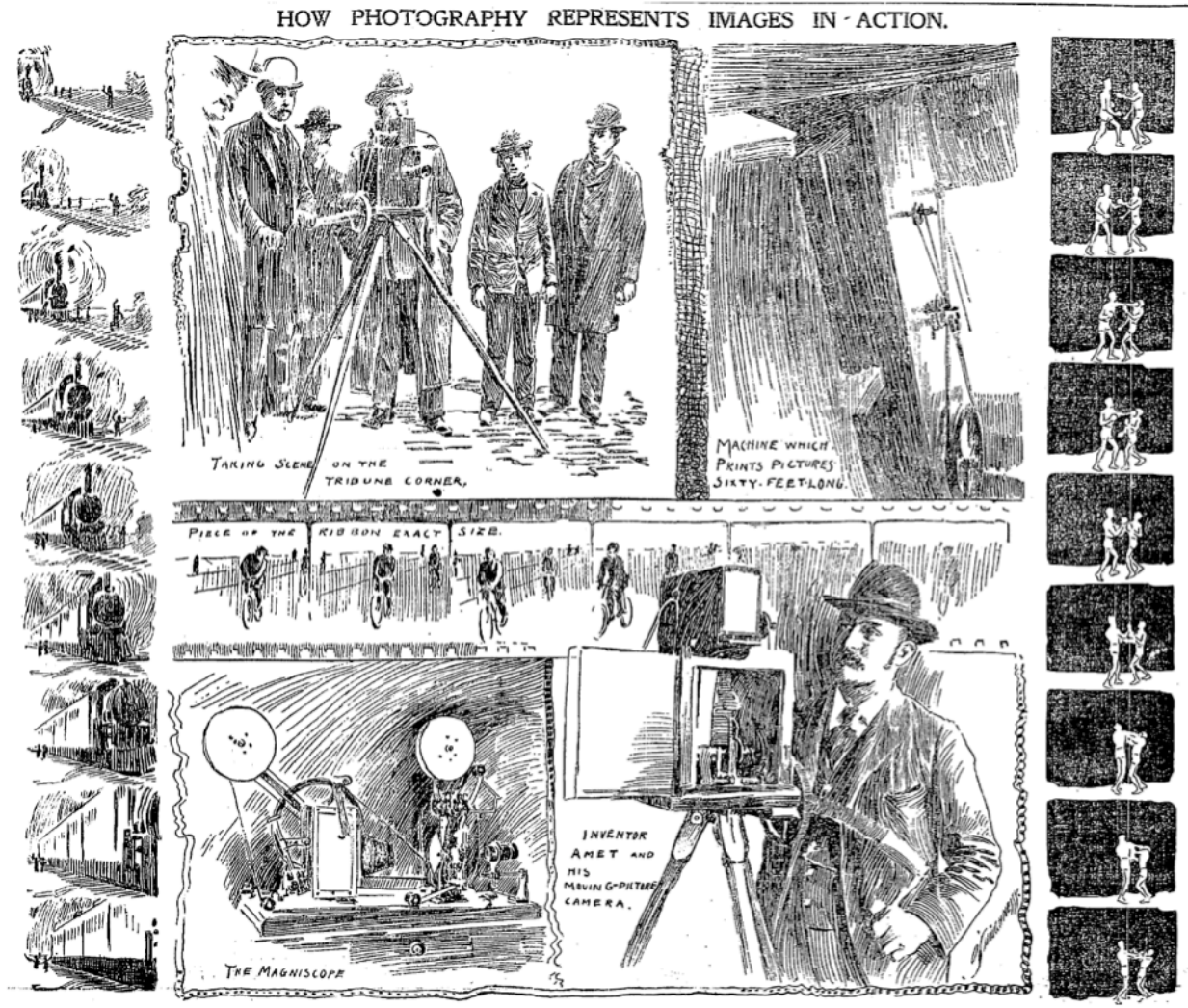
<sup>13</sup> *Chicago Tribune*, October 5, 1896.

