

Detailed Timeline

Scattered childhood memories: Isolated winters. His cat, Macat – when Tesla was 3 years old, he stroked his cat's back which created a loud spark of static electricity. He was speechless. This part might be cool. An innocent three year old child with a curious expression on his face, laying down and then pets it. I love the idea of light coming in through the window –the artistic merit of this.

Had a lot of animals on the farm.

Swords:

“If I remember rightly, I then took to carving swords from pieces of furniture which I could conveniently obtain. At that time I was under the sway of the Serbian national poetry and full of admiration for the feats of the heroes. I used to spend hours in mowing down my enemies in the form of cornstalks which ruined the crops and netted me several spankings from my mother. Moreover, these were not of the formal kind but the genuine article.”

I can imagine him cutting down corn-stalks, exhilarated. And then the images come. And he is interrupted when his mother tells him to stop cutting them down. And she calls him in for dinner. Angry mother, but don't want to see her spanking him.

And there he meets his father and brother.

Tesla is born: “Nikola Tesla was born at precisely midnight between July 9 and 10, 1856, in the village of Smiljan, province of Lika, Croatia, between Yugoslavia's Velebit Mountains and the eastern shore of the Adriatic Sea.”

Tesla and the umbrella: The challenge is to not make this funny. That is the only thing on my mind about this. If treated incorrectly, it could make audiences laugh unintentionally. That is the last thing I want. So, include it only if it can be perceived seriously.

“But some of his other experiments were less successful. Once he perched on the roof of the barn, clutching the family umbrella and hyperventilating on the fresh mountain breeze until his body felt light and the dizziness in his head convinced him he could fly. Plunging to earth, he lay unconscious and was carried off to bed by his mother.”

Yet this seems important because it is so eccentric – it reveals his character.

Taking apart clocks: As a young boy:

“He next endeavored to take apart and reassemble the clocks of his grandfather. This too, he recalled, came to an end: ‘In the former operation I was always successful but often failed in the latter.’ Thirty years passed before he would tackle clockwork again.”

Again, it must be done well. It cannot be funny at all, unless I intended to be. Use it if I can get my intended result.

The Death of Daniel: Tesla believed his brother’s death influenced him. Maybe it did. Made him harder working.

“For all this outward beauty [watching geese fly], however, there were ogres in the boy’s mind, the lasting trauma of a family tragedy. As far back as he could remember, his life had been profoundly influenced by his older brother, who was seven at the time of Nikola’s birth. Daniel, brilliant and the idol of his parents, was killed at the age of twelve in a mysterious accident.

The immediate cause of the tragedy may have been a magnificent Arabian horse which had been given to the family by a dear friend. It was petted by them and attributed with almost human intelligence. In fact this beautiful creature had once saved the father’s life in the wolf-infested mountains. But according to Tesla’s autobiography, Daniel died of injuries caused by the horse. Of the incident itself, however, no details remain.

Anything Nikola did thereafter, he claimed, deemed dull by comparison to the promise of the dead brother. His own achievements ‘merely caused my parents to feel their loss more keenly. So I grew up with little confidence in myself. But I was far from being considered a stupid boy....’

A second more psychologically intricate version exists as to how Tesla’s older brother died. According to the second version, Daniel died from a fall down the cellar stairs. Some believe that the boy lost consciousness and in his delirium accused Nikola of pushing him. He died later from the head injury, probably a hematoma, so this account goes. Unfortunately at this date both versions are impossible to confirm.

Much later in his life, Tesla still suffered from nightmares and hallucinations related to the death of his brother. The details of the experience are never clarified, but the episode recurs and is recounted throughout his life as if from various time frames. One can theorize that a five-year-old child, unable to tolerate such a burden of assumed guilt, might have rewritten the facts in his mind.”

My problem with this may just be Walk Hard. And the derivative of the humor – Ray. But this is a very serious thing.

How do I portray this? The parents loving Daniel, and then receiving news that he died. Nikola finding out. Not sure yet. But the amount of weight Nikola put on this incident makes me want to include it.

Perhaps the greatest importance is the following passage:

“According to Tesla, hoping to console his parents for the loss of Daniel, he subjected himself at a very early age to iron discipline in order to excel. He would be more Spartan, more studious than other boys, more generous, and in every way superior. And it was while denying himself and repressing natural impulses, he later believed, that he began to develop his strange compulsions.”

Tesla and his father’s library: “But then there did come a kind of change, as the result of his favorite pastime – which was reading in his father’s well-stocked library. The Rev. Milutin Tesla at one point forbade Nikola to have candles, fearing that he would ruin his eyes by reading at night. The boy got some materials and made his own, stuffed rags in the keyhole and door cracks, and then read all night. He did not stop reading until he heard his mother beginning her arduous rounds at dawn.”

Read Tesla’s autobiography for more detail on this. Of course I’ll include this. It’s one of my favorite scenes. If nothing else from his childhood, this is it. Fascinating.

Tesla’s father teaching him: More in Tesla’s autobiography.

“From birth he was intended for the clergy. Although he longed to become an engineer, his father was inflexible. To prepare him, the Reverend Tesla initiated a daily routine: ‘It comprised all sorts of exercises – as guessing one another’s thoughts, discovering the defects of some form or expressions, repeating long sentences or performing mental calculations. These daily lessons were intended to strengthen memory and reason and especially to develop the critical sense, and were undoubtedly very beneficial.’”

Tesla’s first flashes (imprecise): I’ll definitely get back to this with more detail. If I reread Tesla’s autobiography, I’ll get more specific with this. But it’s just the start of the visualization that Tesla would use for the rest of his life. It’s objects, invention, journeys in his mind every night and sometimes in the day. One of the most interesting parts of the story is viewing his imagination.

I’ll refer back to the autobiography.

Tesla’s fantasy world: Refer to autobiography.

“to free himself of the tormenting images and to obtain temporary relief, the young Tesla began to conjure up imaginary worlds. Every night he would start on make-believe journeys-see new places,

cities, and countries, live there, meet people and make friends, and 'however unbelievable, it is a fact that they were just as dear to me as those in actual life and not a bit less intense in their manifestations.'

This he did constantly until the age of seventeen, when his thoughts turned seriously to invention."

Tesla turns serious about invention: Refer to autobiography.

"Then [at seventeen], to his delight, he found that he could visualize with such facility that he needed no models, drawings, or experiments, but could picture them all as real in his mind.

He recommended this method as far more expeditious and efficient than the purely experimental. Anyone who carries out a construct, Tesla held, runs the risk of becoming bogged down in the details and defects of the apparatus and, as the designer goes on improving, tends to lose sight of the underlying principle of the design.

'My method is different,' he wrote. 'I do not rush into actual work. When I get an idea I start at once building it up in my imagination. I change the construction, make improvements and operate the device in my mind. It is absolutely immaterial to me whether I run my turbine in my thought or test it in my shop. I even note if it is out of balance.'

Thus, he claimed he was able to perfect a conception without touching anything. Only when all the faults had been corrected in his brain did he put the device into concrete form.

'Invariably,' he wrote, 'my device works as I conceived that it should, and the experiment comes out exactly as I planned it. In twenty years there has not been a single exception. Why should it be otherwise? Engineering, electrical and mechanical, is positive in results. There is scarcely a subject that cannot be mathematically treated and the effects calculated or the results determined beforehand from the available theoretical and practical data...'

Despite such claims, Tesla did in fact often make small sketches of inventions in whole or in part. Later in life his methods of research came to resemble more closely the empirical approach of Edison.

Brilliant math student: "In school he excelled at languages, learning English, French, German, and Italian as well as the Slavic dialects, but it was math at which he starred. He was that unnerving sort of student who lurks behind the instructor while problems are being written on the board, and quietly chalks down answers the moment the teacher has finished. At first they suspected him of cheating. But soon it was realized that this was just another aspect of his abnormal ability to visualize and retain images. The optic screen in his mind stored entire logarithmic tables to be called on as needed. After he became an inventor, however, he would sometimes have to struggle for long periods to solve a single scientific problem."

Nikola is sick for nine months: When he next returned home [from a 'higher school in Karlstadt (Karlovac), Croatia)], a cholera epidemic was raging, and he immediately contracted the disease. He was in bed for nine months, scarcely able to move, and for the second time it was thought he was dying. He remembered that his father sat by his bed, trying to cheer him, and that he rallied sufficiently to suggest, 'Perhaps I may get well if you will let me study engineering.'

Oh, but this biography leaves out important details. Refer to the autobiography!

Tesla studies like a maniac: "At the end of this magnificent, if impractical, year of wandering and dreaming, he was enrolled in 1875 at the Austrian Polytechnic School in Graz. During his first year he had a fellowship from the Military Frontier Authority and hence had no financial worries. Nevertheless, he crammed from three in the morning until eleven at night, determined to complete two years' work in one. Physics, mathematics, and mechanics were his main studies.

Refer to the autobiography.

He records that the compulsion to finish everything, once started, almost killed him when he began reading the works of Voltaire. To his dismay he learned that there were close to one hundred volumes in small print 'which that monster had written while drinking seventy-two cups of black coffee per diem.' But there could be no peace for Tesla until he had read them all.

Tesla defies a professor: Definitely just look at the autobiography on this one.

Tesla and gambling: Autobiography. Maybe exclude this.

Tesla at billiards: This would be very interesting. He was almost at a professional level. All I have to indicate is that he was very good. Maybe show him with his calculations. The entire movie will be full of his calculations on the screen – numbers, angles, equations.

Tesla moves to Budapest, Hungary: "Telegraphs were in operation in the United States and Europe. The transatlantic cable had been laid. Alexander Graham Bell's telephone was sweeping the Continent when the news came in 1881 that an exchange would soon be opened at Budapest. It was one of four cities chosen to be so honored by Thomas Alva Edison's European subsidiary.

Tesla left for Budapest in January of that year. He at once found a job, with the help of an influential friend of his uncle's, in the Central Telegraph Office of the Hungarian government. It was certainly not

what the young electrical engineer would have chosen, being a drafting position at very low pay. However, with his usual zest he threw himself into the work.”

Tesla’s nervous breakdown: Then he was stricken by a bizarre affliction which, for lack of a better name, his doctors called a nervous breakdown. Refer to autobiography. Interesting.

Right now I don’t want to use voice over. Hopefully I won’t have to.

Tesla invents the rotating magnetic field: Absolutely include this. Refer to the autobiography. But here’s some additional information from Man Out of Time:

“Yet not only did his health return but, with the assistance of a devoted friend, he soon recovered greater vigor than ever. The friend was Anital Szigety, a master mechanic with whom Tesla often worked and an athlete. Szigety convinced him of the importance of exercise and, during this period, the two often went for long walks through the city.

In the years since he had left the Polytechnic at Graz, Tesla had never ceased to struggle with the problem of the unsatisfactory direct-current machine. He later wrote, in his usual flamboyant way, that he did not undertake the problem with a simple resolve to succeed. ‘With me it was a sacred vow, a question of life and death. I knew that I would perish if I failed.’

But in fact he already sensed that the battle was won. ‘Back in the deep recesses of the brain was the solution, but I could not yet give it outward expression.’

One afternoon toward sunset, he and Szigety were walking in the city park, and Tesla was reciting Goethe’s *Faust*. The sinking sun reminded him of a glorious passage:”

Interruption: Here is the translation, which is not found in the autobiography:

“The glow retreats, tdone in the day of toil;

It yonder hastes, new fields of life exploring;

Ah, that no wing can llift me from the soil,

Upon its track to follow, follow soaring!”

Continued Man Out of Time:

“Then, ‘the idea came like a flash of lightning, and in an instant the truth was revealed.’

Tesla’s long, waving arms froze in midair as if he had been seized with a fit. Szigety, alarmed, tried to lead him to a bench, but Tesla would not sit until he had found a stick. Then he began to draw a diagram in the dust.

‘See my motor here; watch me reverse it,’ he exclaimed.

The diagram that he drew would be shown six years later in his address before the American Institute of Electrical Engineers, introducing to the world a new scientific principle of stunning simplicity and utility. The applications of it would literally revolutionize the technical world.

It was an entire new system that he had conceived, not just a new motor, for Tesla had hit upon the principle of the rotating magnetic field produced by two or more alternating currents out of step with each other. By creating, in effect, a magnetic whirlwind produced by the out-of-step currents, he had eliminated both the need for a commutator (the device used for reversing the direction of an electric current) and for brushes providing passage for the current. He had refuted Professor Poeschl.”

This helped him create the AC motor.

“In the days that followed he gave himself up entirely to the intense enjoyment of devising new forms of alternating-current machines.

‘It was a mental state of happiness about as complete as I have ever known in life,’ he was to recall. ‘Ideas came in an uninterrupted stream, and the only difficulty I had was to hold them fast.

