

## **Sidedoor Season 3, Episode 10: Inventor, Photographer...Murderer**

[INTRO MUSIC]

Haleema Shah: This is Sidedoor. A podcast from the Smithsonian with support from PRX. I'm Haleema Shah.

HS: Eadweard Muybridge lived a big life. His accomplishments put him in a class of names that have become synonymous with innovation: Alexander Graham Bell, Thomas Edison, Nikola Tesla. But, Muybridge's name hasn't survived in the same way.

Shannon Perich: He was an artist. He was a salesman. He was an adventurer.

HS: That's Shannon Perich. She's the curator of the History of Photography at the National Museum of American History.

SP: He wasn't afraid of the world. I mean, my goodness, he killed his wife's lover and came out of that unscathed essentially.

HS: Yeah, there's a crime of passion in this story, but we'll get to that later. First, we have to tell you about what made Muybridge famous — his photography.

HS: Inside the Smithsonian's National Museum of American History, Perich manages a collection of over 200,000 photos. That collection includes photos by, and of, Eadweard Muybridge.

SP: So we'll unlock. Open this up...

Haleema Shah (on tape): Okay. So what. Whoa. Is he naked here?

SP: So, yes, Muybridge is nude. I think every photographer at some point photographs themselves nude as part of the experimentation of "what do I look like?" Nudes in photography, nudes in art are not a new topic.

HS: In some of these nudes, Muybridge is doing mundane things. In one set, he's just walking up some stairs. But in another, he's throwing a fake discus, like an ancient Greek Olympian — with pretty solid form... but I digress.

[MUSIC]

HS: This time on Sidedoor, we'll look at the life of pioneering and eccentric photographer, Eadweard Muybridge. And we'll find out how a near-death experience, a handsome horse, and

a \$25,000 bet helped Muybridge change the course of photographic history — by putting pictures... in motion.

[BREAK]

Haleema Shah: Eadweard Muybridge was an Englishman whose ambition and family bookselling business brought him to the U.S. He settled in San Francisco shortly after the California Gold Rush hit.

HS: From all we can tell, he lived a quiet life, and he did well as a bookseller importing books from London. In 1860, though, Muybridge decided to visit home and see some relatives. At the time, San Francisco felt a world away from London, so it was going to be a long trip.

HS: Step one: taking a stagecoach ride from San Francisco to St. Louis. But the trip was shorter than Muybridge had bargained for. Because he was in a huge accident in Texas.

HS: Muybridge later said that he didn't remember the accident, but a fellow passenger on the stagecoach recounted it to him:

Muybridge Reenactment: "[The passenger] told me that I was preparing to leave when the stage ran against either a rock or a stump and threw me out against my head."

HS: Marta Braun is a professor at Ryerson University who has spent about 30 years studying Eadweard Muybridge. She also helped curate an exhibition on his life at the National Museum of American History. Here she picks up with the parts that Muybridge obviously doesn't remember.

Marta Braun: He was knocked unconscious and found himself awake a day later in Arkansas where he was cared for and where he was told he would never recover.

HS: And by all contemporary accounts, that accident transformed him.

MB: And was told that, a strange diagnosis that he would never smell or taste again.

HS: And the people around Muybridge said that after his injury, he was erratic, and suddenly prone to fits of rage.

HS: Scholars more recently have argued that Muybridge may have injured his orbitofrontal cortex — a part of the brain that's associated with people's sense of smell, emotion, and decision-making.

HS: Muybridge found his way to doctors in New York, where he was cared for. He eventually made it home, but that's when he fell off the grid.

MB: And then once he arrives in London and he's back in the bosom of his family, we don't really know. He doesn't come back to America, though, for five years.

HS: Five years. That's less of a trip back home, and more of a Spice Girl-style hiatus. We don't know a ton about how Muybridge spent those years in recovery, but there's evidence that he stayed busy.

MB: There is this story of his doctor suggesting he take up photography as a hobby. Something that will focus his mind.