<sup>14</sup> *Chicago Tribune*, July 5, 1896.

<sup>15</sup> *Chicago Inter Ocean*, September 10, 1896.

<sup>16</sup> *Chicago Tribune*, August 30, 1896, and *Chicago Tribune*, July 21, 1896.

<sup>17</sup> *Chicago Tribune*, October 5, 1896.



**Fig. 1** Courtesy of ProQuest Historical Newspapers / *Chicago Tribune*

look when projected, “what they really are, how made, and how exhibited, is so much a source of ignorance.”<sup>18</sup> Tracking the different stages of recording, development, and projection, the article describes movement as a flow. It starts in the profilmic reality, goes through different stages of machinery and humans, and ends up on the white canvas screen in the popular theater. The illustrations included in the newspaper article depict the various stages of recording and processing film (Fig. 1). Under the header “how photography represents images in-action” we see (clockwise) four drawings: a crowd gathered around the camera, a film printing machine, a portrait of Amet with his camera, and the magniscope projector. Across these pictures there is a film strip depicting people on bicycles (a “piece of the ribbon exact size” [sic]).

<sup>18</sup> *Chicago Tribune*, April 4, 1897.

The description of the journalist's day with Amet starts with a crowd that has gathered in the street. Amid all the people, the filmmaker is "busily" recording the scene with his ostensibly self-invented camera.<sup>19</sup> The activity of recording is accurately situated within the street crowds. After this description of the crowd, the writer states that Amet starts recording, by turning the crank, as a careful operation between man and machine. When the recording is finished, Amet relocates and moves through the city to another scene of interest, the train platform. Here Amet, again, "was industrially turning the crank of his instrument." As "the moving picture machine wants motion," the city of Chicago with its crowded streets, busy train station and "numerous other events", are conceived as the raw ingredients of movement that the camera feeds on. The filmmaker, Amet, is also constantly described in motion, as he is on the road from one scene to another. And when he is in stasis, he operates the machine through the crank. It is quite telling that a group of people on the railway platform, assumingly posing for the photographic camera and thereby contradicting the movement of their surroundings, "were nearly struck by the engine [the locomotive] before they could break the rigidity of their poses." Thus it is movement that characterizes the metropolitan city and the moving picture machine adheres to that reality.

After the sections on recording, the mechanisms inside the camera as well as the procedures and energies involved in the development of the film are described. Inside the camera "the mechanism *feeds* the film strip" (emphasis added). Quite effortlessly, the article moves to a section that reports on the development process. Throughout the text, each stage of development is characterized by a form of mechanical movement. In this way, motion appears as a recurring and continuous force. The development of the strip, for example, is done with "a wonderfully accurate little mechanical contrivance operated by a water motor" that powerfully punches through the strip.<sup>20</sup> The verb "feed" appears for a second time, as the "machine must feed the pictures for exhibition purposes." And for a third time, concluding that the feed mechanism is vital for a smooth picture. Printing a positive picture from the negatives involves the aid of a "special device" through which the films are unrolled and pressed together, using the right aperture, "in the instant of time which elapses while the films are passing the opening the printing is done." Thus, in this description, the film rolls are constantly involved in some kind of process, each one indicating a variety of movements.

### **Mechanical Movement and the Continuity of Energy**

What we recognize in this extensive description—published in one of the city's most widely read newspapers—is a locally specific "operational aesthetic."<sup>21</sup> Chicago audiences were eager to read about the mechanics behind the trick in the popular press. But what is most relevant for our current discussion is how these operations are depicted in the newspaper piece. Emphasizing the

<sup>19</sup> Interestingly, in the newspaper piece the camera is incorrectly introduced as the magniscope. The magniscope was the name of the projecting device. Amet might have used a kinetographic camera patented by Nicolas Nelson, a mechanic that worked with Edward Amet and his brothers. See Kekatos, "Edward H. Amet and the Spanish-American War film."

