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Muybridge in Minnesota

by Brad Chisholm

Photographer Eadweard Muybridge is considered, if not the father of the motion picture, then at least its grandfather. His revolutionary work in instantaneous photography directly inspired inventors in Europe and North America to create the earliest motion picture cameras.¹ Muybridge's breakthrough came in 1878 when he used twelve cameras with trip wires to photograph running horses at split-second intervals. He had been commissioned to settle a "dispute among horsemen," as he often put it, as to whether a trotting horse ever had all four hooves off the ground at once, a phenomenon known as unsupported transit. Muybridge's photographs did what the human eye could not. He proved that unsupported transit was real, but in doing so he achieved something more spectacular—he had created the first sequence of "freeze frames" the world had ever seen. His work was soon heralded in *Scientific American* and *The Photographic News*. He was feted by the scientific communities of Paris and London, and he became an internationally celebrated lecturer on the topic of photographing motion.²

The lectures Muybridge gave in such places as New York City, London, Paris, Berlin, and Philadelphia are well-documented in many of the two-dozen books that have been written about the man and his work, including four published since 2010.³ Yet there remain gaps in the details of Muybridge's storied career. One such gap involves his

Midwest tour of 1888. We know he gave a lecture in Milwaukee on June 21st of that year, and we know that he was interviewed in Winnipeg on July 31st, but what did he do in between?⁴ I teach in Minnesota, which lies precisely between those two points on the map, and in 2014 created an undergraduate seminar devoted to answering that question. I did not know ahead of time what we would find, if anything. As it turned out, what we found challenged my perception of Muybridge's career and allowed my students to experience the joy of being the first to discover new information about a prominent historical figure.

Historians who mention Muybridge's 1888 visit to the Midwest have done so thus far only in general statements such as "Muybridge continued to lecture through the summer and fall of 1888, in the Midwest as well as Boston, New York, and Philadelphia."⁵ I became aware of a possible Muybridge/Minnesota connection when I read in Edward Ball's *The Inventor and the Tycoon* (2013) that Muybridge planned to extend his speaking tour to Minnesota.⁶ His source, the surviving two pages of a longer letter Muybridge wrote on June 22, 1888, is the sole source of information on the Midwest tour that any Muybridge biographer ever cited.⁷ The anachronistically entitled website, *The Compleat Muybridge*, has two additional pieces of information—newspaper citations that place Muybridge in Milwaukee and Winnipeg—but that is the extent of the evidence at the time of this writing.⁸

Did Muybridge visit Minnesota? If so, did he merely pass through or did he stop here and give one of his famous lectures? If he gave a lecture, how was he received? What would it have been like to be in attendance? My students and I were determined to find out.

My Preparation

I prepared for the seminar by reading everything I could on Muybridge and by emailing Muybridge scholar Stephen Herbert of Hastings, England, the creator and keeper of the *Compleat Muybridge* website.⁹ Stephen briefed me about the Muybridge collections at various museums and archives. None of my undergraduates had ever visited an archive's website before, let alone an actual archive, and the concept of historical collections was new to them. If my seminar achieved nothing else, their exposure to online archival research was a worthy accomplishment. As a historian, I had spent decades working with archival collections and had long ago lost sight of just what an untypical activity that is.

I also consulted Muybridge biographer Marta Braun, Professor of Photographic History at the University of Ryerson in Toronto.¹⁰ Her work helped me understand the state of photography in the late 19th century and why Muybridge had caused such a sensation. Photography before the 1870s required non-moving subjects because it took several seconds of exposure to render a sharp, focused image. When a new process called gelatin dry plate photography became available around 1872, Muybridge used it in conjunction with rapid automated camera shutters of his own design and a secret developing chemical (later revealed to be ammonia) to successfully take high-speed photographs of moving horses. By 1878 Muybridge was using multiple-cameras set up in a line to capture 12-24 individual photographs in quick succession. Each camera required only 1/2,000 of a second of exposure.¹¹

In further preparation for the class I contacted scholar Stephen Barber, from Kingston University, London, best known for a book he wrote on the subject of Muybridge's personal scrapbook.¹² Barber examined this vast collection of newspaper clippings and magazine articles as though the scrapbook itself was an art object or a holy relic. He convinced me I had to see the scrapbook for myself, so I journeyed to Kingston-on-Thames, now a suburb of London, and personally examined the scrapbook and other Muybridge ephemera at the Kingston Local History Room. Muybridge kept press clippings pertaining to his career from 1867 through 1897, and late in his life assembled them into this scrapbook that he willed to the city museum upon his death in 1904. I had hoped the scrapbook would contain information about a Muybridge visit to Minnesota, but much to my dismay, the otherwise thorough scrapbook contains a four-year gap of no clippings whatsoever. This gap begins in the summer of 1888 just as Muybridge is about to leave Milwaukee, presumably for Minnesota.¹³

Animal Locomotion

At the beginning of my seminar, one of my students asked a great question: why was Muybridge touring in the first place? I originally thought Muybridge was just cashing in on his fame. But in fact, there is no evidence Muybridge was paid for his Midwest 1888 speaking engagements. There was certainly no admission charged. It turns out he was on the road drumming up business as part of a contractual obligation he had with the University of Pennsylvania. Impressed by his photographic breakthroughs, that university's administration hired Muybridge in 1883 at the peak of his fame, set him up

on the Philadelphia campus with a photographic facility, a lab, and a team of assistants, and funded the photographic experiments he conducted from June 1884 through January 1886.¹⁴