‘The pieces of apparatus I conceived were to me absolutely real and tangible in every detail, even to the minutest marks and signs of wear. I delighted in imagining the motors constantly running.... When natural inclination develops into a passionate desire, one advances toward his goal in seven-league boots. In less than two months I evolved virtually all the types of motors and modifications of the system....’

He conceived of such practical alternating-current motors as polyphase induction, split-phase induction, and polyphase synchronous, as well as the whole polyphase and single-phase motor system for generating, transmitting, and utilizing electric current. And indeed, practically all electricity in the world in time would be generated, transmitted, distributed, and turned into mechanical power by means of the Tesla Polyphase System.

What it signified was vastly higher voltages than could be obtained through direct current and – with transmission possible over hundreds of miles – a new age of electric light and power everywhere. Edison’s carbon filament light bulb could burn either AC or DC, but electricity couldn’t be carried economically when a generator was required every two miles. And Edison was less adaptable than his light bulb, being emotionally locked into DC.

Promotion, move, disappointment: The year was 1882, and Tesla’s ideas were still raging inside his head. Having neither the time nor the money for building prototypes, he turned his thoughts to the work of the telegraph office, where he was soon promoted to engineering. He made several improvements to the central-station apparatus (including inventing a telephone amplifier which he forgot to patent) and in return, the job gave him valuable practical experience.

Through family friends – two brothers named Puskas – he was next recommended for a job with Edison’s telephone subsidiary in Paris, where he went in the fall of 1882.

Of paramount interest to him was to sell the officers of the Continental Edison Company on the enormous potential benefits of alternating current. The young Serb was bitterly disappointed, however, on being told of Edison's aversion to so much as the mention of this subject."

Life in Paris: "To be young and in Paris simultaneously provided opportunities for consolation that he did not overlook. He made new friends, both French and American, resumed his old proficiency at billiards, walked miles every day, and swam in the Seine.

More failure with AC, returned cheated: Twice during the summer of 1883 he repeated his experiments with the aid of an assistant. The advantages of an assistant. The advantages of AC over Edison's DC were so obvious to him that he could not believe anyone could close his eyes to them.

In Strassburg, Tesla was asked to see what could be done with a railroad-station lighting plant that the client, the German government, had refused to accept. And for good reason. A large chunk of wall had been blown out by a short circuit during the opening ceremony – in the presence of old Emperor William I. The French subsidiary, being faced with a serious financial loss, promised Tesla a bonus if he could improve the dynamos and soothe the Germans.

It was a ticklish operation for a relatively inexperienced person, but at least Tesla's ability to speak German helped. And in the end, not only was he able to correct the electrical problems, but he made friends with the mayor, one M. Bauzin, whom he then tried to recruit to support his invention. The mayor did in fact round up several wealthy potential investors to whom Tesla demonstrated his new motor. But although it functioned perfectly, the burghers simply could not see its practical advantages.

The disappointed young inventor was only partly consoled when the mayor produced some bottles of St. Estephe 1801, left over from the last invasion of Alsace by the Germans. No one, he said kindly was more worthy of the precious beverage than Tesla.

Having successfully completed his job, the inventor returned to Paris, looking forward to collecting his bonus. But to his dismay, it did not materialize. Of three administrators who were his superiors, each passed the buck to the next until Tesla, angered at being cheated, summarily resigned."

Urged to go to America: The manager of the plant, Charles Batchelor, who had been a close friend and assistant of Edison's for many years, recognized the young Serb's abilities. He urged him to go to America where both grass and currency were greener.

Refer to autobiography.

"Thus Batchelor had reason to think he knew Edison well, and he wrote Tesla a glowing letter of recommendation, introducing the one egocentric genius to the other. As events would prove, however, Batchelor understood Edison less well than he supposed.

Maybe Batchelor tells him Edison is hard of hearing, so he should speak up. Maybe some kind of comment like that if it's useful.

For the train part, read autobiography.

The Statue of Liberty (fictional): So far, this is the only fictional thing I have come up with. There is a good chance I'll remove it, for the sake of being entirely, one hundred percent historically documented. But maybe not. Just keep that fact in mind – this is the only fictional thing I've thought of so far. It's not based on any fact whatsoever. It is giving liberty (not pun intended).

I can definitely imagine this. It's so convenient. And this fits the trailer! Thank God! What an incredible coincidence. So Tesla is in Paris before he heads to America. And there, perhaps with a friend, and perhaps alone, he can go up to the statue of liberty.

Now this is incredible (to me at least) – the Statue of Liberty was finally finished in construction in June of 1884. Tesla just arrived in America in June 4th. So what does this mean?

I can have Tesla there in Paris, visiting the statue. And maybe he talks to a friend about it. "They just finished it." Or a line to that effect. Maybe it still has scaffolding. And the friend says the statue will be sent to America. Tesla, too, thinks of heading to America. Perfectly plausible. Maybe before the train and everything, Tesla thinks of going to America. And he visits the statue under construction in America.

Seems great. Perfect for the trailer. See the statue under construction in Paris. Yes, 100% - I he can see it under construction.

Tesla Goes to America: "He found enough change for the train and swung aboard. Later he talked his way aboard the ship *Saturnia* when no one showed up to claim his berth.

To America, beside the few coins in his pocket [four cents], he brought some poems and articles he had written, a package of calculations relating to what he described (without further elucidation) as an insoluble problem, and drawings for a flying machine. To be sure, at twenty-eight he was already one of the world's greatest inventors. But not another soul knew it."

Maybe show in shipboard, Tesla rehearsing to meet Edison – what he would say – as he did rehearse his words over and over.

To the next chapter:

"At least no one mistook Tesla in his smart bowler hat and black cut-away coat for a Montenegrin shepherd or fugitive from debtors' prison that June day he strode ashore at the Castle Garden Immigration Office in Manhattan. It was 1884, the year the people of France gave America the Statue of Liberty. As if in response to the words of Emma Lazarus, 16 million Europeans and Asians were to sweep into this country in a very few years, and they would keep coming. Men, women, and even children were needed as fuel to run America's fulminating industrial revolution. It was also the year of the Panic of 1884.

Tesla did not go to the Immigration hiring hall, where new arrivals were signed up for labor gangs to slave thirteen-hour days on the railroads, in mines, factories, or stockyards. Instead, with his letter of

introduction to Edison and the address of an acquaintance in his pocket, he asked directions of a policeman and set out boldly onto the streets of New York.”

Tesla fixes a machine in passing: I think this one might be great for the trailer.

“Passing a shop where the owner was cursing at broken machine, he stopped and offered to fix it. When he had done so, the man was so pleased that he gave Tesla twenty dollars.”

I want there to be a dazzling display of skill. After all, the man was extremely pleased. Tesla is quick, and he will impress theater audiences.

“Excuse me.” The gentleman comes in and offers to help. Before or after this, the angry man asks for Tesla’s name.

“What’s your name?” or “Who are you?” Something like that.

Perhaps include the line: “They call me Mr. Tesla.”

I love that line. It would be great in the trailer. Slight Yugoslavian accent.

The Meeting with Edison, and impressing him: The following is – thank God – not just a copy of the autobiography. It’s actually useful. It describes what I believe are two separate situations immediately preceding Tesla’s meeting with Edison.

The good thing about this is that it establishes Edison’s character. Right before this were with Tesla. And then we shift toward watching Edison work in his office. We meet the character. And then we have him meet Tesla. Perfect.

“On a particularly trying summer day in 1884, the American inventor had rushed straight from an electrical emergency at the Vanderbilt house on Fifth Avenue to his Pearl Street generating station. The house had caught fire from two wires that got crossed behind wall hangings that contained fine metallic thread. The flames had been smothered but Mrs. Vanderbilt, hysterical from the ordeal, had learned that the source of her problems was a steam engine and boiler in the cellar. Now the unreasonable woman was demanding that Edison remove the whole installation.

He dispatched a repair crew, sucked a gulp of cold coffee from a mug, and tried to think what to do next. The telephone rang. Edison tilted the receiver to his good ear.

The manager of the shipping company that owned the S.S. *Oregon* sarcastically demanded to know if he had any plans for getting the dynamos repaired for his lighting plant. The liner had been tied up for days past sailing time and was losing bundles of money.

What could Edison say? He had no engineer to send.”

By the way, this is exactly the job Tesla would undertake.

“He thought enviously of Morgan. Mr. J. Pierpont Morgan employed a full-time engineer just to run the private boiler and steam engine that was set into a pit below the garden of his Murray Hill mansion. It was so noisy the neighbors were threatening to sue. But that didn’t bother Morgan; when things got too sticky, he could simply pack a supply of his favorite black cigars and set off for a nice long cruise on his yacht, the *Corsair*.”

‘I’ll send an engineer over this afternoon,’ Edison promised the shipping magnate.

Morgan was the major financial backer of the Edison Electric Company, whose direct-current wires were festooned in localized, horse-frightening, malfunctioning webs above the streets of New York. Although electricity was still little understood by the average financier or industrialist, a few like Morgan could see that it was easily the most promising development to have come along since Archimedes invented the screw. Everyone needed energy. And soon everyone would want Edison’s incandescent lights.”

Okay, so this nonexistent engineer bit. I like it. It has comedic value.

Perhaps Edison has an assistant nearby. Edison is talking on the phone. Then his assistant interrupts him to say something.

Edison is angry.

“What?”

“Mr. Edison, you don’t have an engineer at the moment.”

“I know. It’s called lying, you idiot.”

You know, like this, but there’s a lot of room for polish. It has to sound intelligent. Delivery is everything. Another crucial thing, I have to make it clear to the audience that this void will be filled up by Tesla. Edison could use him to excuse the lie – actually get an engineer.

Maybe Edison hangs up the phone.

“How is it that J. P. Morgan has an engineer at hand whenever he wants, but I don’t?” Something like that. It’s true. It’s a true sentiment. And it gives way to Tesla, who fills the void. Utter perfection. I just need to improve my delivery of the idea.

Skip a few paragraphs:

“Edison had no sooner promised his nonexistent engineer to the shipping company and cradled the telephone receiver that June day than a breathless boy dashed into the shop to report trouble at Ann and Nassau streets. A junction box that had been wired by one of inventor’s inexperienced electricians was leaking. The boy vividly described how a ragman and his horse had been catapulted into the air and then had disappeared down the street at an unbelievable clip.

Edison bellowed for this foreman: ‘Get a gang of men, if you can find any. Cut off the current and fix that cleak.’

He glanced up and became aware of a tall dark presence hovering just inside his office.

'Help you, mister?'

Tesla introduced himself, speaking in careful accented English and a little louder than usual, for he knew of Edison's hearing problem.

'I have this letter from Mr. Batchelor, sir.'

'Batchelor, eh? What's wrong in Paris?'

'Nothing that I know of, sir.'

'Nonsense, there's always something wrong in Paris.'

Edison read Batchelor's brief note of recommendation and snorted. But he gave a penetrating look.

'I know of two great men and you are one of them; the other is this young man!' Hmph! That's some recommendation. What can you do?'

Tesla had rehearsed this moment many times on shipboard. Edison's reputation impressed him deeply. Here was a man who, without formal education of any sort, had invented hundreds of useful products. He himself had spent years digging away at books, but for what? What had he to show for it? What use was all his education?

Quickly he began to describe the work he had done for Continental Edison in France and Germany. And then, before Edison could even respond, he moved smoothly into a description of his marvelous induction motor for alternating current, based upon his discovery of the rotating magnetic field. This was the wave of the future, he said. A smart developer could make a thousand fortunes with it.

'Hold up!' said Edison angrily. 'Spare me that nonsense. It's dangerous. We're set up for direct current in America. People like it, and it's all I'll ever fool with. But maybe I could give you a job. Can you fix a ship's lighting plant?''

Tesla boarded the S.S. *Oregon* that same day with his instruments and began to make the necessary repairs. The dynamos were in bad condition, having several short circuits and breaks. With the aid of the crew he worked through the night. At dawn the next morning the job was finished.

As he walked back along Fifth Avenue toward the Edison shop, he met his new employer and a few of his top men just going home to rest.

'Here is our 'Parisian' running around at night,' commented Edison.

When Tesla said that he had just finished repairing both machines, Edison looked at him in silence, then walked away without another word. But the Serb with his acute hearing heard him remark at a little distance, 'That is a damn good man.'''

Working hard for Edison: “Tesla’s skills were quickly appreciated by Edison, who gave him almost complete freedom in working on the design and operating problems of the shop. He regularly worked from 10:30 in the morning until 5:00 the following morning, a regimen that won from his new boss the grudging comment, ‘I have had many hardworking assistants but you take the cake.’

Both men had the ability in an emergency to go without sleep for two or three days while ordinary mortals crumpled around them. Edison’s workers always claimed, however, that he sneaked catnaps.