<sup>20</sup> A water motor is a small engine quite similar to an applied steam engine.

<sup>21</sup> Neil Harris, *Humbug: The Art of P.T. Barnum* (Chicago and London: The University of Chicago Press, 1973), 73-82. Chicago's post-Columbian exposition audiences might have been particularly sensitive to mechanical explanations.



processes of filming, developing, and projection, the moving picture machine is presented to the readers as the attraction that performs the mechanical splitting and assembling of the reality's flows of movement. It is depicted as a piece of machinery that relocates motion from the streets to the theaters.

In this way, the "Move as if Alive" article relates the kinematograph to the dominant idea that movement entailed more than appearance. In a broader perspective, movement was seen as the manifestation of energy while both energy and motion appeared as a continuous flow. In his book *Energy, Force and Matter*, Peter Harman suggests that during the second half of the nineteenth century movement was considered the underlying principle of all objects in the world. In his formulation of this paradigm of movement, "light, heat, electricity and magnetism [...]" these are now treated as forms of motion, as different manifestations of the same fundamental energy."<sup>22</sup> Motion becomes the elementary ingredient already available in a fundamentally mechanical and dynamic universe.<sup>23</sup> The two laws of thermodynamics that were identified halfway through the nineteenth century created a worldview consistent with endlessly convertible and transformable flows of energy. The conceptual bundling of energy and movement suggested a way of seeing that was mechanical, universal and quantifiable.

*The Tribune's* "Move as if Alive" article demonstrates how the kinematograph was explained to Chicago readers in terms of the mechanical-dynamic paradigm of movement. It describes motion not just on the screen, but also on multiple levels between reality, the camera, and the projected representation. Movement crosses humans, objects, mechanisms, and technology. What we can read in the newspaper piece is a heightened awareness of movement as a flow. Movement is an energy that the camera, the developing mechanisms, and the projecting device (the magniscope) transform and redirect. In other words, moving pictures as an extensive mechanical procedure quantifies energies (movements, gestures, approaching trains) in amounts of images. In an earlier piece on the cinematograph, *The Tribune* wrote, "To show a person in the act of making a bow requires about fifty photographs. The lifting of the hat requires a dozen, and so on."<sup>24</sup> Hence the motion of both kinematographs, the cinematograph and the magniscope, functions as a method to store, measure, and calculate energies into numbers of pictures.

Moreover, the article also explains that certain moments of high energy, such as the arrival of a train or the movement of waves on the shore are especially challenging to capture. These instances require special skills from Edward Amet, the camera operator, as the turn of crank has to be done at the right speed in order to match the action before the camera. Thus the article presupposes a bond between the movement in the profilmic reality, the turn of the crank and the apparatus, and moving pictures recorded. These moments of high energy correspond to Gunning's concept of the "image of energy" in which nineteenth-century technologies could

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<sup>22</sup> Peter M. Harman, *Energy, Force and Matter: The Conceptual Development of Nineteenth-Century Physics* (Cambridge: Cambridge University Press, 1982), 1.

<sup>23</sup> Lynn Voskuil, "Introduction. Nineteenth-Century Energies," *Nineteenth-Century Contexts* 36.5 (2014): 391.

<sup>24</sup> *Chicago Tribune*, October 5, 1896. This comment also echoes Eadweard Muybridge's study on human movements, as well as modernity's ongoing effort to control the human body and make it as efficient as possible, as Anson Rabinbach argues in *The Human Motor: Energy, Fatigue, and the Origins of Modernity* (Berkeley and Los Angeles: University of California Press, 1990).

make energies visible.<sup>25</sup> Yet, while Gunning relates the image of energy to ghostliness and otherworldliness, the discourse on moving pictures in Chicago voices a more rational and ‘scientific’ concern. The flow of movement that *The Tribune* article presents is fundamentally worldly and recognizable to its metropolitan readers. The energies that the moving pictures quantify and make visible originate from familiar crowded streets, trains, and railway stations. For the Chicago audiences that attended kinematograph shows, the energies that the technology made visible were inherently familiar. In this way, the idea of a mechanical-dynamic flow of movement that the moving pictures participated in might have established a form of continuity or even an existential bond between the outside reality and the space of projection.