HS: That hobby grew into an obsession. He left the United States as a mild-mannered bookseller named Eadweard Muybridge, and returned as a temperamental artist named Helios.

MB: He is a photographer and he's a very good photographer.

HS: Helios, by the way, was the name of the sun god in ancient Greek mythology. And a side note: people say that Muybridge went from a neatly groomed man, to a guy that looked like a mix Zeus and Walt Whitman. His long white hair and beard were unkempt, and there are stories of him dressing in torn clothes and hats with holes in them.

HS: And Helios, slash-the-artist-formerly-known-as-Eadweard, took stunning pictures all around the American West. He photographed Yosemite, lighthouses along the coast, and Chinese immigrants working in gold mines. The U.S. government even commissioned him to photograph native tribes in Alaska and the Pacific Northwest. Muybridge was in demand.

MB: By 1872 he was photographing the houses of famous San Franciscans, including Leland Stanford.

HS: Yeah, the founder of Stanford University. He's considered a robber baron — one of those 19th century industrialists who got extremely rich off ruthless business practices. And Stanford would also change the trajectory of Muybridge's life.

[MUSIC]

HS: Stanford had a lot of power. He helped finance the transcontinental railroad, and eventually became governor of California. But like anyone who had a lot going on in their life, he needed a way to relax. Kick back. Get a hobby. So he developed some "equestrian interests."

MB: He had a racing stable, but it seems that his love of horses also began with doctor's advice that it would be calming for him if he took up horse racing.

HS: But Stanford was an intense guy, and took his new interest pretty seriously.

MB: He was quite a “Type-A behavior” guy. Do you still say that? Do you still use that phrase “Type A Behavior?”

HS (on tape): I feel like people still use that. Yeah.

MB: Okay. He was super energetic. He wanted to have the greatest racing stable in the west, and he wanted to have the most-advanced training methods.

HS: He wanted his fast horses to go faster. And to do this, he needed to know everything there was to know about how they moved.

MB: He thought that he should get a photograph that would show whether or not the horse had all four legs in the air at one point in the horse’s gallop. That was quite a controversy.

HS: It was called the “Unsupported Transit” Controversy. And from a 21st Century vantage point, it’s hard to get why people debated it so much.

HS: But thinking back to a 2018 debate that fractured the internet — you know, the recording that some people swore was of the word “Laurel” and others were certain was of the word “Yanny,” it’s hard to remember why people cared so much about that, too.

[LAUREL/YANNY CLIP]

HS: It’s definitely Laurel, by the way.

[LAUREL/YANNY CLIP]

HS: Anyway, this debate about horses had much higher stakes than “Laurel vs Yanny.”

MB: Of course, we have to remember that the horse was the source of all locomotion of importance, just like the cars and trucks are today. That is, war, you went to war on horses. The horse was really the greatest vehicle of the 19th Century. And so, to understand its movements was really very critical.

HS: And the great industrialist Leland Stanford, was very invested in understanding his horses’ movements.

MB: One of the stories that you often read is that Stanford placed a bet that it was true with the owner of a San Francisco newspaper for 25,000 dollars and the camera was going to prove whether or not the horse had all four legs suspended in the air. Most scholars believe that isn't true, it's just an exaggeration. But it's a lovely story, isn't it?

HS: A lovely story, and a lot of money! That would be over 400,000 dollars today.

HS: And who better to ask for a photo of an airborne horse than the famous photographer who took pictures of Stanford's house? Yeah, Eadweard Muybridge.

HS: So as the story goes, he hired Muybridge to help him win this bet, and capture a galloping horse in midair. But there was one problem — the technology did not exist.

[MUSIC]

HS: At this point, photography had only been around for about 50 years. This was when a subject's tiniest movement during a portrait session could turn a photo into a blurry mess.

MB: He'd have to get a, what we today would call, a "snapshot." A picture that was taken in a fraction of a second when the usual exposure times for photographs in 1872 was about two seconds. Well, in two seconds, the horse is going to be right across the field from one end to the other. You're not going to get anything.