The fifty thousand dollar flop - cheated: “Before long Tesla observed ways in which the primitive Edison dynamos could be made to work more efficiently, even though limited to the production of direct current. He proposed a plan for redesigning them and said it would not only improve their service but would save a lot of money.

The astute businessman in Edison brightened at the mention of latter, but he realized the project Tesla had described was major and would take a long time. ‘There’s fifty thousand dollars in it for you – if you can do it,’ he said.

For months Tesla worked frenziedly, scarcely sleeping from one day to the next. In addition to redesigning the twenty-four dynamos completely and making major improvements to them, he installed automatic controls, using an original concept for which patents were obtained.”

This is all as serious drama. The whole – you don’t understand our American humor – should become a famous line.

The question is: Was Edison truly cheating him – making an honest promise and then betraying it by pretending it was a joke, or was Edison truly making a joke that he didn’t expect Tesla to misinterpret. Or maybe a third option: Edison deliberately lied for the sole purpose of enraging Tesla, for the sake of jealousy. *Prodigal Genius* is the source of this conversation. I’ll probably get better information from that source.

Some paragraphs ahead:

“It took Tesla the better part of the year to finish redesigning Edison’s dynamos. When at last the job was done, he went to his boss to report complete success and, not incidentally, to as when he might receive his \$50,000.

Edison swept his high black shoes from his desk and fell forward openmouthed.

‘Tesla,’ he exclaimed ‘you don’t understand our American humor.’

Read *Prodigal Genius*. It will certainly have better detail than this.

Also refer to the autobiography. There was a little about this incident. One of the classic moments of the film. No doubt.

“Once again it seemed that the Serb was to be deliberately cheated by an Edison company. Angered, he announced he would resign. Edison offered a compromise: a \$10 raise of his princely salary of \$18 per week. Tesla picked up his bowler hat and walked out.”

Okay, so here it says that he was “deliberately cheated”.

So be it.

That is how it was. It wasn't a practical joke. He was cheated.

And so when Tesla comes back, after what I believe were months of intense labor, and Edison denies him the money – when he lies – pretends it was all a joke, we get this incredible cinematic moment.

What happens in this moment?

One, we set up Edison as a true antagonist. A selfish, terrible money-grubbing liar. And we see how Tesla conducts himself. He walks out without cursing at Edison. He walks out. In the most respectable way, yet terribly hurt.

And so what sense does this create for the audience?

Total and absolute sympathy for Tesla. Here is a man who worked like a maniac for an honest pay, and Edison comes along and just destroys at all, laughing at this honest man. Tesla comes to give Edison everything, but no, the rich bastard just makes Tesla a poor nothing. This genius, this brilliant poor man, who works harder than anyone else, is so maltreated by Edison, and humbly walks out, so hurt.

We feel for Tesla. We truly, from the bottom of our souls, sympathize with Tesla – this kind man who was cheated. This will most likely be one of the most powerful moments of the film.

Tesla forms his first company, eased out: “Meanwhile [while Morgan reorganized industries in his yacht, the *Corsair*], Tesla, whose engineering reputation was beginning to be favorably known, was approached by a group of investors and offered a chance to form a company under his own name. He leaped at it. At last his great alternating-current discovery could be presented to the world. Humanity, as he saw it, would be freed from its burdens. Unfortunately, his backers had something more modest and practical in mind. There was a big market for improved arc lights for streets and factories, and this would have to come first.

The Tesla Electric Light Company was formed, with headquarters at Rahway, New Jersey, and a branch office in New York. One of the men involved in this firm was James D. Carmen, who was to be a behind-the-scenes ally of Tesla's for twenty years or more. He and Joseph H. Hoadley would serve as officers in several of Tesla's companies.

Working in his first laboratory on Grand Street, the Serb developed a Tesla arc lamp which was more simple, reliable, safe, and economical than those in current use. The system was patented and first put to work on the streets of Rahway.

Tesla's compensation was to have been shares of stock in the firm. Now, to his painful surprise at the ways of American commerce, he found himself being eased out of the company. He wound up with a handsomely engraved stock certificate which, because of the newness of the firm and the recurring economic crises, had little redeemable value.

Exit Tesla for the third time."

Yes, more pain for Tesla. Just keeps getting hit. And that's what makes drama. Suffering. But we take all this suffering, and then enjoy all the good that comes. We feel for it. Even suffering is an emotion, and we go to the theater to experience emotions. I don't know. Maybe I don't know what I'm talking about.

A depressing period: "The slump became a depression, and he was unable to find an engineering position. From the spring of 1886 until the following year he went through one of the more depressing periods of his life. Toiling as a laborer on New York street gangs, he barely managed to survive. Tesla referred to this painful experience afterward."

He dug ditches. Yes, he went to lows. This story has terrible lows, and incredible highs. That's what makes it a great story.

So the "barely managed to survive" part – I'll show Tesla unable to find work, so he goes to work digging ditches, and him getting barely enough food to eat. Show him frantically eating the food he can afford. Such a poor, poor man. We sympathize with you, Tesla!

"Four years had passed since he had discovered the rotating magnetic field and constructed his first alternating-current motor at Strassburg. He was beginning to wonder whether the green pastures and golden promise of America would continue to elude him. Humiliated by recent disappointments, he again brooded upon what seemed like his wasted years of education."

Yes, show this somehow. But I'm fairly certain Prodigal Genius will have more in depth information about this.

There is no question about it: I will reread Tesla's autobiography as well as Prodigal Genius.

Tesla is finally given a chance: After all the struggling Tesla had went through, we are thrilled to see him happy once more. Ecstatic to be specific. We are thrilled!

"But then his luck took another unexpected turn. Having heard of his induction motor, the foreman of the work crew on which the inventor was suffering so bitterly took him to meet A. K. Brown, manager of

the Western Union Telegraph Company, who not only knew about alternating current but was personally interested in the new idea.

Where Edison had failed to see the revolution ahead or, more likely, had seen in it the death knell of his own direct-current system of electrification, Brown correctly gauged the future. With his help another company was created in Tesla's name. The Tesla Electric Company had the specific goal of at last developing the alternating-current system that the inventor had conceived in the park in Budapest in 1882.

Tesla works on his dream: The laboratory and shops that the ecstatic Tesla found for his new company were at 33-35 South Fifth Street, only blocks from the Edison workshops. The Tesla Electric Company, capitalized with half a million dollars, opened for business in April 1887. To the inventor, who had waited so long for this moment, it was the fulfillment of a dream. He began laboring day and night without rest.

Because it was all there in his mind he needed only a few months to start filing patent applications for the entire polyphase AC system. This was in fact three complete systems for single-phase, two-phase and three-phase alternating currents. He experimented with other kinds too. And for each type he produced the necessary dynamos, motors, transformers, and automatic controls."

"But still no satisfactory alternating-current motor existed. Within six months after opening his shop, Tesla sent two motors to the Patent Office for testing and filed his first AC patents. In all, through 1891, he applied for and was granted a total of forty patents. So original and sweeping were they that he met with no delay."

Lightshows with Tesla (imprecise): For the sake of spectacle, and an interesting trailer, show all the crazy inventions Tesla made – whenever.

Tesla achieves fame, and makes his first lecture: "And now, recognition was mercifully swift in coming. William A. Anthony, who had established a course in electrical engineering at Cornell University, saw the significance of the Tesla system at once and spoke out in its favor. This was not just a new motor but quite possibly the foundation of a new technology. The essence of the system, as Anthony noted, was the beautifully simple induction motor, which had almost no wearing parts to break down.

The news of such unheralded activity in the U.S. Patent Office rocked Wall Street as well as the industrial and academic worlds. At Professor Anthony's suggestion the almost unknown Serb was invited to lecture to the American Institute of Electrical Engineers on May 16, 1888.

Tesla, to his surprise, discovered himself a natural and brilliant lecturer; and his address became a classic. His subject was 'A New System of Alternate Current Motors and Transformers.'

Dr. B. A. Behrend, commenting on the presentation, said, 'Not since the appearance of Faraday's 'Experimental Researches in Electricity; has a great experimental truth been voiced so simply and so

clearly.... He left nothing to be done by those who followed him. His paper contained the skeleton even of the mathematical theory.”

Include some excerpt or excerpts from the lecture.

Maybe include this, as well as some others:

“The subject which I now have the pleasure of bringing to your notice is a novel system of electric distribution and transmission of power by means of alternate currents, affording peculiar advantages, particularly in the way of motors, which I am confident will at once establish the superior adaptability of these currents to the transmission of power and will show that many results heretofore unattainable can be reached by their use; results which are very much desired in the practical operation of such systems and which cannot be accomplished by means of continuous currents.”

Think of how else to present this lecture.

Tesla meets up with Westinghouse: “Tesla’s timing could not have been better. His patents were the missing key that George Westinghouse had been waiting for. The Pittsburgh magnate, a stocky, blunt, dynamic fellow with a walrus mustache, had a taste for fashionable dress and for adventure. Like Morgan he would soon be commuting in his private railway car—at first from Pittsburgh to New York but finally to Niagara Falls. In his reputation as a plunger, Westinghouse somewhat resembled Edison. And like Edison he was a fighter. The two men were to be well-matched in the battles ahead.

Westinghouse was a hard-driving businessman but he was the antithesis of a robber baron: he did not see the buying up of politicians and the fleecing of the public as essential to success in business. What he did see, what he had appreciated from the very first, was the potential of a power system that could send currents of high voltage surging across the great spaces of America. Like Tesla he had even dreamed of harnessing the hydroelectric potential of Niagara Falls.

He called on the inventor in his laboratory. The two men, who shared both the romance of the new energy and a taste for personal dandiness, felt a quick rapport. Tesla’s workshops and laboratory were crammed with intriguing apparatus. Westinghouse moved from machine to machine, sometimes bent forward, hands on knees, peering, or sometimes with his head tilted, nodding with pleasure at the smooth hum of alternating-current motors. He needed few explanations.”

“He agreed to work as a consultant for Westinghouse in adapting his single-phase system, at a salary of \$2,000 per month. While the extra income was welcome, it meant moving to Pittsburgh just as exciting social invitations had begun to trickle in from members of the New York ‘400’. He left reluctantly.”

Tesla becomes an American citizen: This may be important. It shows he’s proud to be an American. Which is something American audiences want to hear.

“Tesla soon achieved another milestone as important to him as the development of his inventions. On July 30, 1891, he became an American citizen. This, he often told friends, he valued more than any of the scientific honors to come to him. Honorary degrees he tossed into drawers, but his certificate of naturalization was always kept in his office safe.”

Visits family: “In September [of 1891] he left for Paris to attend the International Exposition and, from there, in the company of his uncle Petar Mandic, departed for Croatia. Petar had once been a monk in the monastery of Gomirje near Ogulin, and here the exhausted inventor went to recover his health.

He then visited his sisters and mother. Of the circumstances in which his widowed mother then lived or whether he ever contributed to her support once he began to earn money in America, unfortunately no records have been found. That she often dominated his thoughts, however, future events were to disclose.”

Edison tries to take down Tesla: “Edison felt a flood of outrage when the first heard the news of Tesla’s deal with Westinghouse for his alternating-current system. At last the lines were clearly drawn. Soon his propaganda machine at Menlo Park began grinding a barrage of alarmist material about the alleged dangers of alternating current. As Edison saw it, accidents caused by AC must, if they could not be found, be manufactured, and the public alerted to the hazards. Not only were fortunes at stake in the War of the Currents but also the personal pride of an egocentric genius.”

“At West Orange, New Jersey, families living in the neighborhood of Edison’s huge laboratory began to notice that their pets were vanishing. Soon they found out why. Edison was paying schoolboys twenty-five cents a head for dogs and cats, which he then electrocuted in deliberately crude experiments with alternating current. At the same time he issued scare leaflets with the word ‘WARNING!’ in red letters at the top. The gist of these messages: if the public were not alert, they might find themselves being terminally ‘Westinghoused’.

Edison had been laying the groundwork for his vendetta for two years. He had written to E. H. Johnson: ‘Just as certain as death Westinghouse will kill a customer within six months after he puts in a system of any size. He has got a new thing and it will require a great deal of experimenting to get it working practically. It will never be free from danger....’

Now he was accusing Westinghouse of doing what he himself had done to the gas companies when he sent agents around the country propagandizing the virtues of direct current: ‘None of his plans worry me in the least; only thing that disturbs me is that W. is a great man for flooding the country with agents and travelers. He is ubiquitous and will form numerous companies before we know anything about it.

Westinghouse, his eyes on the challenges ahead, paid only reluctant attention to Edison’s hectoring but at last he agreed to carry on an educational campaign to combat it. He would make speeches, he said;

he would write articles; he would do anything to get the truth before the people. He was, he told Tesla, determined to win for his company the right to harness Niagara Falls.”