### Post-Mechanical Paradigm of Movement

However, the flow of movement presented by the kinematograph was fragile and delicate. As much as there was movement during the early moving picture shows, there was also stasis.<sup>26</sup> During its projection, the flow of movement could easily be disrupted. Individual films ran for about forty seconds, depending on the speed of projection. In other instances, a scene was projected in a loop, allowing viewers to watch the action repeating itself multiple times over a number of minutes. An early effort in Chicago to establish a more continuous and smooth show was the use of two vitascopes at Hopkins’ South Side Theater.<sup>27</sup> These projections ended abruptly and unexpectedly: there were breaks between the scenes in which the presenter took center stage. In this way, motion appeared intensified (or concentrated) and fragmented. Most early projectors allowed backwards projection as well. Yuri Tsivian defines this reverse projection as the “optical refutation” of the continuity of energy (that is, the optical refutation of the mechanical world-view).<sup>28</sup>

In the course of the 1890s different theories on movement and energy appeared that refuted mechanical notions on the continuity and preservation of motion. This new paradigm provided a way to understand the world in terms of discontinuities and intensities. In this way, this post-mechanical way of conceiving motion provided another method of comprehending the moving pictures, one that was active alongside the mechanical-dynamic descriptions. Instead of movement as a flow, motion is depicted in these instances as a burst of motion and as an energy thrown on the screen. The article on Amet and his magniscope, for example, describes how at each instant “light is *suddenly* thrown through it [the picture] on screen [...] And the projected

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<sup>25</sup> Gunning, “Animating the Nineteenth Century: Bringing Pictures to Life (or Life to Pictures?),” 469.

<sup>26</sup> Vito Adriaenssens and Steven Jacobs write that paradoxically, the medium of movement “seems to have been fascinated by stasis and stillness.” In “The sculptor’s dream: Tableaux vivants and living statues in the films of Méliès and Saturn,” *Early Popular Visual Culture* 13.1 (2015): 41.

<sup>27</sup> According to a review in the *Chicago Inter Ocean* (July 5, 1896) there were already two vitascopes operative during the first show at Hopkins’ South Side Theater in Chicago, securing the pictures to be shown “in rapid succession.” The practice of operating two projectors seems to have been unique, as I was unable to trace evidence of this practice at other theaters in Chicago and other US cities.

<sup>28</sup> Yuri Tsivian, *Early Cinema in Russia and its Cultural Reception* (London and New York: Routledge, 1994), 57. Tsivian, writing on the introduction of cinema in Russia after 1906 focuses on how the moving pictures represented Eisenstein’s theory of relativity.



image is made to appear to move.”<sup>29</sup> At an earlier occasion, describing the vitascope, the newspaper wrote “in an instant it is given life, motion, and coloring.”<sup>30</sup> These sudden bursts of light and movement destabilize the natural flow of motion.

Electromagnetics, as Christoph Asendorf writes in his book *Batteries of Life*, contributed to a post-mechanical paradigm in which objects and energies flow immaterially, invisibly, and more unexpectedly than in the dynamic, mechanical world-view.<sup>31</sup> Whereas in the mechanical-dynamical conception of the world energy appeared visible and audible, like the steam and noise of a train, in the post-mechanical paradigm, movement is seen as the emblem of energy, and could appear abruptly at any instance. Above all, electricity became a “life force.” It breathed life into inanimate objects. As 1890s Chicago audiences were eager to read, these new forms of energy were both powerful and life threatening.<sup>32</sup> Movement as energy also signaled the possibility of disruption. Electricity symbolized both the continual motion fundamental to modernity as well as the shocks and assaults on the body that came with it.