During his time at Penn, Muybridge took thousands of photographs of people and animals engaged in walking, running, jumping and other motions. His human subjects included a great many nude models and athletes, and while that troubled some university officials it also generated curiosity about the “Muybridge Work.”¹⁵ The university hoped to cover the costs of its investment in Muybridge by selling portfolio collections of his motion-sequence photographs to learned institutions and wealthy individuals for the advancement of science and art (and, of course, to enhance the reputation of the university). The project was entitled *Animal Locomotion*, with “animal” used in the broad sense to include human beings. By late 1887 the photographs had been taken, arranged on pages called photographic plates, grouped into sets by subject matter, copied, and made ready for purchase. In January 1888 Muybridge began a series of talks in the eastern United States with the expressed goal of promoting sales of the portfolios.¹⁶

There is confusion in the historical record about what the title, *Animal Locomotion*, encompassed. And for good reason. It was used by Muybridge and the University on three distinct, but related works. Today, what comes up in a cursory search of the title, “Animal Locomotion,” are reprint compilations of the photographic plates, the best of which is the 1979 Dover three-volume set called *Muybridge’s Complete Human and Animal Locomotion*. It is easy to assume after seeing these compilations that the original *Animal Locomotion* was also a coffee-table book of photographs, but it was not. Only after visiting the University of Pennsylvania Rare Book and Manuscript

Library did it become clear to me that *Animal Locomotion* consisted of the following three items:

1. *Animal Locomotion: An Electro-Photographic Investigation of Consecutive Phases of Animal Movements, 1872-1885* by Eadweard Muybridge is a booklet, copyright 1887. It consists of an 18-page prospectus in which Muybridge describes the goals and scope of his photographic work. The remaining 32 pages comprise a highly detailed catalog of 781 photographic plates available for purchase. If you placed an order you were a “subscriber,” and the booklet’s order-blank-styled title page became your receipt, autographed by Muybridge with a flourish. For a \$100 subscription you got 100 plates of your choosing. For \$600 you got all 781.¹⁷

2. *Animal Locomotion* was the name embossed on the leather cover of the flat portfolio boxes mailed to subscribers that contained the photographic plates themselves. The name also appeared on a large cover sheet that accompanied each portfolio. The plates were 19” x 24” high quality photographic reproductions known as collotypes printed on heavy linen paper with wide margins that made them ideal for framing. Each plate was an arrangement of between 9 and 36 sequential photographs of human and animal subjects undertaking different motions, as captured by a battery of cameras over a period of a few seconds. The plates bear Muybridge’s name and an 1887 copyright.¹⁸

3. *Animal Locomotion: The Muybridge Work at the University of Pennsylvania*, is the title of a scholarly follow up book, published and copyrighted by the university in 1888,

that consists of three lengthy and well-illustrated treatises by Penn faculty members which detailed the science, artistry, and history behind Muybridge's photographic experiments. These are Dennis Marks' "The Mechanism of Instantaneous Photography," Harrison Allen's "Materials for a Memoir on Animal Locomotion," and Francis Dercum's "A Study of Some Normal and Abnormal Movement Photographed by Muybridge." The book opens with a preface by University of Pennsylvania Provost and Muybridge's immediate superior, Dr. William Pepper.¹⁹

Pepper had invested perhaps as much as \$50,000 of the university's money in funding Muybridge during the years it took the photographer to complete the *Animal Locomotion* project. This included the substantial lab work undertaken by the New York Photogravure Company to transfer the images onto heavy paper. Muybridge was under pressure to find 500 subscribers at the \$100 rate. In the period January through April, 1888, speaking in Boston, New York, Philadelphia, and Orange, New Jersey, he got off to a respectable start. By that spring, Muybridge had signed up perhaps as many as 50 subscribers, including the luminary inventor, Thomas Edison.²⁰ Now it was on to Chicago. Muybridge must have been cautiously optimistic as he boarded the train to begin his Midwest tour.

Picking Up Muybridge's Trail

My students and I started our search by squinting through digitized newspapers from the summer of 1888. None of Muybridge's biographers mentions the exact date of the Chicago presentation that launched the Midwest phase of his travels that year, only that he was there at some point prior to his June 21st talk in Milwaukee. We discovered, thanks to an article on page 24 of the June 3, 1888 *Chicago Tribune*, that Muybridge spoke at the Chicago Art Institute the previous evening.²¹ The fact that Muybridge's talk was covered on the 24th page of a 28-page newspaper was a surprise to me. As a film historian, I've been so accustomed to accounts of Muybridge's brilliant international lecture career that I assumed his appearance in any city would be, if not front-page news, at least worthy of prominent regard in a city's newspaper.

Although Muybridge had received speaking invitations on the East Coast, he seems to have journeyed to Chicago and other Midwest cities without advanced bookings. Our research revealed that on his Midwest tour he was a hard-scrabble subscription-hawker who would arrive in a city and introduce himself to the directors of libraries, museums, art institutes, and universities. He then presented sample photographic plates to them and talked his way into lecture opportunities when possible. Muybridge worked Chicago's learned institutions and sold 16 subscriptions, including two for the full 781 plates. He was encouraged. His next stop seems to have been the June 21st lecture at the Milwaukee School of Art. Ticket stubs from this event can be found in Muybridge's scrapbook.²² The day after this lecture, Muybridge wrote to Provost Pepper's assistant, Jesse Burk, and reported that the

Wisconsin audience [was] large and appreciative... I did pretty well in Chicago 14 (\$100) subscribers, and 2 complete series (\$600 each)... I expect to visit Madison, Wisc., St. Paul, Minneapolis, and Denver, probably also Cincinnati; It is of no use visiting St. Louis until later in the fall.²³

I suspect he is referring to the summer heat in St. Louis, no small consideration for a lecturer who needed people to crowd into an auditorium in the age before air conditioning.