“As usual in these years of rapid growth, George Westinghouse had money problems. It had cost a great deal more than he had expected to convert his plants over to the Tesla polyphase system. And now when he needed funds for expansion, the bankers were giving him mingy responses.

His only consolation was knowing that Edison was in trouble too. The rumors on Wall Street were that, unless Edison consolidated, his problems were acute. To take his mind off them, he blustered. Westinghouse, he said, should stick with his air brakes, for he knew nothing about the electricity business.

Edison’s opening feint in the War of the Currents was to lobby legislators at Albany to pass a law limiting electrical currents to 800 volts. That way, he figured, AC would be stopped. But the legislators didn’t buy it since Westinghouse countered with a threat to sue the Edison firm and others for conspiracy under the laws of the State of New York.

‘The man has gone crazy,’ ranted Edison of his nemesis in Pittsburgh, ‘and is flying a kite that will land him in the mud sooner or later.’

In addition to waging a virulent campaign in press, pamphlet, and by word of mouth, Edison initiated Saturday demonstrations for newspaper reporters with strong stomachs. He called them in to witness the frightened dogs and cats that schoolboys had snatched off the streets being shoved onto a sheet of metal to which were attached wires from an AC generator with a current of one thousand volts.

Batchelor sometimes helped with these demonstrations of the perils of alternating current. Once while trying to hold a wriggling puppy, he himself received a terrible shock. He described having ‘the awful memory of body and soul being wretched asunder... the sensations of an immense rough file thrust through the quivering fibres of the body.’ Still the killing of animals continued.”

“Prior to the next execution ‘Professor’ Brown went on the road with Edison’s traveling show. On stage he electrocuted a number of calves and large dogs with AC and referred to having ‘Westinghoused’ them. In effect he was asking Americans, ‘Is this the invention you want your little wife to cook dinner with?’

Public concern had been fired to the desired pitch when New York State prison authorities announced the first scheduled electrocution of a condemned murderer. One William Kemmler would die on August 8, 1890 – Westinghoused.”

I don’t think I can include the animal parts. One, I definitely DON’T want to see that on screen. And two, Tesla electrocuted animals frivolously as well. I can also add a third reason, I have a totally extreme view of life rights, and don’t want to project my opinion to the world. I’ll let my extreme views be kept private.

Tesla denies a fortune: “The financial advisers arranged a merger with several smaller companies including U.S. Electric Company and the Consolidated Electric Light Company. The new firm would be known as the Westinghouse Electric and Manufacturing Company.

So far, so good, but there was one problem: Nikola Tesla’s patent royalties under the generous arrangement with Westinghouse would sink any ship, according to the investment bankers. One source has stated he was told by Tesla that Westinghouse had paid him \$1 million in advance royalties. Only four years after the contract was signed, it was rumored that the accrued royalties could be in the neighborhood of \$12 million. No one seemed to know exactly, least of all Tesla. As utilities expanded, royalties would be collected on powerhouse equipment and motors and on every application of the alternating-current system patents. Tesla stood to become a billionaire, one of the world’s wealthiest men.

‘Get rid of that royalty contract, Westinghouse,’ the investment banker advised. Otherwise the stability of the reorganization would be imperiled.

This Westinghouse was loath to do. He himself was an inventor and believed in royalties. Besides, he argued, royalties were paid for by the customers and included in costs of production. But the bankers left him with no choice.

Reluctantly he called on the inventor in what must have been one of the most embarrassing confrontations of his life. (In the official biography of George Westinghouse the episode goes unmentioned.) The contract between Tesla and Westinghouse had been made in good faith on the part of both men. Tesla, had he chosen, undoubtedly could have gone to court and had it upheld. But to what end if Westinghouse were to lose his firm?

As usual, George Westinghouse went directly to the point. Explaining the problem, he said, ‘Your decision determines the fate of the Westinghouse Company.’

Tesla’s absorption in his new fields of research had been total. Money was something he spent freely when he had it, but he seldom knew how much was available. To him the value of money consisted in what one did with it rather than in any intrinsic worth.

‘Suppose,’ he asked, ‘I should refuse to give up my contract; what would you do then?’

Westinghouse spread his hands. ‘In that event you would have to deal with the bankers, for I would no longer have any power in the situation.’

‘And if I give up the contract, you will save your company and retain control? You will proceed with your plans to give my polyphase system to the world?’

‘I believe your polyphase system is the greatest discovery in the field of electricity,’ said Westinghouse. ‘It was my efforts to make it available to the world that brought on the present difficulty. But I intend to continue, no matter what happens, with my original plans to put the country on an alternating-current basis.’

Being no businessman, Tesla could not refute Westinghouse's assessment of his financial situation; but he trusted the industrialist. 'Mr. Westinghouse,' he said, 'you have been my friend, you believed in me when others had no faith; you were brave enough to go ahead... when others lacked courage; you supported me when even your own engineers lacked vision to see the big things ahead that you and I saw; you have stood by me as a friend... You will save your company so that you can develop my inventions. Here is your contract and here is my contract – I will tear both of them to pieces, and you will no longer have any troubles from my royalties. Is that sufficient?'

The Westinghouse Company's annual report of 1897 states that Tesla was paid \$216,600 for outright purchase of his patents at this point to avoid the payment of royalties.

By destroying the contract, Tesla not only relinquished his claim to millions of dollars in already earned royalties but to all that would have accrued in the future. In the industrial milieu of that or any other time it was an act of unprecedented generosity if not foolhardiness. He was to live well for another decade but thereafter would be plagued by a chronic shortage of research and developmental capital. How many discoveries were thus to be lost to society can only be surmised.'

Westinghouse returned to Pittsburgh, where the mergers and refinancing were arranged. His company went on to become a giant, and he kept his promise to Tesla. Years later in a formal testimonial to the industrialist, Tesla wrote: 'George Westinghouse was, in my opinion, the only man on this globe who could take my alternating-current system under the circumstances then existing and win the battle against prejudice and money power. He was a pioneer of imposing stature, one of the world's true noblemen of whom America may well be proud and to whom humanity owes an immense debt of gratitude.'"

This is certainly an important part of the story. I have to, if not then, then at the end, state that he turned down over a billion dollars.

Tesla becomes world-renowned, puts on dazzling lectures, with gadgets: "As long as the world left him alone in his Manhattan laboratory to pursue his love affair with electricity, Tesla was the happiest man alive. In the waning years of the 1880s and the early 1890s he had enjoyed such a brief period. But when he delivered four blockbusting lectures in America and Europe in 1891-92, he became the world's most celebrated scientist, and his private life was never the same again.

A weird, storklike figure on the lecture platform in his white tie and tails, he was nearly seven feet tall, for he wore thick cork soles during his dangerous demonstrations. As he warmed to his act, his high-pitched, almost falsetto voice would rise in excitement. The audience, riveted by the cadenced flow of words, the play of lights and magic, would stare as in a trance.

Despite the fireworks, philosophy, and poetry, his every scientific claim was based on experiments he had personally repeated at least twenty times. Each item of equipment was new, designed by him and

usually fabricated in his own shop. The same demonstration was seldom repeated from one appearance to another.

He spoke of the mysterious fascination of electricity and magnetism, 'with their seemingly dual character, unique among the forces in nature, with their phenomena of attracts, repulsions, and rotations, [their] strange manifestations of mysterious agents,' that stimulate and excite the mind."

Tesla describes electricity. I certainly want the atmosphere of mystery and awe. That is exactly what science should be thought of as – rather than something boring. I want him to be passionate about science – and thus make the audience passionate as well.

"But how to explain them?

'An infinitesimal world, with the molecules and their atoms spinning and moving in orbits, in much the same manner as celestial bodies, carrying with them and probably spinning with them ether, or in other words, carrying with them static charges,' he said, 'seems to my mind the most probable view, and one which, in a plausible manner, accounts for most of the phenomena observed. The spinning of the molecules and their ether sets up the ether tensions or electrostatic strains; the equalization of ether tensions sets up other motions or electric currents, and the orbital movements produce the effects of electro and permanent magnetism.'

It had been only three years since, speaking before this same professional group, he had introduced the power system that was to revolutionize industry and bring light to even the most remote hoes. Now he described his research into the very nature of electricity by way of light and luminous effects, holding his audience in thrall."

Amnesia – and other minor things: As Tesla was working on developing radio – or the wireless telephone, or simply wireless as they called it at the time, Tesla fell to a deep sleep after months of hard work.

When he awoke, he experienced partial amnesia.

"From having gone almost without rest for months, he said that he had then slept 'as if drugged.' On regaining his senses, he was shocked to discover that he could visualize no scenes from his past except those of earliest infancy.

Having developed a marked indifference to medical doctors, he put his mind to the problem of curing himself.

Night after night he concentrated on the memories of early childhood, gradually bringing more and more of his life into focus. In this unfolding process the image of his mother was always the principal figure. He began to feel a consuming desire to go to her.

'This feeling grew so strong,' he recalled, 'that I resolved to drop all work and satisfy my longing. But I found it too hard to break away from the laboratory and several months elapsed, during which I succeeded in reviving all the impressions of my past life...'

It was early spring of 1882. He had not yet accepted a flock of invitations to lecture in England and France and indeed was still in a state of emotional conflict about doing so.

Then, he recalls, a vision materialized 'out of the mist of oblivion,' and he saw himself at the Hotel de la Paix in Paris, just coming to from one of his peculiar sleeping spells. In this 'recollection,' he saw himself being handed a dispatch bearing the sad news that his mother was dying.

A curious fact about this period of partial amnesia, Tesla later wrote, was that he was alive to everything touching on his research, which went forward apace. 'I could recall the smallest details and the least significant observations in my experiments, and even recite pages of texts and complex mathematical formulae.'

It appears there had been reason for his concerns about his mother's health: letters had been arriving from the family home at Gospić indicating that her health was indeed failing. He had also been receiving from all parts of the world invitations, honors, 'and other flattering inducements' to visit and lecture. At last he accepted those from London and Paris, planning thereafter to go directly home.

His lecture to the Institution of Electrical Engineers in London was hailed as a major scientific event, and when it was over, the British did not want to let him go.

'Sir James Dewar insisted on my appearing before the Royal Society,' he recalled. 'I was a man of firm resolve but succumbed easily to the forceful arguments of the great Scotchman. He pushed me into a chair and poured out half a glass of wonderful brown fluid which sparkled in all sorts of iridescent colors and tasted like nectar.'

To his surprise Dewar said, 'Now you are sitting in Faraday's chair and you are enjoying whiskey he used to drink.' On being assured that no one else in the world more deserved these honors, he was won over. The French could wait one more day.

His lecture before the Royal Society of Great Britain, attended by the elite of the scientific world, brought yet more accolades for the young inventor. Lord Rayleigh, the distinguished physicist who was then chairman of the Royal Society, urged the inventor, because of his great talent for mining fundamental discoveries, to consider revising his *modus operandi*.

He recommended that Tesla in the future specialize in some single area of research. This was a highly novel idea for a scientist who demanded all the answers at once."

The following is dramatic, the part about the nervous breakdown:

‘My dear Tesla,’ he wrote. ‘You are a true prophet. I have finished my new coil, and it does not do so well as the little one you made for me. I fear it is too large.... The phosphorescence through my body when I hold one terminal is decidedly inferior to that given with the little one....’

The observant Crookes had noted the inventor’s exhaustion and went on to warn him that he appeared to be on the verge of a physical and nervous breakdown. ‘I hope you will get away to the mountains of your native land as soon as you can,’ he wrote. ‘You are suffering from overwork, and if you do not take care of yourself, you will break down. Don’t answer this letter or see anyone but take the first train.’

Sir William was right; but his advice was just then impossible for Tesla to accept.

The inventor hurried to Paris where he lectured on ‘Experiments with Alternating Currents of High Potential and High Frequency’ and again demonstrated his sensitive electronic tubes. This time his audiences were the Societe Internationale des Electriciens and the Societe Francaise de Physique.

That same month of February 1892, Sir William Crookes affirmed Tesla’s intuition. He published a prediction that electromagnetic waves in space could be used for wireless.”

Okay, so – so far in this chapter I’ve dealt with amnesia, wanting to see his mother, lecturing in England and France, and being at the verge of a nervous breakdown.

The part about amnesia kind of changes things. It makes me consider flashbacks to childhood rather than going linearly from beginning to end.

Tesla’s mother dies, but this doesn’t really affect the story, as far as I know at this point.

Then he went to Yugoslavia. First Belgrade, where he was welcomed well, and then to Zagreb and Budapest.

Returned to the States in 1892.

Radio: “He moved scientific history forward again in the spring of 1893 when, addressing the Franklin Institute in Philadelphia and the National Electric Light Association at St. Louis, he described in detail the principles of radio broadcasting.”