It is interesting to note that the descriptions of moving picture machines appeared at the junction between the two different paradigms. The popular discourse of 1896-1897 Chicago demonstrates the mixture of connotations and understandings that arose with this new machine. Electricity, for example, was frequently associated with the movement of the cinematograph, even though most devices were hand-operated and not all shows used an electrical light source. Initially, the vitascope was introduced to the *Tribune* readers as “a combination of electrical forces reproducing scenes from life [...]”<sup>33</sup> Another article from later that month writes that details were thrown on the screen “by a remarkable manipulation of scientific forces.”<sup>34</sup> The *Inter Ocean* described that before the machine’s premiere, “The electrician for the Cinematograph has been in town all week, fixing the wires and the switchboard.”<sup>35</sup> And even in a *Tribune* article that denounces the cinematograph as a device “easily described,” the author mistakenly observes that there are a number of electric wires attached to the projecting apparatus.<sup>36</sup>

Notions of post-mechanical and electrical movement and energy might have been especially alluring to Chicago audiences. The Columbian Exposition of 1893 was renowned for

<sup>29</sup> *Chicago Tribune*, April 4, 1897. Emphasis added.

<sup>30</sup> *Chicago Tribune*, July 5, 1896.

<sup>31</sup> Christoph Asendorf. *Batteries of Life: On the History of Things and their Perception in Modernity* (Berkeley and Los Angeles: University of California Press, 1993). See also Harman, who describes how Hendrik Lorentz “envisaged an electromagnetic rather than a mechanical view of nature, denuding the ether of mechanical properties.” In *Energy, Force, Matter*, 7.

<sup>32</sup> For example, although the Chicago public was fascinated by electricity and new forms of movement at the Columbian Exposition, it fiercely opposed high-voltage lines for electric streetcars. *The Tribune* even published a piece titled “Death in the Air.” See Miller, *City of the Century*, illustration 16.

<sup>33</sup> *Chicago Tribune*, July 5, 1896.

<sup>34</sup> *Chicago Tribune*, July 21, 1896.

<sup>35</sup> *Chicago Inter Ocean*, September 10, 1896.

<sup>36</sup> *Chicago Tribune*, October 5, 1896. The writer clearly means the cinematograph itself, and not the light source, as he writes, “It is a small, square box of glass and wood hitched to a number of electric wires.”

its promotion of electricity, as contemporaneous authors remarked.<sup>37</sup> Not only were the amount of light bulbs used at the exhibition larger than the total present in any American city, but electricity was also presented there as a novel source of power for transportation in the form of electrical-powered moving sidewalks and a railway.<sup>38</sup> Electricity became closely affiliated not only with the spectacle of light, but also with movement and urban crowds. It established Chicago's status as the frontier of technological modernity. Soon after the exhibition, the city would be nicknamed the "Electric City" due to the electrical lights illuminating the downtown streets.<sup>39</sup> As a result of the world fair and the popular scientific press, local Chicago audiences seem to have been well aware of emerging notions on energy and movement. This new knowledge entailed that the earth and its atmosphere contained invisible energies that could be bundled and released. Thus, electricity was both a life force and a lethal threat. To convert it into movement or moving images could be seen as a precarious affair.