We were thrilled to discover that the first two pages of the above letter have been digitized by the University of Pennsylvania Archives and are available on line (the subsequent pages have been lost). For Muybridge's biographers, this partial letter has been the sole source of information on Muybridge's Midwest itinerary. The students spent an entire class period deciphering Muybridge's handwriting—which felt to them like cracking a code. Muybridge's mention of Madison, Wisconsin, which is less than 90 miles from Milwaukee, strongly suggests that was his next destination.

Sure enough, *The Wisconsin State Journal* on July 3rd, 1888 includes an account of Muybridge's visit to Madison. But here was a surprise. Muybridge gave no public lecture in that city. Instead, he met with officials from the University of Wisconsin and the State Historical Society. In this meeting, which occurred on July 2, Muybridge gave his hosts a conference-table version of his public lecture, beginning with allusions to classic Greek sculpture and studies of the human and animal forms in motion. He argued that not until his own photographic breakthroughs in instantaneous photography had we

ever accurately understood the motion of a trotting horse or hurdle-jumping athlete. He made the case that anyone serious about studying art, anatomy, and physiology would want to see his work. Representatives from the Wisconsin Historical Society agreed to buy a 100-plate portfolio of *Animal Locomotion*.²⁴ Today this purchase, which actually includes 108 plates, can be seen in the non-circulating portion of the collection of the Kohler Art Library at the University of Wisconsin.²⁵

Muybridge's trail next leads to St. Paul, Minnesota where his name turns up on a list published in the *St. Paul Daily Globe* on July 10, 1888 of notable people arriving at or departing from the Hotel Ryan.²⁶ At other points in his career Muybridge travelled with an assistant, but he was traveling alone when he walked into the lobby of this gargantuan St. Paul hotel. At the train station and again at the hotel, porters would have helped transport the two large crates with which Muybridge traveled on this trip. One of these contained his slide projector and the other held as many as 300 glass slides that he used in his lectures. Also packed in these crates were dozens of *Animal Locomotion* booklets and perhaps as many as 400 *Animal Locomotion* plates. Muybridge carried his personal items in a grip sack. These included a tuxedo for lecturing in, although probably not much else as Muybridge was a bit of an ascetic who was known for his rumpled, even unkempt, appearance.²⁷ But Muybridge did not travel with an assistant on this trip. There is no mention of "we" in his letter to Burk, no mention of a companion by any of the journalists who met him, and, given the pressure to raise \$50,000 via subscriptions, presumably no desire from the university to pay for a traveling assistant.

What did Muybridge see when he arrived in the Twin Cities that July? Apparently a bustling community with boom-town growth and civic pride. Muybridge

was not a prolific letter-writer and left us no first-hand accounts of his impressions, but my students and I found someone who did. In our search of the Minnesota Historical Society's hotel history files we discovered that one of Muybridge's fellow Hotel Ryan residents had, within days of Muybridge's stay, shared his impressions of the Twin Cities in two letters to his mother. The letter-writer was Charles Wadsworth, a Philadelphian on a church-sponsored trip with a group of his fellow Presbyterians. In a letter dated July 29, 1888 he said of Minneapolis:

This is a beautiful city—the most beautiful we have seen—population 220,000+ -
- It grew 40,000 last year—It is a Yankee City. Streets broad & clean—business blocks imposing – Hotels magnificent—drives charming—They have the Boulevard system of roads around the City—You can drive 25 miles on these boulevards. Among the buildings now in progress are – City Library (\$250,000) YMCA (\$150,000) and several Churches. The churches out in these cities (except Milwaukee which is only a miserable German town, religiously) are exceedingly beautiful far surpassing those in the East. Around Minneapolis are the innumerable lakes—on the shores of which are lovely circling drives...²⁸

Of St. Paul, Wadsworth wrote:

St. Paul is a beautiful city and in some respects I prefer it to Minneapolis—It is more wholesale (except flour) and has the atmosphere of commerce—as it is

at the head of navigation of the Mississippi. Nothing seems to expand a place and give it color like commerce.²⁹

While Muybridge stayed in St. Paul there is no indication he made a public presentation in that city. Frankly, July in Minnesota is a hot and humid time, not conducive to gatherings of people for indoor lectures. In 1888, residents of St. Paul and Minneapolis, at least those who had the means, got out of the city and headed for the cooler climes of nearby lakes. As did Muybridge. Fifteen miles west of downtown Minneapolis lies Lake Minnetonka, which had become a popular summertime destination, filled with pleasure craft and beachside recreation.³⁰

Again, Philadelphian Charles Wadsworth:

We went to Minnetonka yesterday—a larger lake—325 miles of shoreline—a fairly pretty lake...bordered by large hotels...³¹

That summer, the largest and most impressive hotel on Lake Minnetonka was the Hotel Lafayette, built in 1882 by railroad magnate James J. Hill. This sprawling structure had 300 rooms, 3 grand staircases, and a five-acre footprint on the grounds of what is today the Lafayette Country Club. The hotel itself burned down in 1897. Trains from Minneapolis and St. Paul arrived every two hours or so on summer days in 1888, and they stopped right in front of this popular lakeside resort complex. The Lafayette was part of a new trend in which a mega-hotel was itself a destination, even for day-visitors—essentially it sought to be a lavish living room for the citizens of Minneapolis and St.