Yes, the fact that he helped invent radio is important. However, it is not relevant to the story. My movie is not a list of what Tesla accomplished. The focus is emotion. And this does not contribute to emotion. So I say, skip it. It’s one thing to have a first lecture – an important, transformative event for the character. It’s another matter to delve in the many accomplishments for no apparent reason.

The White City: Over 27 million people attended – which was the size of half of the population of the US. It was an enormous event in every way. It was the biggest outdoor event at that point in history.

In terms of electricity, it even says on Wikipedia that it was a historic moment and a revolution. Make this clear to the audience! That's why it's important enough to be in the story!

Ooh – cool. It would be known as “then night Tesla brought light to the world.”



I understand that the spectacle of this film may not stun the audience. But they can certainly appreciate the novelty of all of this. They can understand that Tesla was a genius, and they can understand that the people witnessing these spectacles were stunned. Some things, like Tesla as a human live wire, will impress them.

What value is this to the story? I believe this may be the pinnacle of Tesla's fame. Also it shows some of the spectacles of Tesla which may be useful in the trailer and the movie. Many visual ideas in rapid succession. I can skip the part with Twain in the laboratory.

Besides, this is important because it propelled Tesla to fame.

“January sleet scraped at the windows of Tesla's laboratory. Kolman Czito, his assistant, shivered as he helped to adjust a machine, but the inventor worked away in total concentration. For all that Tesla was aware of the temperature, it might as well have been blossom time.

The telephone rang, and he sighed as he went to answer it. The operator was putting through a long-distance call from Pittsburgh.

George Westinhouse's voice boomed across the miles, almost stuttering in his excitement. His firm had gotten the contract for installing all the power and lighting equipment for the Chicago World's Fair of 1893, otherwise known as the Columbian Exposition – the first electrical fair in history. It would use Tesla's alternating-current system, his maligned and ridiculed AC, all the way.

This was good news and bad: good because it offered a great international event as a showcase; bad because it meant leaving work that meant more to him than anything else in life. His radio research was now at its most exciting, critical point.

The industrialist's words were tumbling over each other. It was going to be the grandest spectacle of modern times, he said; a chance not only to show what AC could do but to exhibit all the new electrical products being invented. Who would not give an arm and a leg for such an opportunity?

General Electric would be showing Edison's inventions. Everybody who was anybody in international science would be there. The architecture was to be magnificent. When does the Fair open?' Tesla asked, fearing the worst.

'May first. Hardly time for everything we must do.'

'All right, Mr. Westinghouse,' said the inventor.

Turning away from his beloved coils, he went to work on the big show. Ideas were already racing through his mind of ways to amaze the scientific community and bewitch the public. He could not possibly have said no.

The United States both wanted and needed a spectacle. Shortly after President Grover Cleveland was elected to a second term of office, the nation was engulfed by bank failures, joblessness, and bankruptcies. The Panic of 1893 haunted the humble and the mighty alike. Something to take people's minds off the imminent prospect of standing in breadlines seemed politically desirable.

The Columbian Exposition was devised as a celebration (one year late) of the four hundredth anniversary of the discovery of America.

President Cleveland invited the royalty of Spain and Portugal and other foreign dignitaries. He even agreed to turn the gold master key that would release the electricity and flood the City of Tomorrow with light, starting up fountains and machinery, raising flags and banners, and signaling the grand opening of the extravaganza. To agree to turn the master key took courage. Electricity had been installed in the White House in 1891, but thus far no president had ever been allowed to touch the switches. The task had been prudently left to hirelings, for, after all, the public had been warned by no less an authority than Edison of the dangers involved.

Chicago was a gray city when the great day finally came, the breadlines now being actual and long. But the site of the Fair was breathtaking to the multitude that arrived, and reporters began to write of it as the White City. *The New York Times* (May 1, 1893) reported, 'Grover Cleveland, calm and dignified, in a few elegant words delivered in a clear, ringing voice, which was heard by the great multitude gathered before him, declared the World's Columbian Exposition open... and touched the ivory-and-gold key....'

A Tower of Light flared into brilliance with a thousand electric bulbs radiating the promise of a brighter future. Venetian canals had been built to mirror the modern illumination of 'Old World' architecture. Everywhere the pulse of the future throbbed: alternating current.

As the lights went on, the massed human beings below uttered a great sigh. Then, in the seats reserved for them, the Cabinet officers, the Duke and Duchess of Veragua, and other foreign dignitaries began to cheer. The crowd lustily joined in while tightly corseted women fainted and fell like soldiers in battle.

Westinghouse, who had underbid General Electric on the illumination contract, had enjoyed a decisive triumph. In the Electricity Building could be seen all the latest products and inventions of American ingenuity. At night especially the Fair seemed an enchanted place. Colored searchlights played on the fountains, making them so beautiful that people actually wept tears of joy. Adventurous citizens careered around the fairgrounds on an elevated train driven by electricity. The foolhardy crowded to get seats on Mr. G. W. Ferris's enormous wheel, which was 250 feet in diameter and like nothing ever seen before. They packed in sixty to a car to soar out precariously above both the White City and the gray city that lay beyond."

Woah! The very first Ferris Wheel! That's pretty interesting. I definitely want someone to remark about that.

"What is that?"

"A machine designed by a Mr. G. W. Ferris. They call it a Ferris Wheel. It spins round and round. Just for entertainment."

"That'll never catch on."

Anyway, back to Man Out of Time:

"Between May and October, 25 million Americans visited Chicago to see the latest wonders of science, industry, art, and architecture. This was then a third of the total population.

Visitors crowded into display rooms presided over by the famous Nikola Tesla. Clad in white tie and tails, he stood among a magician's feast of high-frequency equipment, demonstrating one electrical miracle after another. A darkened alcove held tables that glowed with his phosphorescent tubes and lamps. One length of tubing radiated the words 'Welcome, Electricians,' which Tesla had had laboriously blown letter by letter from the molten glass. His other lights honored such great scientists as Helmholtz, Faraday, Maxwell, Henry, and Franklin. And he had not forgotten – right there up with the famous scientists – the name of the most eminent living poet of Yugoslavia: Zmaj Jovan, whose pseudonym was ZMAJ.

Day after day he captivated the curious with demonstrations illustrating how alternating current worked. On a velvet-covered table small metallic objects – copper balls, metal eggs – were made to spin at great speeds, reversing themselves smoothly at fixed intervals.

He demonstrated the first synchronized electric clock attached to an oscillator and showed his first disruptive discharge coil. The audiences understood little of the science involved, yet were enthralled. And when he seemed to turn himself into a human firestorm by using the apparatus with which he had so often thrilled his laboratory visitors, they cried out in fear and wonder."

Yes. Absolutely show that. Not using the laboratory meeting with Twain.

“A bevy of Tesla’s young women friends arrived under firm escort from New York City. They flirted with him, rode on the Ferris wheel, and visited the Woman’s Building to hear Mrs. Potter Palmer (Chicago’s retort to Mrs. Astor) declare that the model kitchen, which boasted an electric stove, electric fans, and even an automatic dishwasher, heralded the liberation of the female.”

Hilarious. Maybe include that. Also this is extremely important (not the zipper):

“They saw the first zipper and Edison’s Kinetoscope (early motion-picture photography) which brought ‘scenes to the eyes as well as sounds to the ear’; and they listened to thin bursts of music piped by telephone from a concert in Manhattan.”

A man laughs.

“Motion-pictures. Give it a year. Trends die.”

More:

“A journalist, one of a throng who visited the Tesla exhibition, sent this report to his newspaper:

‘Mr. Tesla has been seen receiving through his hands currents at a potential of more than 200,000 volts, vibrating a million times per second, and manifesting themselves in dazzling streams of light.... After such a striking test, which, by the way, no one has displayed a hurried inclination to repeat, Mr. Tesla’s body and clothing have continued for some time to emit fine glimmers or halos of splintered light. In fact, an actual flame is produced by the agitation of electrostatically charged molecules, and the curious spectacle can be seen of puissant, white, ethereal flames, that do not consume anything, bursting from the ends of an induction coil as though it were the bush on holy ground.’

The inventor, it was reported, expected one day to develop himself in a complete sheet of lambent fire that would leave him quite uninjured. Such currents, he claimed, would keep a naked man warm at the North Pole, and their use in therapeutics was but one of their practical possibilities.”

And returning home:

“Tesla returned to New York elated by his triumphs. In the flush of fame he was more determined than ever to avoid the many public claims on his time. He would have preferred to avoid all commercial claims as well, but the need to finance radio and other research soon made this impossible.

Meeting High Society: Some knowledgeable men called him the greatest inventor in history.

I DEFINITELY want this in the trailer.

“My associates tell me you’re the greatest inventor in history.”

And Tesla gives some modest, and preferably witty reply. Definitely denies it.

Okay, now: What is the use of the following information? According to later in the chapter, he was on a relentless search for millionaires to finance him. This is where he went. And, also, as a little addition, he would live in that hotel for a while.

So how do I imagine the following? Well, just as shown: Go to a new scene – an abrupt location. Where are we? Ah, Wallstreet. And then watch the investors go to the hotel. And then from there we see Tesla in the crowd.

That's directing! I'm directing the movie with my script. As much of that as possible is what I think right now, although that attitude might radically change.

Anyway, here's the information:

"Wall Street was dominated by personal adventures, including such legendary figures as Morgan, John D. Rockefeller, the Vanderbilts, Edward H. Harriman, Jay Gould, Thomas Fortune Ryan, and other more ephemeral but equally colorful specimens. Some might bloom for a day, only to be trampled and forgotten. Most thrived on trading of such dubious legality that anyone who tried to emulate them today would probably be obliged to live in a foreign capital beyond threat of extradition. Dealing in coal, railroads, steel, tobacco, and the new field of electrical utilities, they plunged, cornered, and sold short.

According to the irreverent Twain, the gospel preached by the robber barons during this galloping phase of the industrial revolution was, 'Get money. Get it quickly. Get it in abundance. Get it dishonestly, if you can, honestly, if you must.'

Each day when the closing gong sounded at the Stock Exchange on Wall Street, many members moved on to the Waldorf-Astoria Hotel, which was then located where the Empire State Building now stands. For a broker to be admitted as a member of the 'Waldorf Crowd' was a patent of success. The splendid lounges and dining rooms served as showcases in which to observe the preening of the winners as well as the dismay of the losers. Fear was often a palpable presence.

Tesla instinctively gravitated to the glass-enclosed Palm Room to see and be seen by the money men so important to his career. He had begun dining there regularly some years before he was able to take up residence at the fashionable hotel. Compared to the enormous wealth amassed by the plungers and builders of the period, he was not affluent, but he was handsome, polished, charming, and lived as if his prospects for wealth were excellent, as indeed they were."

"Tesla himself was now a member of McAllister's exclusive roster of wealth and social position, the New York '400'. He was meeting those fabled 'great silent men with cold eyes and hard smiles' on their own playing field. His knowledge was being courted, and he enjoyed the game. Should he allow himself to become, like Edison, 'Morganized'? Should he be 'Astored,' 'Insulled,' 'Melloned,' 'Ryaned,' or 'Fricked'? He had no illusions as to the risk involved. No matter who capitalized his inventions, there would certainly be meddling interference and probably ultimate control. That was how the system worked, and it was the price an inventor must pay.

A few knowledgeable men had already begun to call him the greatest inventor in history, even greater than Edison. If further proof of his success in the New World were needed, a backlash was developing against him- not just in the Edison camp but, more quietly, among other scientists who received less attention from the press and who were never invited to the exciting celebrity affairs in his laboratory.

All his life Tesla was to cultivate an adoring host of journalists, editors, publishers, and literati. Although his lectures made him world-famous and were preserved in the records of learned societies, he never once submitted an article to an academic journal. Indeed, when he first arrived in America there was none; institutional ties with the big three of industry, government, and universities had not yet become the accepted avenue to recognition for a scientist. But now that was changing.”

So, maybe Tesla is looking for sponsorship here. Meeting people. Maybe being praised by adoring strangers, or greeted by interested women. Maybe we sort of go through his lack of a love life – lay that out for the audience.

Parties, friends, women, a social life – maybe not relevant: The rest of the chapter I’ve raid contains interesting information, but none I can incorporate will into the story. Maybe in passing I can have him mention how he doesn’t have the time for a wife or something to that effect.

The fact that he had a social life and close friends, and went to parties is good, but it’s not crucial. So what? That’s just a setting.

Hopefully I can find some opportunity to showcase this while progressing the story. For example, maybe I can let Tesla be his charming self, not interested in women, impressing guests in his laboratory, displaying his taste in fine music, food, and drink in some place where that is not he focus – something else is.

Niagara, fame description, expansion of AC: Not sure how much I’ll use this. But the fact that he worked in Niagara MUST be at least mentioned.

“If there ever was a man who created so much and whose praises were sung so little – it was Nikola Tesla. It was his invention, the polyphase system, and its first use by the Niagara Falls Power Company that laid the foundation for the power system used in this country and throughout the entire world today....”