In April 1897, when the article "Move as if Alive" appeared in the *Tribune*, misunderstandings about electricity's contribution to the moving pictures had more or less vanished. The newspaper explained earlier that the involvement of electricity was rather minimal.<sup>40</sup> Nevertheless, I would argue that associations with electricity still influenced the reception of the kinematograph in Chicago and its surrounding discourse. Paradoxically, movement in the projected pictures is described in one instance as an orderly, mechanical flow, while the same element of motion is explained as a sudden burst and an eruption of energy. The *Tribune*, for example, narrates that "figures begin to move symmetrically, and the bustle and activity of real life are before the observer."<sup>41</sup> The article on Amet's magniscope likewise portrays movement as a powerful force. Motion as the visual rendering of energy is omnipresent in Chicago's metropolitan streets, and Amet's machine absorbs, redirects, and stores this energy. The moment of projection, subsequently, is described as of moment of release. Through the movement of the pictures, energies are released before the public. Therefore, the local popular discourse on the kinematograph contained an eclectic mix of two paradigms on movement. The projected moving-picture attraction and its technological procedures were explained as an event of mechanical-dynamical movement, while, at the same time, they also alluded to the newly emerging post-mechanical electromagnetic paradigm. In any case it was movement itself, not as

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<sup>37</sup> See, for example, J. P. Barrett, *Electricity at the Columbian Exposition* (Chicago: R. R. Donnelley, 1894).

<sup>38</sup> David. E. Nye, *Electrifying America: Social Meanings of a New Technology, 1880-1940* (Cambridge: MIT Press, 1990), 38-41.

<sup>39</sup> Robert Muccigrosso, *Celebrating the New World: Chicago's Columbian Exposition of 1893* (Chicago: Ivan R. Dee, 1993). See also Harold L. Platt, *Electric City: Energy and the Growth of the Chicago Area* (Chicago: University of Chicago Press, 1991).

<sup>40</sup> *The Tribune* wrote about the cinematograph on August 30, 1896. "Contrary to the general belief, which doubles arose out of the association of Edison's name with the American invention, the light is the sole connection of electricity with the apparatus." But, as explained above, on October 5, *The Tribune* repeats the electrical association with the cinematograph by describing "a small, square box of glass and wood hitched to a number of electric wires."

<sup>41</sup> *Chicago Tribune*, July 5, 1896. Most likely, this observation concerns the Edison kinetoscope film picturing the Leigh Sisters' *Umbrella Dance* (1895).

supportive to the representation but *as* the representation, which was expressed as a fundamental element of this new technology.

## The Spectator

If we hold that popular discourse in some way originates from the audience's experience, or conversely, that Chicago audiences were influenced by the discourse on movement and the cinematograph, then the manifestation of multiple paradigms in that discourse allows us to theorize on the spectator's experience. The presence of two different ideas of motion and energy in the popular press' coverage indicates the temporal absence of a solid conceptual framework regarding the newly introduced moving pictures. Contradictory explanations could further obscure the spectator's already limited understanding of the vitascope, the cinematograph, and the magniscope.

Gunning argues that the late-nineteenth century's images of energy aroused an uncanny experience within spectators due to the visibility of energies that would normally remain unseen.<sup>42</sup> Yet, for the cinematograph this uncanny experience remains hard to locate in Chicago's popular press. The aesthetic experience that the historical audiences participated in seemed not so much directed toward a ghostly otherworldliness, but was rather aimed at the very earthly and worldly context of modernity. If we recognize the cinematograph as a technology of movement situated at the cross-section of two paradigms, the spectator's position needs some revision. Although such a project would reach beyond the scope of this article, we could sketch some preliminary conclusions.

In the specific context of the highly technological modernity of late 1890s Chicago, the comment of "move as if alive" should not be understood simply as a claim of realism. The "realistic reproductions [...] wonderfully lifelike and distinct" entailed the presentation of movement as a vital force in this particular modern world-view, as much as it concerned photographic realism.<sup>43</sup> In each case, movement was not just something that occurred on screen. Whereas photographic realism ideally makes the medium transparent, the cinematograph's capacity as a technology of movement arranges the device itself as the center of attention. Yet the effect of this mediation was not to distance the spectator but to involve him or her in the spectacle of motion. Movement was situated inside the projecting apparatus, during the processing and development of the film strip, inside the camera, at the site of the operator's body, and as part of the external world. And as a flow, even the screen is not the end point of the cinematograph's movement. The spectator became part of the flow of movement, similar to the manner in which the *flâneur* takes part in the flux of the world.<sup>44</sup> This challenges the duality widely accepted in film theory between the mobility of the images on the screen, and the