Paul.³² This is where Muybridge gave a lecture on the evening of July 23, 1888. A day earlier he had placed a notice in local papers advertising his talk. In this notice Muybridge does not state a specific time for the start of his lecture. In Chicago and Milwaukee Muybridge's lectures had a posted start time.³³ Perhaps the casual atmosphere of the lakeside in July prompted Muybridge to be more informal about starting. Or perhaps he wanted to wait until a sufficient crowd gathered before starting.

The notice ran in three places, the complete text of which reads:

Professor Eadweard Muybridge of the University of Pennsylvania, will deliver an illustrated lecture at Hotel Lafayette, Minnetonka Beach, on Monday evening, July 23. Subject, "Animal Locomotion." The lecture will be illustrated after the celebrated Stoddard lectures, showing positions of animals of all kinds in motion. Professor Muybridge is the acknowledged authority on this subject, having illustrated Senator Stanford's book on "The Horse in Motion" and has contributed several articles of this character to the Century Magazine. All are invited. Trains for the beach will leave St. Paul via the Manitoba Road at 2, 4, 5 and 6 pm. Minneapolis twenty minutes later, returning after the lecture.³⁴

The Stoddard lectures to which Muybridge refers were a series of travel talks given around the United States at that time by John Lawson Stoddard, who lavishly illustrated his lectures with photographic slides. Senator Stanford was the California railroad baron, former governor, and avid horse breeder who originally commissioned Muybridge to use photography to help him study the gait of horses, including settling the question of unsupported transit.³⁵

The Hotel Lafayette Illustrated Lecture

People who gathered at the Hotel Lafayette to see Muybridge would have experienced the following. The Hotel Lounge was arranged with rows of folding chairs facing a screen and lectern. Although we do not know how many people were in attendance, a reporter from the *Minneapolis Tribune* who was present wrote that the lounge was full. Standing before the screen was Muybridge who looked like a Victorian wizard in his well-worn tuxedo with his long white beard, disheveled mop of white hair, and dark, fierce eyebrows. He was a fit, energetic 58-year-old who, for much of his lecture, would have held a pointer in one hand and a small tin “clicker” (to signal a change of slide) in the other. He spoke extemporaneously rather than from notes. His accent would have borne traces of a middle class upbringing on the outskirts of London.³⁶

In the back of the room on a sturdy table sat his slide projector. This was *not* Muybridge’s custom-designed zoopraxiscope—the large, heavy projector capable of showing moving images from 16” spinning disks that some have called the first movie projector. The history books make much of the zoopraxiscope, which today sits in a glass case in the Kingston museum, a fascinating contraption that would be at home in any steam punk exhibition with its gleaming brass, complex cogs and gears, mysterious cranks, and hand-crafted wooden frame. Much of Muybridge’s current importance to the origin of motion pictures stems from his use of the zoopraxiscope to impress audiences beginning in about 1880. It was capable of projecting a series of hand-drawn images in a brief repetitive sequence that simulated motion. But none of the newspaper accounts of

Muybridge's Midwest lectures mentions moving images whatsoever. Muybridge used the zoopraxiscope in East Coast lectures in early 1888, and famously demonstrated the machine to Thomas Edison that February. The illusion of movement Muybridge achieved with this machine usually received raves in the press, and one would expect Midwestern journalists to respond similarly had they seen it.³⁷ The bulkiness of the zoopraxiscope may have mitigated against him taking it to the Midwest. This finding is significant because nearly all the Muybridge biographies give the impression that once he achieved his horses-in-motion breakthrough, he never made a presentation without his "zoop."³⁸

The machine on the sturdy table at the back of the Hotel Lafayette lounge during Muybridge's presentation was his biunial magic lantern—essentially a pair of slide projectors built one atop the other which resembled a two-foot tall cabinet of polished wood and brass with two large lenses. The Hotel Lafayette audience would have seen a man at the back of the room operating Muybridge's magic lantern. This would have been a hotel staffer, whose name is lost to history, and who was coached in advance by Muybridge. When Muybridge clicked his clicker the assistant advanced to the next slide via a tasteful transition. The assistant was kept quite busy loading the 3¼ inch square glass slides: Muybridge used over 200 of them that evening.³⁹

Muybridge's assistant would have been careful not to knock over two metal canisters sitting nearby, nor to trip over the tubes which connected the canisters to the back of the projector's lamp housing. The projector was not designed to use electrical power because few venues in the 1880s would have had electricity, as my students and I had to remind ourselves. The canisters contained oxygen and hydrogen, which when

brought into contact with a calcium wick inside the projector produced an intensely bright form of “limelight,” as well as a steady hissing sound. Muybridge may have traveled with a supply of calcium wicks, but gas canisters were prohibitively heavy (and volatile), and were most likely supplied by the hotel. The Lafayette may have kept them around for illustrated lectures in general, or possibly to power its own gas-lit chandeliers. Alternatively, at Muybridge’s advance behest, the hotel could have acquired oxygen and hydrogen canisters from a local gas supplier, welding shop, or theatre.⁴⁰