Actually, however, Tesla’s praises were well sung at this period and only later would it become convenient for the beneficiaries of his genius to grow forgetful. In the 1890s his name and achievements were almost constantly in headlines.”

So he was at the top of the world for a brief period, but then what happened? I don't understand this. "Only later would it become convenient for the beneficiaries of his genius to grow forgetful." I need to understand why Tesla's fame died.

Okay, so here's some expansion stuff. Could be useful in a montage:

"Soon alternating-current power systems were being built in New York City for the elevated and street railways, for steam-railway electrification, and were even being extended to the Edison substations.

And then some stuff about lawsuits. Maybe a mention:

"Nevertheless the inventor and Westinghouse continued to be torn and worried by sore losers [of the War of Currents]. The company defended its alternating-current patents in some twenty court actions – including the one alluded to earlier that was determined by the U.S. Supreme Court – in each of which Westinghouse won a decisive victory. It filed actions against General Electric and others, and these too were successful. But as mentioned earlier, so much litigation created public confusion and left unhappy men. Some of these who had once praised Tesla now did their best to damage him."

Pretty random. Returning to New York to continue research, one of his projects he envisioned would help him control the world's weather. Never too far-fetched for Tesla:

"Weary of the bickering and backbiting [of critics, company and scientific enemies, courts], the inventor returned to New York, more determined than ever to protect his time, aching to follow up half a dozen lines of research.

He began to achieve effects with high-voltage equipment that opened an infinity of possibilities. By learning to create artificial lightning he hoped not only to discover how to control the world's weather but also how to transmit energy without wires. And this in turn meshed with research that he hoped would enable him to build the first world-wide broadcasting system."

No more parties: Finally, there seems to be a use to showing Tesla with his social life. He seems to have experienced the social scene and decided that it is not worth abandoning his research for it. So this contrast – first being famous and social – and then deciding to get to work, may be important.

"Since his return to New York, Tesla had lived almost a hermit's existence. Only on the most tempting social occasions were the inventor's friends any longer able to lure him from his laboratory. The late night fun and games had stopped. Robert and Katharine Johnson worried about him, warning that all work and no play could bring on another breakdown."

Tesla, in his thirties, in the Waldorf-Astoria Hotel: This is where the introduction begins. This section, the white pigeon section, and the Twain laboratory scene are adjacent.

This is a scene that I probably won't use just like this. It seems like a background, not the focus. The scene itself should progress the story. It contains ideas I will definitely want to use, such as his idiosyncrasies.

"Promptly at eight o'clock a patrician figure in his thirties was shown to his regular table in the Palm Room of the Waldorf-Astoria Hotel. Tall and slender, elegantly attired, he was the cynosure of all eyes, though most diners, mindful of the celebrated inventor's need for privacy, pretended not to stare."

Tesla walking with his white pigeon: This is odd. I read that the death of the white pigeon was the "final blow" to Tesla. But in *Man Out of Time*, it is said that Tesla saw his white pigeon in his thirties. The maximum lifespan of a pigeon is thirty five years. The numbers don't add up. But anyway, after leaving the hotel at ten at night, which was a habit:

"Strolling back toward his laboratory, he turned into a small park and whistled softly. From high in the walls of a nearby building came a rustling of wings. Soon a familiar white shape fluttered to rest on his shoulder. Tesla took a bag of grain from his pocket, fed the pigeon from his hand, then wafted her into the night, and blew her a kiss."

Tesla enters his laboratory in his thirties, with Twain, lightshows: Finally I've gotten this place down chronologically. It's the spring of 1894. Tesla had been working like he always did, and then he had some time to show his friends his work. Johnson (the close friend, but not Katharine), Joseph Jefferson (actor), Marion Crawford, and Twain. He also had them pose for the first photographs ever taken by gaseous tube lights.

So anyway, here is the is where that part of the introduction began:

In *Man Out of Time*, this follows leaving the hotel at ten, and meeting with the white pigeon.

This is a great description of his laboratory at "33-35 South Fifth Avenue (now West Broadway), near Bleecker Street".

"Entering the familiar loft building in the darkness, he closed a master switch. Tube lighting on the walls sprang into brilliance, illuminating a shadowy cavern filled with weirdly shaped machinery. The strange thing about this tube lighting was that it had no connections to the loops of electrical wiring around the ceiling. Indeed, it had no connections at all, drawing all its energy from an ambient force field. He could pick up an unattached light and move it freely to any part of the workshop.

In a corner an odd contraption began to vibrate silently. Tesla's eyes narrowed with satisfaction. Here under a kind of platform, the tiniest of oscillators was at work. Only he knew its awesome power. Thoughtfully he glanced through a window to the black shapes of tenements below. His hardworking immigrant neighbors appeared safely asleep. The police had warned him of complaints about the blue lightning flaring from his windows and electricity snapping through the streets after dark.

He shrugged and turned to his work, making a series of microscopic adjustments to a machine. Deep in concentration, he was unaware of the passage of time until he heard a pounding on the door at street level.

Tesla hurried down to greet an English journalist, Chauncey McGovern of *Pearson's Magazine*.

"I'm so pleased you could come, Mr. McGovern."

"I felt I owed it to my readers, sir. Everyone in London is talking about the New Wizard of the West – and they don't mean Mr. Edison."

"Well, come along up. Let's see if I can justify my reputation."

As they turned to the stairs there came a ring of laughter from the street entrance and a voice that Tesla recognized.

"Ah, that's Mark."

He opened the door again to welcome Twain and the actor Joseph Jefferson. Both had come directly from the Players' Club. Twain's eyes sparkled in anticipation.

"Let's have the show, Tesla. You know what I always say."

"No, what do you say, Mark?" the inventor asked with a smile.

"What I always say, and mind you they'll be quoting me into the hereafter, is that thunder is good, thunder is impressive, but it is lightning that does the work."

"Then we'll get a storm of work done tonight, my friend. Come along."

"Not to stagger on being shown through the laboratory of Nikola Tesla," McGovern would later recall, "Requires the possession of an uncommonly sturdy mind..."

"Fancy yourself seated in a large, well-lighted room, with mountains of curious-looking machinery on all sides. A tall, thin young man walks up to you, and by merely snapping his fingers creates instantaneously a ball of leaping red flame, and holds it calmly in his hands. As you gaze you are surprised to see it does not burn his fingers. He lets it fall upon his clothing, on his hair, into your lap, and finally, puts the ball of flame into a wooden box. You are amazed to see that nowhere does the flame leave the slightest trace, and you rub your eyes to make sure you are not asleep."

If McGovern was baffled by Tesla's fireball, he was at least not alone. None of his contemporaries could explain how Tesla produced this oft-repeated effect, and no one can explain it today.

The odd flame having been extinguished as mysteriously as it appeared, Tesla switched off the lights, and the room became black as a cave.

"Now, my friends, I will make for you some daylight."

Suddenly, the whole laboratory was flooded with strange, beautiful light. McGovern, Twain, and Jefferson cast their eyes around the room, but they could find no trace of the source of illumination. McGovern wondered vaguely if this eerie effect might somehow be connected with a demonstration Tesla had reportedly given in Paris in which he had produced illumination between two large plates set at each side of a stage, yet with no source of light apparent.

But the light show was merely a warm-up for the inventor's guests.

Lines of tension on Tesla's face betrayed the seriousness with which he himself regarded the next experiment.

A small animal was brought from a cage, tied to a platform, and quickly electrocuted. The indicator registered one thousand volts. The body was removed. Then Tesla, with one hand in his pocket, leaped lightly upon the same platform. The voltage indicator began slowly climbing. At last two million volts of electricity were pouring "through" the frame of the tall young man, who did not move a muscle. His silhouette was now sharply defined with a halo of electricity formed by myriad tongues of flame darting from every part of his body.

Seeing the shock on McGovern's face, he extended one hand to the English interviewer, who described the strange sensation: "You twist it about in the same fashion as you have seen people do who hold the handles of a strong electric battery. The young man is literally a human electric 'live wire.'"

The inventor leaped down from the platform, turned off the current, and relaxed the tension of his audience by tossing off the performance as no more than a trick. "Pshaw! These are only a few playthings. None of these amount to anything. They are of no value to the great world of science. But come over here, and I will show you something that will make a big revolution in every hospital and home as soon as I am able to get the thing into working form."

He led his guests to the corner where a strange platform was mounted on rubber padding. When he flipped a switch, it began to vibrate rapidly and silently.

Twain stepped forward, eager. "Let me try it, Tesla. Please."

"No, no. It needs work."

"Please."

Tesla chuckled. "All right, Mark, but don't stay on too long. Come off when I give you the word." He called to an attendant to throw the switch.

Twain, in his usual white suit and black string tie, found himself humming and vibrating on the platform like a gigantic bumblebee. He was delighted. He whooped and waved his arms. The others watched in amusement.

After a time the inventor said, "All right, Mark. You've had enough. Come down now."

“Not by a jugful,” said the humorist. “I am enjoying this.”

“But seriously, you had better come down,” insisted Tesla. “Believe me, it is best that you do so.”

Twain only laughed. “You couldn’t get me off this with a derrick.”

The words were scarcely out of his mouth when his expression froze. He lurched stiffly toward the edge of the platform, frantically waving at Tesla to stop it.

“Quick, Tesla. Where is it?”

The inventor helped him down with a smile and propelled him in the direction of the rest room. The laxative effect of the vibrator was well known to him and his assistants.

None of his guests had volunteered to undergo the experiment in which Tesla stood on the high-voltage platform; they never did. But now they clamored for an explanation of why he had not been electrocuted.

As long as the frequencies were high, he said, alternating currents of great voltages flowed largely on the outer surface of the skin without injury. But it was no stunt for amateurs, he warned. Milliamperes penetrating nerve tissue could be fatal, while amperes distributed over the skin could be tolerated for short periods. Very low currents flowing beneath the skin, whether alternating current or direct current, could kill.

It was dawn when Tesla finally said good-night to his guests. But the lights burned on in his laboratory for another hour before he locked the doors and walked to his hotel for a brief period of rest.”

Kind of interesting, but not related to the story. Every scene should propel the story, not just be a spectacle.

Fire: So Tesla is happy and all – inventing. Doing what he loves. Probably one of the happiest times in his life. But then disaster:

“Then, suddenly disaster struck. At 2:30 in the morning of March 13, 1895, his laboratory at 33-35 South Fifth Avenue caught fire. The six-story building in which it was located was destroyed, the cost to him being incalculable. All the expensive research apparatus that he and Kolman Czito had so laboriously built crashed right through from the fourth floor to the second where it came to rest, a mass of molten, reeking metal.

Nothing was insured. But even had it been, it could not have covered his losses. Indeed, a million dollars, as he later said, could not have compensated for the resulting setbacks in his research. Stunned, sickened, he turned away from the ruins in the cold early morning and wandered through the streets in a trance, paying no attention to where he was or to the passing of time. The Johnsons frantically searched for him in his familiar haunts.

Newspapers all over the world reported the tragedy: 'Work of half a lifetime gone.' 'Fruits of Genius Swept Away.' In London the *Electrical World* reported that the greatest loss was the physical collapse of the inventor. Charles A. Dana of the New York *Sun* paid him the highest tribute: 'The destruction of Nikola Tesla's workshop, with its wonderful contents, is something more than a private calamity. It is a misfortune to the whole world. It is not in any degree an exaggeration to say that the men living at this time who are more important to the human race than this young gentlemen can be counted on the fingers of one hand; perhaps on the thumb of one hand.'

Only his closest assistants knew the dazzling scope of his advanced researches in radio, wireless transmission of energy, and guided vehicles, or that he was achieving effects with what the world would soon know as X rays, and also nearing a breakthrough in the potentially lucrative industrial discovery of a means of producing liquid oxygen. It may have been the latter volatile substance that caused the blaze—apparently started from a gas jet on the first floor near oil-soaked rags—to explode so rapidly through the entire building.

An emotional letter from Katharine, written the day after the fire, finally reached him. She told of their search and the hope of consoling him in his 'irreparable loss.'

'It seemed as if you too must have dissipated into thin air... Do let us see you again in the flesh that this awful thought may vanish,' she implored. 'Today with the deepening realization of the meaning of this disaster and consequently with increasing anxiety for you, my dear friend, I am even poorer except in tears, and they cannot be sent in letters. Why will you not come to us now—perhaps we might help you, we have so much to give in sympathy....'

The degree to which this strangely unresponsive man had begun to affect her life and happiness was no longer a question in her mind."

All of this makes me wonder if I should have put more detail with the Johnsons. But look—so far, no. Not really. Not worth the time in meeting characters. They don't really matter. There are no scenes. Nothing. Maybe just a little hanging out with high society. But no... not worth it. I doubt it will be worth it. But who knows, maybe I'll want to write it down if those characters are still important later. Remember that they are contained in the chapter called High Society and a very little bit, especially at the end in High Road, Low Road.