HS: At this point, photographers were controlling how much light an image was exposed to by manually removing a lens cap from a camera and then quickly popping it back on. But in the early 1870s, Muybridge started changing the game. He created mechanical shutters to capture his images. The shutter would open and close within one-thousandth of a second.

HS: With his new-and-improved technology, Muybridge set out to help his benefactor, Leland Stanford, settle his bet. In 1873, he snapped an image of Occident, Stanford's prize horse, running.

HS: But it wasn't that impressive. The image was blurry, and it didn't prove much to the public. So, Muybridge went back to the drawing board. Shortly afterwards...

HS (on tape): It sounds like he got sidetracked with some personal problems?

MB: (Laughs) That's... yeah. That's one way of putting it. Yes.

HS (on tape): So, what exactly happened?

MB: Well, during the time he was working for Stanford, he met and married a woman called Flora and fathered, he thought, a son who was named Florado.

HS: Florado Helios Muybridge. Florado after Flora. Helios after... well, you get the idea. They were a family with cool names, but Muybridge's commitment to his work left Flora and little Florado alone for weeks at a time.

HS: Muybridge was 42 when he met Flora. She was 21. She liked to go out, have fun. She especially enjoyed the theatre. But Muybridge was never around to take her.

MB: And he discovered that his wife was having an affair with a ne'er-do-well called Harry Larkyns, a man about town.

HS: Reports called him a “roguish” drama critic who had given himself the faux-military title “Major Larkyns.” And Muybridge found out that Larkyns might have fathered Florado.

MB: He found this out by looking at a picture of his son, and on the back was written “Little Harry.”

HS: As in “Little Harry Larkyns.” And this is where the story goes full out “Wild West.”

MB: He gets a gun. He gets on a train to the mine where Larkyns was. He finds the cabin in which Larkyns was playing cards. He knocks on the door. [He] asked for Larkyns. And when Larkyns comes to the door, he said, “Harry Larkyns?” “Yes?” Muybridge says, “I have a message from my wife,” and shoots him dead.

HS: And Muybridge didn't seem very concerned about covering his tracks.

MB: There were lots of witnesses. There's no question of, about him doing it and committing the crime or not. He was seen. Everybody knew who it was and he was quite calm afterwards. He let himself be taken back to San Francisco and put into jail and he was tried for the crime.

[MUSIC]

HS: Coming up next, we find out how Muybridge tried to help Stanford settle that bet, and how Stanford may have helped Muybridge get away with murder.

[BREAK]

Haleema Shah: We're back. And here's where we are: Eadweard Muybridge, a talented photographer in the 1870s, was working for California business tycoon Leland Stanford. He was trying to solve a burning question: when a horse gallops, do all four hooves come off the ground? Muybridge was trying to invent the perfect camera to settle that debate. But, he got distracted by his wife's lover — who he killed in front of a lot of people.

HS: Here's what Marta Braun told me about Muybridge's trial in 1875.

MB: Well, his lawyer, who some people say was hired on his behalf by Stanford, his lawyer wants him to be exonerated on the grounds of insanity.

HS: The defense basically tried to argue that Muybridge's stagecoach accident years before did more than change him into a photographer. It changed him into a murderer.

MB: They brought up the men who had known him before and after. Who talked about a personality change that had happened after the stagecoach accident.

HS (on tape): Do you think that Muybridge really changed after the stagecoach accident, or was it something that, maybe, his lawyer played up?

MB: I think he did change. There are pictures of him in Yosemite where he's sitting on the outcroppings of a cliff, thousands of feet high. Those kind of activities to me suggest a mind that's not completely balanced.

HS: So, it sounds like the insanity argument could have held some water. But, what's interesting is that the argument didn't really matter.

MB: But the jury actually decides that it was "justifiable homicide." So, what we have there are a group of 12 men, most of them married, who would have done the same thing themselves, they say.

HS (on tape): Wow.

HS: The jury basically decided that "the guy had it coming." And so, after murdering his wife's lover, Eadweard Muybridge walked free.