Muybridge’s lecture ran two hours. He began by showing his audience pictures of classical Greek bas relief sculpture taken from the Parthenon that included galloping horses. From there he showed images of horses and people from renaissance paintings, including images by Michelangelo and Raphael. He described the difficulty of capturing fast-moving animals, the limitations of the human eye, and our general misunderstanding of rapid locomotion. Muybridge commended classical and renaissance artists who got the movements right, and then showed examples of paintings of horses from the 18th and 19th centuries that got the legs wrong.⁴¹

How could he be so confident of the correct positions of a moving horse’s legs? This was his cue to describe his own work--how he had been a San Francisco based photographer tasked with capturing a horse’s gait in all its phases. After a fair amount of trial and error with different types of emulsions, lenses, and shutters beginning in 1872, he achieved success in 1878 when he placed 12 (later 24) cameras alongside a track that were triggered as a horse named Sallie Gardner raced by and broke through each camera’s trip wire.⁴²

Muybridge showed the Hotel Lafayette audience his many series of horses, various other animals, and humans in motion, although he may not have shown any of his nude studies. An attendee at one of Muybridge's talks in Orange, New Jersey earlier that year admonished Muybridge in a letter to the local paper for including photographs of male and female nudes in his lectures. The lack of any such outcry in accounts of his Chicago, Milwaukee, and Minnetonka Beach lectures suggests he may have avoided showing nudes altogether.⁴³ Instead, Muybridge meticulously presented and explained the exact leg positions of animals and partially clothed people as they walked and moved at various speeds. The human eye, he argued, was imperfect, but with the aid of his "electro-photographic" technique, we could now see and study the world in motion.

Muybridge's lecture was "very interesting," according to the modest account (25 lines) in the next day's *Minneapolis Tribune*. He spoke for two hours without a break and kept the audience entertained with fascinating information, occasional name-dropping, and anecdotes delivered with wit.⁴⁴ No doubt some of the audience would have consisted of guests at the Hotel Lafayette. Many others were people escaping from the heat of the city to spend a pleasant evening by the cool lake. They arrived either by train or on one of the many ferries or pleasure boats that steamed around the lake. They may have come in response to the notices in the paper, or they may have been strolling by and spontaneously decided to take in a lecture at the Lafayette.

Also at the Hotel Lafayette that summer was W.E.B. DuBois, soon to become a renowned scholar, essayist, and social justice advocate. But he was not there as a guest that night and likely did not see Muybridge's lecture. DuBois was one of the hotel's waiters—his summer job before starting college in the fall. While newspapers of the

time heralded the impressive wonders of the Lafayette,⁴⁵ DuBois would later give us the perspective of the Lafayette staff, particularly of the African American food servers and the atrocious treatment they were afforded as they worked to please oblivious white patrons to whom they were largely invisible. DuBois reminds us that to make a plush place like the Lafayette successful, a vast staff of scores of workers was grossly exploited, all to make the bourgeoisie visitors feel like they were getting something special: great food, a lovely lake view, impressive architecture, modern transportation, and on top of that an entertaining illustrated lecture by Eadweard Muybridge.⁴⁶

For those who missed Muybridge's lecture, in addition to the above-mentioned next-day account, a longer article appeared in the *Minneapolis Tribune* six days later that is essentially a summary of Muybridge's discussion of his work in the *Animal Locomotion* prospectus/catalog. This article is even illustrated with sequences of drawings that are close variants to what that booklet contains. Muybridge had already left the Twin Cities by the day this piece was published, but readers were directed to the University of Pennsylvania if they had interest in purchasing *Animal Locomotion* portfolios. Muybridge was using the local press to further elicit subscriptions.⁴⁷

From Lecturer to Salesman

Muybridge was in the Twin Cities for more than two weeks leading up to his Hotel Lafayette talk, and during that time visited the St. Paul Public Library, the Minneapolis Public Library, the University of Minnesota, and the Minneapolis School of Design. He persuaded the directors of these institutions to become subscribers and

purchase *Animal Locomotion* portfolios. Today 64 plates from the portfolio purchased by the University of Minnesota can be seen in the Special Collections and Rare Books Department of the university's Elmer L. Andersen Library. At the time of this writing, the whereabouts of the *Animal Locomotion* portfolios purchased by the other three organizations are not known.⁴⁸

After leaving the Twin Cities Muybridge traveled by rail to Duluth, and from there by ferry to Port Arthur, Ontario. In Port Arthur, Muybridge was confronted by customs officials who wanted him to pay duty on the crates containing his projector, glass slides, and photographic plates. He chose not to incur the expense and had the crates sent back to Duluth. He continued his journey by rail to Winnipeg, Manitoba, where he arrived in late July with about 60-70 plates and a few catalogs. On July 31st he gave an interview to a reporter from the *Manitoba Daily Free Press*, and it appears he tried to persuade people to buy his photographs for display in public spaces such as the Parliament building, but there is no indication Muybridge sold any subscriptions in Winnipeg. Neither did he give a lecture.⁴⁹