Some more about the fire: Tesla was disappointed, but realized it was only a set-back. So it was really no gigantic deal. It was unfortunate, and Tesla would think about it for years, but no insurmountable deal.

Enter George Sherff: Probably won't be too important of a character, but he'll probably be there often. Just because of his presence, it is important to know him. Here's some info:

"An important figure entered the inventor's life at this juncture. In preparing for his Academy of Science lecture he was supplied with lantern slides and cathode tubes by an eager new assistant named George Scherff.

At first his secretary, Scherff was to become a financial and legal adviser, bookkeeper, office manager, stockholder, factotum, friend, and during acute financial squeezes, nearly-always-reliable source of small loans. Devoted through good times and lean, he was to become Tesla's most loyal and least dispensable employee.

Scherff never complained about long hours, scanty rewards, or the occasional thoughtlessness of his boss. If it meant depriving his own family to help Tesla out of a tight spot, the good and frugal Scherff would manage. He never questioned the fact that he was always Mr. Scherff, the loyal functionary, never an intimate or social equal. He truly worshipped Tesla, learned more about his affairs than anyone else, and would go to his grave with sealed lips where the inventor's private matter were concerned. If ever there was a faithful friend standing behind a great man, it was George Scherff behind Nikola Tesla."

Settling the romantic question, almost killed, interview: If I don't mention anything romantic for the entire movie, this will do. It's everything – complex, fascinating, and dramatic.

I can't find the source of this interview. I know the name of the source, but I can't find the actual article. I can reconstruct, for dramatic – as in, artistic – purposes to fit a film scene. It doesn't have to be a hundred percent accurate. It can't be, anyway. But I'll try to find it later, if possible. Here is the source as listed at the back of *Man Out of Time* – Chapter ten, source fifteen:

"New York *Herald*, undated anonymous article written two years after Tesla's laboratory fire of March 13, 1895. Butler, Library, Columbia University."

There is a ton of great stuff here. The one question is whether it is too personal, too revealing. It is my choice of style how close I want to get to Tesla. But maybe this is good.

Either way, I definitely want to put this down as a potential scene for the future.

"Tesla's expertise in handling such queries [of why he isn't married] is apparent at end of a long interview he gave to a reporter for the New York *Herald*, who came upon him one night slumped in a café at a late hour, looking haggard and tired. He was still brooding at times over the setbacks he had suffered when his laboratory burned, but it was apparent to the reporter from his pallor and the look in his eyes that something was seriously troubling him.

'I am afraid,' began Tesla, 'that you won't find me a pleasant companion tonight. The fact is, I was almost killed today.'

He had gotten a shock of about 3.5 million volts from one of his machines.

'The spark jumped three feet through the air,' he said, 'and struck me here on the right shoulder. I tell you it made me feel dizzy. If my assistant had not turned off the current instantly it might have been the end of me. As it was, I have to show for it a queer mark on my right breast where the current struck in

and a burned heel in one of my socks where it left my body. Of course the volume of current was exceedingly small, otherwise it must have been fatal.'

It is possible that he was even minimizing the accident because of Edison's long campaign against 'deadly AC.'

The reporter asked how far sparks could travel.

'I have frequently had sparks from my high-tension machines jump the width or length of my laboratory, say thirty to forty feet,' he said. Indeed, there is no limit to their lengths, although you can't see them except for the first yard or so, the flash is so quick.... Yes, I am quite sure I could make a spark a mile long, and I don't know that it would cost so much either.'

Asked whether he had suffered many accidents while working with electricity, he said, 'Very few. I don't suppose I average more than one a year, and no one has ever been killed by one of my machines. I always build my machines so that whatever happens it cannot kill anyone. The burning of my laboratory two years ago waste most serious accident I ever had. No one knows what I lost by that.'

For a moment he sat reflecting. Then, speaking in the third person, he began to explain the **main source of sadness in a prolific inventor's life**.

'So many ideas go chasing through his brain that he can only seize a few of them as they fly, and of these he can only find the time and strength to bring a few to perfection. And it happens many times that another inventor who has conceived the same ideas anticipates him in carrying one out of them. Ah, I tell you, that makes a fellow's heart ache.'

When the laboratory burned, he said, there was destroyed with it the apparatus he had devised for liquefying air by a new method. 'I was on the eve of success, and in the months of delay that ensued, a German scientist solved the problem....'

It was Linde who anticipated him in this important commercial breakthrough of liquid oxygen. Tesla had been seeking a means of refrigeration for the artificial insulation of electrical mains.

'I was so blue and discouraged in those days,' he said, 'that I don't believe I could have borne up but for the regular electric treatment which I administered to myself. You see, electricity puts into the tired body just what it needs – life force, nerve force. It's a great doctor, I can tell you, perhaps the great of all doctors.'

Asked if he were often depressed, he said, 'Perhaps not often.... Every man of artistic temperament has relapsed from the great enthusiasms that buoy him up and sweep him forward. In the main my life is very happy, happier than any life I can conceive of.'

He described the overmastering excitement of his research. 'I do not think there is any thrill that can go through the human heart like that felt by the inventor as he sees some creation of the brain unfolding to success.... Such emotions make a man forget food, sleep, friends, love, everything.'

It was as if he had purposely led the reporter to the next question. Did he believe in marriage 'for persons of artistic temperament'?

Tesla considered carefully.

'For an artist, yes; for a musician, yes; for a writer, yes; but for an inventor, no. The first three must gain inspiration from a woman's influence and be led by their love to finer achievement, but an inventor has so intense a nature with so much in it of wild, passionate quality, that in giving himself to a woman he might love, he would give everything, and so take everything from his chosen field. I do not think you can name many great inventions that have been made by married men.'

Whether this struck the interviewer as a sly put-down of Edison, with his two marriages, he did not indicate.

Tesla hesitated and then, adverting to his single estate, added with what the reporter described as pathos, 'It's a pity too, for sometimes we feel so lonely.'

Whether I'll use this, and how much loneliness I emphasize in this story, is still to be decided.

The Oscillator: This may make a phenomenal trailer introduction. New York City, 1898. Suddenly in the city, buildings shake. Then windows begin to shatter. Citizens pour into the streets in Italian and Chinese neighborhoods.

Then we see a man's hands. He is working with some machinery in a laboratory. Suddenly we see his face. He looks to the side and begins to sense an ominous vibration in the floor and walls. Knowing that he must quickly put a stop to it, he seized a sledgehammer and smashed the little oscillator in a single blow.

With perfect timing the two policemen rushed through the door, allowing him to turn with courteous nod.

The two police officers just stare in frightened awe.

"Gentlemen, I am sorry," he said. "You are just a trifle too late to witness my experiment."

Fucking badass. You have to love Tesla. I think that's a perfect trailer introduction. And it's all one hundred percent real.

This scene is truly amazing – the spectacle of it, the drama of it, is too much to skip, It's absolutely fascinating. Especially about the part that he could destroy the Brooklyn Bridge in a matter of minutes if he felt like it.

Now, what makes this so phenomenal as a trailer opening? One it's misleading. You think it's aliens, or a disaster movie. But no, not at all. But it's definitely intriguing. And then we get these two cops going up

flights of stairs. Also – this gets us thinking. And then we have Tesla, in his strange mad scientist lab. And then Tesla realizes the vibration and smashes the oscillator with a sledge hammer. Amazing. Dramatic.

It's over.

And then the cops come in, with frightened awe.

What really gets us is Tesla's character. And the line. It's an instant classic. It's so witty – in how it avoids the danger and makes it a playful situation – yet I didn't write it at all. This is absolute historical truth.

It's so perfectly phrased. It just makes the perfect introduction for the trailer.

"Gentlemen, I am sorry," he said. "You are just a trifle too late to witness my experiment."

Now let's just quote this from the book not to miss anything for later:

"One day in 1898 while testing a tiny electromechanical oscillator, he attached it with an innocent intent to an iron pillar that went down through the center of his loft building at 46 East Houston Street, to the sandy floor of the basement.

Flipping on the switch, he settled into the straight-backed chair to watch and make notes of everything that happened. Such machines always fascinated him because, as the tempo built higher and higher, they would establish resonance with first one object in his workshop and then another. For example, a piece of equipment or furniture would suddenly begin to shimmy and dance. As he stepped up the frequency, it would halt but another more in tune would take up the frantic jig and, later on, yet another.

What Tesla was unaware of on this occasion was that vibrations from the oscillator, traveling down the iron pillar with escalating force, were being carried through the substructure of Manhattan in all directions. (Normally earthquakes are more severe at a distance from their epicenter.) Buildings began to shake, windows shattered, and citizens poured onto the streets in the nearby Italian and Chinese neighborhoods.

At Police Headquarters on Mulberry Street, where Tesla was already regarded with suspicion, it soon became apparent that no other part of the city was having an earthquake. Two officers were dispatched posthaste to check on the mad inventor. The latter, unaware of the shambles occurring all around his building, had just begun to sense an ominous vibration in the floor and walls. Knowing that he must quickly put a stop to it, he seized a sledgehammer and smashed the little oscillator in a single blow.

With perfect timing the two policemen rushed through the door, allowing him to turn with a courteous nod.

'Gentlemen, I am sorry,' he said. 'You are just a trifle too late to witness my experiment. I found it necessary to stop it suddenly and unexpectedly and in an unusual way... However, if you will come around this evening I will have another oscillator attached to this platform and each of you can stand on

it. You will, I am sure, find it a most interesting and pleasurable experience. Now you must leave, for I have many things to do. Good day, gentlemen.'

When reporters arrived, he blandly told them he could destroy the Brooklyn Bridge in a matter of minutes if he felt like it.'

Moving to Colorado: It just so happens that the Oscillator scene serves as a perfect transition to the move to Colorado. I have just demonstrate that Tesla's experiments are dangerous in the city. Now he also describes sparks flying up to the ceiling, increasing the danger for the city. So the Oscillator scene is pertinent to the story as it provides a prime example of why Tesla decide to move from New York for his experimentation. I'm so happy that scene is relevant! Something I can use!

"To Leonard Curtis, a patent attorney who had loyally protected his and Westinghouse's rights during the War of the Currents, he wrote: 'My coils are producing 4,000,000 volts – sparks jumping from walls to ceilings are a fire hazard. This is a secret test. I must have electrical power, water and my own laboratory. I will need a good carpenter who will follow instructions. I am being financed for this by Astor, and also Crawford and Simpson. My work will be done late at night when the power load will be least.'

Curtis, who was associated with the Colorado Springs Electric Company, immediately set to work on the inventor's problem. His solution would have far-reaching consequences."

"Leonard Curtis's reply from Colorado Springs could not have brought better news: 'All things arranged, land will be free. You will live at the Alta Vista Hotel. I have interest in the City Power Plant so electricity is free to you.'

Tesla, overjoyed, threw himself into detailed preparations, especially the ordering of machinery that would have to be shipped. Meanwhile, Scherff and his shop assistant, Kolman Czito, were called upon to labor almost around the clock for a major move of laboratory equipment."

"Tesla departed New York on May 11, 1899, traveling by train and making a stopover in Chicago to demonstrate again his radio-controlled boat. George Scherff was left behind to run the New York laboratory with precise and lengthy instructions for more equipment to be built, bought, and shipped. Of course Tesla left him with neither adequate money nor a power of attorney to cover the day-to-day expenses. As the inventor saw the matter, when he considered it all, his staff would soon share his own wealth and fame."

I love trains. I can imagine a good train scene. Have music in the background. Tesla's face. Awesome.

"Arriving at Colorado Springs on May 18, he was taken directly to the Alta Vista Hotel. After examining the creaky elevator, he chose room No. 207 (divisible by three and only one flight up), and left instructions for the maid to deliver eighteen clean towels daily. He said he preferred to do his own dusting.

The land made available to him was about a mile east of Colorado Springs, in the shadow of Pike's Peak. Its main use was grazing pasture for the town's dairy herd. His closest neighbor was to be the Colorado School for the Deaf and Blind, a choice reflecting some discretion. The elevation was 6,000 feet above sea level; the air clear, dry and crackling with static electricity.

To reporters who interviewed him on his arrival, he disclosed that he planned to send a wireless message from Pike's Peak to Paris in time for the Paris Exposition of 1900. The journalists asked whether he meant to send messages from peak to peak. He replied haughtily that he had not come to Colorado to engage in stunts.

He had filed in the preceding decade a whole series of patents related to the wireless transmission of power and messages, beginning with the most basic equipment for the production of high frequencies and high voltages. He had already built a coil that produced 4 million volts, and now he wanted to go much higher in order to power a device capable of making transmissions on a global scale. The tests were to be made in great secrecy – or, at any rate, as much secrecy as was possible in a small community titillated by the arrival of a famous inventor with mountains of mysterious equipment.