[MUSIC]

HS: Muybridge took a few years away from California, but some unfinished business with a horse and a camera called him back to Stanford's ranch.

HS: By the late 1870s, Muybridge had been photographing Stanford's horses for years and he had access to better chemicals and camera technology than when he started. This time, he'd try to get a sequence of clear images, instead of trying to snap a picture right when a horse was mid-stride.

HS: And after countless hours of tinkering in obscurity at Stanford's ranch, he thought he'd figured it out. And Muybridge being Muybridge put it to the test in the most dramatic way possible.

[MUSIC]

HS: So, one morning, in June of 1878 in Palo Alto, a crowd of reporters and horse racing enthusiasts gathered at the track. They were invited to bear witness to photographic history.

MB: And, they set up the most amazing and elaborate set up. They had the 12 cameras in a shed and facing that shed was a wall. And between the wall and the cameras, the horse would run. But everything was covered in white. The ground was covered with white marble dust and

lime. The wall was painted white so that the sun would allow a picture to be made. It was so bright that the dark-coated horse was like a silhouette running across this white field and being captured by these twelve cameras.

HS: The crowd settled in, people waited expectantly, and the show began. Stanford's prize horse galloped down the track, pulling a two wheeled cart. In its path were twelve trip-wires, each connected to a different camera. As the horse sped down the path, the cart's wheels rolled over each wire. The shutters fired rapidly one after another, capturing the horse in different stages of motion.

MB: Members of the press are watching, Muybridge makes the twelve pictures. He rushes to expose the negatives and he shows them to the assembled press corp and they are astonished. In fact, the whole world is astonished.

HS: Muybridge laid out the sequence of images, printed on glass slides, like a comic strip for the public to see. The images captured what the naked eye couldn't — the position of the horse's leg, the angle of its tail, and the fact that for an instant all four of its hooves were off the ground.

HS: And newspapers at the time ate it up. Here's what one said about images of the horse and the coach-driver, C. Marvin:

Newspaper Quote Reenactment: "Even the threadlike tip of Mr. Marvin's whip was plainly seen in each negative, and the horse was exactly pictured."

HS: The same article practically gushed about Muybridge.

Newspaper Quote Reenactment: "Mr. Muybridge, a photographer of genius and artist of rare skill, was the operator.

HS: If Stanford's 25,000 dollar bet wasn't just legend — Muybridge had settled it.

[MUSIC]

HS: Muybridge's photographic sequence wouldn't just tell the world that horses are totally airborne while they run. It would change scholarship. Here's history of photography curator Shannon Perich again.

SP: So, the breakthrough with Occident...

HS: That's Stanford's horse.

SP: ...is that the camera can see things that the human eye can't see, and that we can use photography to access our world beyond what we know it to be.

HS: Muybridge proved that his camera could capture motion that was too fast for our brains to process. And he would later use the same technology to capture humans and other animals in motion. He wowed people with his work in Paris, and got a little “humble braggy” about it. He wrote:

Muybridge Reenactment: “Many of the most eminent men in art, science, and letters in Europe were present at the exhibition [...] happily I have strong nerves, or should have blushed with the lavishness of their praises.”

HS: For his next trick, Muybridge wanted to show his sequence of images to the public in photo-realistic detail. So, he came up with the zoopraxiscope. One of the first devices to project moving images.

[MUSIC]

HS: The zoopraxiscope projects images from a disc that looks like a glass record. It spins to make a sequence of images look like they’re in motion, and that sequence plays in an endless loop like a primitive gif. The whole series of moving pictures is projected onto a screen or wall. Inside the Smithsonian collection’s cabinet of photographic history, Perich slid one out of a drawer.

HS: On its outer edges, you can see images of a galloping horse in different stages of motion.

SP: And we can see on here that there are handmade hand-rendered drawings.

HS: Wait, what? The zoopraxiscope didn’t even show images that were photographed?

HS: It turns out when the zoopraxiscope projected photographic images, the size and proportions were distorted. To correct for that, an artist had to stretch the horse, think of the difference between a chihuahua and a weiner dog — so the zoopraxiscope’s projection would look accurate in motion.