On August 1st Muybridge boarded the train back to Port Arthur and from there he returned to Duluth, collected his crates, and took a train west. Although he stopped in Bismarck, North Dakota, he gave no lecture nor made any sales there. He turned up in Denver later that August, where he convinced the director of the public library to buy a portfolio (with financial help from two wealthy benefactors), but apparently Muybridge gave no lecture there either.⁵⁰ We concluded, based on an 1892 list of his subscribers that I had photocopied from his scrapbook, that Muybridge sold fewer than 30 *Animal Locomotion* subscriptions that summer. Among his subscribers were the University of

Nebraska, the University of Kansas, the St. Louis Museum of Fine Arts, and the Cincinnati Public Library, which suggests he made stops at each of those places.⁵¹

By November, 1888, Muybridge was back in New York City. The following January he left for Europe. There he conducted a more successful tour that included lectures in England, Ireland, Scotland, France, Germany, and elsewhere.⁵² He sold portfolios to many of the most prominent universities on the continent. At one point he wrote the University of Pennsylvania's Jesse Burk from Berlin with a request for 200 *Animal Locomotion* catalogs. However, even after this tour Muybridge does not seem to have come close to the goal of 500 subscribers. Eventually, in order to settle his contract with the University of Pennsylvania, he grudgingly turned over his copyright to the *Animal Locomotion* photographs to the university.⁵³ Muybridge retained the right to use the photographs in future publications and did so in two later books that combined photographs, illustrations, and his own essays on the significance of his photographic legacy. He retired permanently to England after a disappointing attempt to entertain audiences with his zoopraxiscope at the Chicago Columbian Exposition of 1893.⁵⁴

The Muybridge in Minnesota seminar gave my students the opportunity to enjoy the “rush” of doing history. They got to be history detectives. I believe they derived two particular benefits from the experience. First, they learned a new set of research skills: how to navigate through old newspapers, how to access information in archival collections, and how to decipher 19th century syntax and handwriting. Second, they learned the critical value of historical context. Indeed, we all had to shed our 21st century assumptions and imagine Muybridge dealing with 19th century realities: no electricity, no air conditioning, no automobiles with which to lug a traveling lecturer's equipment

around. Muybridge's world contained an abundance of servants and porters, a proliferation of newspapers, and of course, the horse was very much central to daily life.

I began the semester thinking Muybridge's celebrity would have smoothed the way for him in the Midwest. Biographer Marta Braun refers to his "stellar career as a showman-lecturer."⁵⁵ But this is based more on the reception Muybridge received in New York, London, and Paris. In the Midwest, Muybridge was not well known. He had to sell himself over and over in each new city, to each journalist, library director, and university official. The notices promoting his Hotel Lafayette talk took up no more space than did an item in the same paper on the same day in which the newspaper heralded the opening of Madame Mitchell's fortune-telling parlor.⁵⁶

I had thought Muybridge's lectures always involved his famous zoopraxiscope. But it must have been deemed too heavy or too delicate for a trip involving lengthy train rides and uncertain prospects for lectures. Normally, when he used the zoopraxiscope, it just functioned as a slide projector until the last ten minutes or so of a two-hour lecture when he would insert a disk and end with a spectacular flourish of simulated motion. In the Midwest in 1888 he chose to forego that flourish and travel somewhat more lightly.

I had thought Muybridge was selling coffee-table books. But he was selling large collections of photographic plates, suitable for framing. This was far more impressive than a book of photographs, but also far more expensive and beyond the means of middle class people.

I had thought Muybridge gave illustrated lectures in all the cities he visited, but on his Midwest tour he gave perhaps as few as three--Chicago, Milwaukee, Minnetonka Beach—although he stopped in many more cities to sell subscriptions. His primary work

on this tour involved identifying individuals and institutions who had an interest in studying animal and human locomotion. He worked hard. He had to scramble. He made sales, but not always.

The conclusions historians draw about Muybridge, the famous lecturer, are based on his presentations in cities that had well-established cultural institutions and long-standing traditions of support for the arts and sciences. Few Midwest cities had reached that point by 1888. The people Muybridge encountered in places such as Minnesota may have been pleased to meet a distinguished eminence, but they were preoccupied with building cities and establishing industry and commerce. Our picture of Muybridge is incomplete without the inclusion of his less well-known activities in parts of the country that were not that far removed from their so-called frontier days.

Eadweard Muybridge, the man who inspired the invention of the motion pictures, came to Minnesota and gave an illustrated lecture one hot summer night in a big hotel on the shore of Lake Minnetonka. He met a few people. He sold a few subscriptions. He made no record of his stay, nor did he leave a lasting impression on the state. He moved on. He never came back.

The students of FS 401: Muybridge in Minnesota (f 2014) St. Cloud State University

Ashley Anthony

Anthony Nelson

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Ren Lundquist

Jordan Uhrich

Jake Morgan

Wayne Williams

¹ Marta Braun, *Picturing Time: The Work of Etienne-Jules Marey: 1830-1904*, 47; Brian Coe, “William Friese Greene and the Origins of Cinematography,” *Screen* (1969): 30; Paul Spehr, *The Man Who Made Movies: W.K.L. Dickson* (New Barnet, UK: John Libbey, 2008) 77 (Muybridge’s influence on Marey, Friese Greene, and Edison).

² *Manitoba Daily Free Press*, Aug. 2, 1888, (“dispute”) 1; *Scientific American*, October 19, 1878, 241; *Photographic News*, March 17, 1882, 1.