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<sup>42</sup> As Gunning writes, "The nature of the encounter with dynamic cinematic image was more uncanny, introducing viewers to a new immaterial, purely visual, energy and its power over the viewer's imagination." In Gunning, "Animating the Nineteenth Century: Bringing Pictures to Life (or Life to Pictures?)," 462.

<sup>43</sup> *Chicago Inter Ocean*, August 30, 1896.

<sup>44</sup> As Nancy Forgiione argues, the *flâneur* was not just a distanced spectator, but was also sensuously involved in the outer world. In "Everyday Life in Motion: The Art of Walking in Late-Nineteenth-Century Paris," *The Art Bulletin* 87.4 (2005): 664-687.

immobile and passive position of the viewer.<sup>45</sup> Movement, in the case of the earliest moving pictures, was something in which the spectator (the human subject) and inanimate technological objects (the camera and projection apparatuses) produced together. In that respect, the movement of the kinematograph provides another example of what Mark Seltzer labels “the radical and intimate *coupling* of bodies and machines” in the late-nineteenth century.<sup>46</sup> Machines and bodies both participate in the flow of movement. Movement as animation, as “impart[ing] life, vitality, and motion,” was something that occurred between objects and bodies.<sup>47</sup>

Movement was the fundamental characteristic of moving images. What I have been arguing is that the Chicago popular discourse indicates that the attraction of movement was not just limited to the images on screen. The popular observation “move as if alive” thus entailed something more than a claim of realism. Life-like movement could be considered as the attraction of movement involving a broader concern with motion; one that stretched from Chicago’s crowded streets through machines and pictures to the realm of the auditorium. The discourse through which movement was understood in 1896 and 1897 was subject to a significant paradigm shift. This altered the conception of the kinematograph, as the technology of moving pictures could now be apprehended in various ways. To “move as if alive” could now mean both the kinematograph’s capacity to partake in the flow of life, and its capacity to disrupt that same flow through its intensity and fragmentation. In a mechanical way, the kinematograph could redirect and represent the late nineteenth-century’s existing energies from the street to the local theater stages and dime museums. At the same time, this technology of movement signaled the burst of discontinuous, electromagnetic energies that were recognized as a paradoxically lethal source of life. Hence, the *movement* of the moving pictures was inherently unstable. This instability was not just due to technical constraints. Delivering a shaky image, containing significant flicker, the technology of moving pictures itself was characterized by a contradiction in understanding. Yet, in terms of discursive practices, these contradictory notions on movement were not all negative, as they stirred a truly modern experience of being-in-motion: a collective effort between humans and technology.

Gert Jan Harkema is a doctoral candidate in Cinema Studies at Stockholm University’s Department of Media Studies.<sup>48</sup>

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<sup>45</sup> As Anne Friedberg writes, “as film spectators, as television viewers, as computer users, we are immobile in front of screens full of images and sounds. Facing a screen, the spectator/viewer/user is caught in a phenomenological tangle—twin paradoxes—of mobility and immobility (mobility of the images; the immobility of the spectator) and of materiality and immateriality (the material space of the theater, domicile, or office and the immateriality of the cinematic, televisual, or computer image).” In *The Virtual Window: From Alberti to Microsoft* (Cambridge: MIT Press, 2006), 150.

<sup>46</sup> Mark Seltzer, *Bodies and Machines* (New York and London: Routledge, 1992), 13.

<sup>47</sup> Jackie Stacey and Lucy Suchman, “Animation and Automation: The Liveliness and Labours of Bodies and Machines,” *Body & Society* 18.1 (2012): 1-46.

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