HS: So, just to drive that home: Muybridge took pictures. And then to show off the achievement of his photography, which was a breakthrough, he had an artist draw reproductions of his pictures.

[MUSIC]

SP: That is so unsatisfying to have this revolutionary technology and this breakthrough photographically. To see the sequence of the horse running, to see its feet come off the ground, to have that major “Aha” moment, and to see it in what looks like a real horse, and then for him to project it as this really sketchy child-like hand drawn image is so dissatisfying because it just feels like it’s so much lower quality.

HS: Looking back at Muybridge's story, the zoopraxiscope feels like a huge letdown. But Perich says that invention and inspiration isn't always a straight line of successes and revolutions. There are a lot of dead-ends.

HS: The zoopraxiscope was just the first stop on the road of inventors trying to figure out what to do with Muybridge's photographic sequence.

SP: Once you have broken a threshold, then there's a whole lot of people that will come and pick that new idea up, that revelation, that revolution, and run it out to different opportunities. So, Muybridge lays out an intellectual and visual framework that sets up lots of other people for success.

HS: Other people, who were able to build on the breakthrough of the photographic sequence.

HS (on tape): So, who benefits from it the most as far as other inventors go?

SP: Well Edison, of course, is going to be one of those people who makes the kiss and other films that are going to be able to incorporate narrative in a way that Muybridge doesn't incorporate narrative.

HS: Thomas Edison was working just a few years after Muybridge. He had different technology — like flexible film — which was a revolution of its own.

SP: As soon as you have flexible film and you can capture images quickly, then you're going to have motion pictures.

HS: By building on Muybridge's and other inventors' work, Edison created something closer to cinema that we know today, and became known as the "Father of Motion Pictures."

SP: I think Edison is definitely much more interested in consumption and producing products that are going to sell. Not only are they moving, but you see their interaction. And from that interaction between two people — the tilt of a head, a gesture of an arm, a bat of an eyelash — those kinds of things become cues and signals that we know from real life.

HS: Eadweard Muybridge isn't talked about much today. But his legacy is all around us. On screens, in theaters, and even in your texts. So, the next time you see a gif of a dancing llama, or sneezing panda cub, think about the man who blurred the line between photography and motion picture. And proved, even for a split second, a horse can fly.

[BREAK]

Haleema Shah: You've been listening to Sidedoor, a podcast from the Smithsonian with support from PRX.

HS: If you want to see some of Eadweard Muybridge's photography, we'll be sharing his work in our Sidedoor newsletter. You can subscribe at [si.edu/sidedoor](http://si.edu/sidedoor). Every other week, you'll get bonus content, news, and updates straight to your inbox from me!

HS: Sidedoor is made possible by funding from the Secretary of the Smithsonian, as well as the Smithsonian National Board. And thanks to listeners like you. Your generous support helps make all the amazing work you hear about at the Smithsonian possible.

HS: Our podcast team is Justin O'Neill, Jason Orfanon, Lizzie Peabody, Jess Sadeq, Greg Fisk, and Lara Koch. Extra support comes from John Barth, and Genevieve Sponsler. Our show is mixed by Tarek Fouda. Our theme song and other episode music are by Breakmaster Cylinder.

HS: If you want to sponsor our show, please email [sponsorship@prx.org](mailto:sponsorship@prx.org).

HS: I'm your host Haleema Shah. Thanks for listening.

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<<EXTRA STUFF>>  
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So, basically, there's a good chance that Muybridge's instagram account would have been disabled.

HS BIG PIC NOTES:

- After we mention what the zoopraxiscope, we should give a more detailed descriptor of "the looping video of the silhouette of a running horse and a man riding it" to set the stage of muybridge as the father of the gif
- Speed up Marta in the middle since she's dry

- A different outtake at the end
- The conclusion is a little too winky. Would add a line that Braun said that “ a lot of his images would qualify as pornographic or voyeuristic, too”