³ Marta Braun, *Eadweard Muybridge* (London: Reaktion Books, 2010); Stephen Barber, *Muybridge: The Eye in Motion* (Chicago: University of Chicago Press, 2012); Edward Ball, *The Inventor and the Tycoon* (New York: Doubleday, 2013); Adam, Hans Christian, *Muybridge: The Human and Animal Locomotion Photographs* (Cologne: Taschen, 2014).

⁴ *Milwaukee Sentinel*, June 22, 1888, 9; *Manitoba Daily Free Press*, *op cit*.

⁵ Braun, *Eadweard Muybridge*, 224.

⁶ Ball, 360, 412. Ball mistakenly places the tour in 1887.

⁷ Eadweard Muybridge to Jesse Burk, June 22, 1888, Muybridge Papers, University of Pennsylvania Archives, Box 62: 6. This source is cited in Gordon Hendricks, *Eadweard Muybridge: The Father of the Motion Picture* (New York: Grossman, 1975), 176; Robert Bartlett Haas, *Muybridge: Man in Motion* (Berkeley: U. of California Press, 1976), 155; Herbert, Stephen, ed., *Eadweard Muybridge: The Kingston Museum Bequest* (Hastings, UK: The Projection Box, 2004), 124, 150. Others, such as Braun, *Eadweard Muybridge*, 246, cite one or more of the earlier biographies.

⁸ www.StephenHerbert.co.uk/muychron03.htm#part4

⁹ Stephen Herbert, email messages to the author, July 8, 2013 and December 31, 2013.

¹⁰ Marta Braun, email message to the author, January 3, 2014.

¹¹ Muybridge used the older wet plate photographic process on his earliest attempts, but got the best results with the new dry plate technique. See Braun, *Eadweard Muybridge*, 136-45; Muybridge, Eadweard, *Improvement in the Method and Apparatus for Photographing Objects in Motion*. US. Patents 212,864 and 212,865 awarded on March 4, 1879 (United States Patent and Trademark Office).

¹² Stephen Barber, email message to the author, December 31, 2013. See also Barber, *Muybridge*, 21.

¹³ The Muybridge Scrapbook, Eadweard Muybridge Collection, Kingston Local History Room. The gap runs from mid-1888 to late 1892.

¹⁴ Eadweard Muybridge to Provost William Pepper, September 3, 1883 (acceptance of contract), Pepper to Lippincott, March 27, 1884 (arrangements to print photographs), Papers of William Pepper, University of Pennsylvania, Rare Books and Manuscript Library; Herbert, 122-3 (dates of photographic experiments).

¹⁵ Edward Coates to Pepper, Sept. 27, 1886 (nudity objections) and Eadweard Muybridge to Pepper, November 11, 1886 (“Muybridge Work”), Papers of William Pepper, University of Pennsylvania, Rare Books and Manuscript Library.

¹⁶ Muybridge states “I have accepted several invitations to lecture in New York and vicinity...” in Muybridge to Jesse Burk, Feb. 7, 1888. Eadweard Muybridge Papers, University of Pennsylvania Archives, Box 62: 6.

¹⁷ Eadweard Muybridge, *Animal Locomotion: An Electro-Photographic Investigation of Consecutive Phases of Animal Movements, 1872-1885* (Philadelphia: University of Pennsylvania, 1887).

¹⁸ Eadweard Muybridge, *Animal Locomotion*. Plates. (Philadelphia: University of Pennsylvania, 1887).

¹⁹ Dennis Marks, Harrison Allen, and Francis Dercum, *Animal Locomotion: The Muybridge Work at the University of Pennsylvania* (Philadelphia: J.B. Lippincott, 1888).

²⁰ Ball, 357 (\$50,000); According to www.minneapolisfed.org \$100 in 1888 would be \$2,700 today, \$50,000 would be \$1,350,000; Muybridge to Jesse Burk, February 7, 1888, op. cit. (lecture tour); Eadweard Muybridge, *Descriptive Zoopraxography* (Philadelphia: University of Pennsylvania, 1893) Appendix B, 8-13; Spehr, op. cit., (Edison subscription).

²¹ *Chicago Tribune*, June 3, 1888, 24.

²² Scrapbook, op. cit.

²³ Muybridge to Burk, June 22, 1888, op. cit. In this letter Muybridge also provides advice about photographic equipment which Burk solicited in an earlier letter on behalf of a team of faculty members who were preparing for an expedition to Babylon. This suggests that Muybridge may have served as the university’s photographic expert. The Babylon-bound scientists became a *cause celebre* of the university a few months later when they were stranded for a prolonged period after a shipwreck. *The Pennsylvanian* 4:14, October 24, 1888, 112.

²⁴ *Wisconsin State Journal*, July 3, 1888, 2.

²⁵ Two sets of folios with a combined 108 plates are available for view at the Kohler Library, Madison, Wisconsin, Non-Circulating Flat Shelving, WR M99 Cutter.

Subscribers could order any number of additional plates for a dollar apiece once they committed to at least one 100-plate portfolio. See Muybridge, *Animal Locomotion* prospectus/catalog.

²⁶ *St. Paul Daily Globe*, July 10, 1888, 1.

²⁷ Muybridge to Burk, February 7, 1888 (slide projector crate); *Manitoba Daily Free Press*, Aug. 4, 1888, p. 4 (slides, grip sack); Ball, 39 (rumped appearance); Herbert 131 (assistant).

²⁸ Charles Wadsworth to his mother, July 29, 1888. Minnesota Historical Society Manuscripts Collection, P 2764.

²⁹ Wadsworth, *ibid.*

³⁰ Lake Minnetonka Steamboats, 1868-1925. Minnesota Historical Society Sound and Visual Collection (Album 111).

³¹ Charles Wadsworth to his mother, July 31st, 1888. Minnesota Historical Society, Manuscripts Collection, P 2764.

³² Peg Meier, "Summer Paradise," *Minneapolis StarTribune*, July 12, 1998, (from a reprint without page numbers provided by the Lafayette Country Club); Eric Dregni, *By the Waters of Minnetonka* (Minneapolis: University of Minnesota Press, 2014) 131.

³³ *Minneapolis Tribune*, July 24, 1888, 4; *Milwaukee Sentinel*, June 20, 1888, 3; *Chicago Tribune*, June 3, 1888, 24.

³⁴ Muybridge's notice ran in identical form in three places: *St. Paul Daily Globe*, July 22, 1888, 2; *St. Paul Daily Globe*, July 23, 1888, 2; *St. Paul Dispatch*, July 23, 1888, 3.

³⁵ *The Times of Philadelphia*, October 17, 1888, 3 (Stoddard's lecture at the Philadelphia Academy of Music). J.D.B. Stillman, *The Horse in Motion, As Shown by Instantaneous Photography* (Boston: James R. Osgood and Company, 1882). Stillman was commissioned by Stanford to assemble Muybridge's horse photographs into this book.

³⁶ *Minneapolis Tribune*, op. cit. (full house); Herbert, 119 (clicker), 124 (tuxedo); Ball, 9 (energetic and robust); Braun, *Eadweard Muybridge*, 12-16 (upbringing).

³⁷ Herbert 120-1, 126, 128 (raves).

³⁸ A replica of the zoopraxiscope presently sits in the back room of the National Media Museum in Bradford, England, where archivist Toni Booth first introduced me to the "zoop" nickname. On February 7, 1888, Muybridge told Burk that for his upcoming lectures it was "desirable to make use of the zoopraxiscope, which is now in the room

under the stairs...” See Herbert, 123, 129-130, for the only acknowledgement in any of the biographies that Muybridge occasionally lectured without the zoop.

³⁹ *Chicago Tribune*, op. cit. (over 200 slides); Herbert, 101-3 (lantern and slides); *Minneapolis Tribune*, July 24, 1888, p. 4. The slide projector is referred to here as “stereoscopic” which tells us it was Muybridge’s two-lens machine, but he was not achieving a 3-D effect. The two-lens (biunial) projector made possible smooth transitions between slides as well as the seamless loading of the next slide. Muybridge to Jesse Burk, February 7, 1888 (requests his “large lantern”).

⁴⁰ Berger, Molly W., *Hotel Dreams: Luxury, Technology, and Urban Ambition in America, 1829-1929* (Baltimore: Johns Hopkins, 2011) 27 (gas light). Charles Musser, *The Emergence of Cinema: The American Screen to 1907* (Berkeley: California U.P., 1994), 32-33 (limelight).

⁴¹ *Minneapolis Tribune*, July 29, 1888, 6; Muybridge, Eadweard, “The Attitude of Animals in Motion, Illustrated with the Zoopraxiscope,” Royal Institute of Great Britain, March 13, 1882, scrapbook (lecture).

⁴² Haas, 47-48, 93, 109-111 (photographing horse gaits 1872-78).

⁴³ Rebecca Solnit, *River of Shadows: Eadweard Muybridge and the Technological Wild West* (New York: Penguin, 2004) 228 (complaint about nudity).

⁴⁴ *Minneapolis Tribune*, July 24, 1888, 4.

⁴⁵ *St. Paul Globe*, July 23, 1882, 1.

⁴⁶ Meier, op. cit; Dregni, 109-111.

⁴⁷ *Minneapolis Tribune*, July 29, 1888 p. 6.

⁴⁸ Muybridge, *Descriptive Zoopraxography*, 11-12. The Minneapolis School of Design listed on the subscribers list in *Descriptive Zoopraxography* may have been the Minneapolis School of Fine Arts (established 1886) which is today’s Minneapolis College of Art and Design. See mcad.edu/about-us/history.

⁴⁹ *Manitoba Daily Free Press*, op. cit.

⁵⁰ *Bismarck Daily Tribune*, Aug. 8, 1. The complete account of his Bismarck visit reads: “Eadweard Muybridge, the Philadelphia scientist who has made fame through his discoveries of animal locomotion, arrived in the city yesterday en route west.” *Denver Daily News*, Aug. 25, 1888, 5.

⁵¹ Muybridge, *Descriptive Zoopraxography*, 8-12.

⁵² Herbert, 124-134 (European lectures).

⁵³ Braun, 227 (200 catalogs); William Pepper to Attorney H.G.Ward, June 15, 1896; Ward to Pepper, June 16, 1896 (transfer of negatives to the university) Papers of William Pepper, University of Pennsylvania Rare Books and Manuscript Library.

⁵⁴ Julie K. Brown, *Contesting Images: Photography and the World Columbian Exposition* (Tucson: University of Arizona, 1994) 103, 104, 156.

⁵⁵ Braun, *Eadweard Muybridge*, 230.

⁵⁶ *St. Paul Dispatch*, July 23, 1888, 3. “Astrologist in town” runs 17 lines, precisely the same as the Muybridge notice further down the page.

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