Tesla was directed to a local carpenter named Joseph Dozier, to whom he outlined plans for the experimental station, and the construction began immediately. He then sent the first of an almost continuous stream of wires and letters to Scherff in New York asking that Fritz Lowenstein, his young engineering assistant, be sent west: 'He must be here to oversee construction and locate equipment.'

During the building of the experiment station the inventor commuted to and from the site each day to buckboard, his long legs sprawled over the sides – not so much from lack of space as in readiness to abandon ship. Tesla trusted horses no more than he did electric elevators (In time, the horses of Colorado Springs would have equal reason not to distrust, for when he got his powerful magnifying transmitter operating, it would electrify the Earth in all directions, making runaways of the gentlest nags.)

A fence surrounded the weird structure that began to rise from the prairie floor, and this barrier bristled with warnings: 'KEEP OUT – GREAT DANGER.' When the station was completed an even more ominous quotation from Dante's *Inferno* was posted at the door: 'Abandon hope all ye who enter here.' It did not take long for the word to spread that the apparatus being built by Mr. Tesla was capable of killing a hundred persons in a single flash of lightning.

The experiment station, which had started out looking like a large square barn, ended up resembling a ship with a towering mast. Extruding from an open section of the roof was a tower that reached eighty feet above the ground. From this metal mast soared another 122 feet into the air. Poised up its tip was a copper ball three feet in diameter.

Machinery was moved in and assembled as quickly as it arrived on the construction scene. Coils or high-frequency transformers in many shapes and sizes were built. From New York came the specially built two-turn primary circuit that he had had in his laboratory on Houston Street. With its associated circuit interrupters, it would drive his magnifying transmitter."

“Once this powerful equipment [his magnifying transmitter] was built and the inventor began testing he was able to emulate the electrical fireworks of even the wildest mountain storms. When the transmitter was operating, lightning arresters in a twelve-mile radius from his station were bridged with continuous fiery arcs, stronger and more persistent than those produced by natural lightning.

For the first time he kept a careful daily diary in which he recorded every aspect of his research. And because visual effects were useful as well as thrilling, he devoted many hours to photographic experiments.”

Tesla’s ability wanes: “The fact that he began to make trial-and-error adjustments of his research equipment in Colorado when he was middle-aged hints at a waning power.” Also: “Later in life his methods of research came to resemble more closely the empirical approach of Edison.

“After he became an inventor, however, he would sometimes have to struggle for long periods to solve a single scientific problem.”

Finally we get to this. Middle age.

“The equipment Tesla was perfecting would, he hoped, one day be adaptable for commercial use. But first, thousands of observations and delicate adjustments had to be made. He no longer trusted his legendary memory to store such a volume of information. His daily notes referred constantly to experiments that had failed to turn out as expected, and he would ask himself why. This process was at sharp variance with the one he claimed to have used throughout his earlier life. Now middle-aged, he may have felt his memory waning slightly. Certainly he felt driven by the pressures of his self-imposed deadline.”

Maybe represent this somehow. That he’s losing his memory. Voice over, visually, talking to someone. Something like that.

Mayhem in Colorado

In his Colorado journal his lifelong fascination with visual phenomena is underscored. The flashing lights that he had always experienced on the screen of his mind were dramatically externalized, and his descriptions, among the mass of mathematical formulas, are detailed, loving, almost erotic in their lingering portrayal of the colors and grandeur of his Colorado electrical storms.

Nights when experiments were being made with the magnifying transmitter the prairie sky exploded with sound and color. Even the earth seemed alive and the crash of thunder from the spark gap could be heard for miles. Butterflies were sucked into the vortex of the transmitter coil, which was fifty-two feet in diameter. Awed spectators at some distance from the station told of seeing tiny sparks flying between grains of sand and between their heels and the ground when they walked. They said that at three hundred feet away, arcs an inch long could be drawn from grounded metal objects. Horses grazing or

trotting peacefully half a mile away would suddenly go berserk, feeling shocks through their metal shoes.

The inventor and his assistants, working nightly amidst thunder and lightning, stuffed cotton in their ears and wore thick cork or rubber soles on their shoes. Even so, Tesla described a frequent bursting sensation in the ears, something almost as positive as touch, and feared damage to their eardrums. Often the pain and buzzing they felt continued for hours after a test.”

“For all his worries about the project, Tesla was finding Colorado’s weather and atmosphere exhilarating. His vision and hearing, both of which were always acute, responded to an extraordinary degree to the clarity of the air. The climate was ideal for his observations. The sun’s rays were fiercely intense, the air dry, and the frequent lightning storms of almost inconceivable violence.

The natural lightning discharges in this part of Colorado were very frequent and sometimes of great violence, on one occasion about twelve thousand discharges occurring within two hours, all within thirty miles of Tesla’s laboratory. Many of them he described as resembling gigantic trees of fire with their trunks upside down. And toward the end of June he noticed a curious phenomenon: His instruments were being affected more strongly by discharges occurring at a great distance than by those nearby. ‘This puzzled me very much,’ he wrote. ‘what was the cause?’”

Lightning and beautiful music: Just eight months in Colorado. A single scene seems enough, actually.

“On the appointed night he dressed neatly and carefully in his black Prince Albert coat, donned gloves and a black derby hat, and arrived at the station to find courageous Czito already waiting. The latter would man the switch, giving Tesla the opportunity to observe effects from the doorway of the laboratory. It was important for him to watch both the giant coil in the center of the room and the copper ball on the mast. When all was ready, he shouted, ‘Now!’

It had been prearranged that on the first test the switch was to be closed for only a single second. Accordingly Czito slammed it in, watched the second hand on his pocket watch, and almost instantly pulled it out. The effects in that brief instant were rewarding: threads of fire had crowned the secondary coil and electricity snapped above.

For the main event Tesla wanted to watch from outside where he would have a clear view of the mast and ball. ‘When I give you the signal,’ he told Czito, ‘I want you to close the switch and leave it closed until I gave you the signal to open it.’

In a moment he called, ‘Now! Close the switch!’

Czito followed orders and stood poised to pull it out again on command. The vibration of heavy current surging through the primary coil made the ground feel alive. There came a snap and roar of lightning exploding above the station. A strange blue light filled the interior of the barnlike structure.

Czito looked up to see the coils a mass of surging, writhing snakes of flame. Electrical sparks filled the air and the sharp smell of ozone stung his nostrils. Lightning exploded again and again, building to a

crescendo, and still Czito waited for the order to yank open the switch. Unable to see Tesla from his post, he began to wonder if the inventor had been struck by lightning and lay injured or dead outdoors. To continue seemed madness. In another moment he feared the walls and roof of the station would be aflame.”

Making this moment classic: Sweet music in the style of Debussy. While this overwhelming, exploding electrical storm occurs, the sound starts to fade, and then we hear the sweet, romantic music of Claude Debussy. A smile grows on Tesla’s face. He thrives on the chaos. Or maybe some other music. But it has to be beautiful and ironic. Maybe opera. But leave it open to an original score!

What went from possibly the cheesiest moments in film – mad scientist with endless lightning – to one of the greatest, a man thriving on the chaos of an unprecedented electrical storm. Love it. Classic scene. Oscar-worthy. Absolutely gorgeous scene. Opera music fits. The Master of Lightning.

“Ave Maria” by Schubert. Tesla stares in awe. The music gives a twofold message: With a female voice, we see that lightning was Tesla’s one love in his life – his mistress. And two we see what beauty it was. Tesla is stunned there in frozen rapture. He is almost in tears with the beauty of the lightning – as are we, the audience, watching this masterful scene juxtaposing one of the most beautiful works of music in history with an overwhelmingly violent lightning storms.

Tesla is in love with the lightning.

“Tesla, however, was neither injured nor dead. He was frozen in a paroxysm of bliss. From where he stood he could see the lightning bolts shooting 135 feet from the top of the mast, and as he later learned, the thunder was being heard fifteen miles away in Cripple Creek. Again and again the lightning surged and crashed. Sublime! Had ever a human being felt more in tune with the gods? How long he stood there he had no idea. Later it turned out to have been only about one minute. But suddenly, inexplicably, all was silent. What could have happened? He shouted to Czito: ‘Why did you do that? I did not tell you to open the switch. Close it again quickly!’

Czito, however, had not touched the switch. The power was dead. God in His mercy had sent him a reprieve.

Tesla rushed to a telephone and called the Colorado Springs Electric Company. He began remonstrating and pleading. They had cut off his power, he charged, and must restore it at once.

The reply from the powerhouse was curt and to the point.

‘You’ve knocked our generators off the line, and she’s now on fire!’

Tesla had overloaded the dynamo. The town of Colorado Springs was in darkness. As soon as the fire was extinguished a standby generator was put into service, but Tesla’ request to be served by it was brusquely denied.

Determined to continue his experiments, he offered to take a team of skilled workmen to the powerhouse and repair the main generator at his own expense. The offer was accepted. Within a week the repairs had been made, and Tesla was once more provided with electricity.

Back to New York: “But the last thing Tesla intended to do just then was to disclose his apparatus to other scientists. His work in Colorado was finished. The New Year, 1900, arrived and went almost unnoticed by the inventor, who was in the midst of preparations to dismantle his equipment and departed.

Tesla, at least, seemed perfectly satisfied with what he had achieved in Colorado. He had made lightning dance at his command; he had use the whole Earth as a piece of laboratory equipment; and he had received messages from the stars. Now was in a hurry to get on with the future.”

I don't want to dwell on the alien part. It's not important. It can be mentioned in passing. We see reporters pounce on him, and ask him about receiving signals from extra terrestrials. Tesla replies positively, and that these Martians must have been more advanced than humanity.

‘When he reached New York in mid-January 1900, reporters and magazine editors pounced upon him.

Predictably, the eastern scientific fraternity had echoed Professor Holden in denouncing Tesla's claim to have received a message of extra terrestrial origin - at least, without telling them how he did it. But Tesla's offense was greater than that. The signals, as he had written to Julian Hawthorne of the Philadelphia *North American* just before leaving Colorado, indicating to him that ‘intelligent beings on a neighboring planet’ must be scientifically more advanced than Earthlings, a suggestion not easily swallowed by doctors of philosophy.

Tesla burned to reply to these ‘messages’ from outer space. Certain that he was at the forefront of a broad, revolutionary technology, he immediately began filing new patents for radio and the transmission of energy, based on his Colorado experiments.”

“Although he was being ridiculed in the press, his reputation among capitalists still remained good. One thing that impressed such hard-headed gentlemen was the record of the Westinghouse Company in maintaining its monopoly of alternating-current patents despite the efforts of competing industrialists to batter down the walls.”

Searching for capital, Morgan: “In a search for new developmental capital he again began frequenting the Players' Club in Gramercy Park, the Palm Room of the Waldorf-Astoria, and, of course, Delmonico's. To the same purpose he suggested to a willing Robert Johnson that an article for *Century* magazine be written by Tesla on energy sources and the technology of the future. He slaved over this article, which was eventually entitled ‘The Problem of Increasing Human Energy,’ and which appeared in June 1900.

Like most of Tesla's writing it turned out to be a lengthy philosophical treatise rather than the brisk report on his Colorado research which Johnson had desired. Nevertheless, it created sensation."

"Of all the people who had read Tesla's article in *Century* magazine and been impressed by the boldness of his vision, one fitted the inventor's requirements perfectly: J. Pierpont Morgan.

The two met for a talk about the world system. Tesla instinctively was less forthcoming than he had been with Westinghouse: no need to distract the financier with too much technical information. Instead, he dilated on themes of money and power. He described to Morgan the plan for all wavelength channels to be broadcast from a single station. Thus the financier would have a complete monopoly of radio broadcasting. Where others in the field were thinking only in limited terms of point-to-point transmissions, as in ship-to-shore and transoceanic wireless, Tesla was talking about *broadcasting* to the entire world. Morgan was interested."

Maybe mention how Tesla was angry about Marconi stealing his patents – receiving false credit for the invention of radio.

"Tesla followed up their meeting with a letter on November 26, 1900, describing exactly what he was offering-up to a point. He had already made transmissions over a range of nearly seven hundred miles, he said, and was able to construct plants for telegraphic communication across the Atlantic and, if need be, the Pacific Ocean. He could operate selectively without mutual interference a great number of instruments and could guarantee absolute privacy of messages. He had all the necessary patents, he added, and was free to enter into agreements.

He proposed that his name be identified with any corporation that might be formed, and estimated a cost of \$100,000 for building a transatlantic plant and \$250,000 for Pacific plant, with six to eight months to build the former and one year for the latter.

He made no mention to Morgan of the wireless transmission of power, not because he had given up the idea, but for the prudent reason that it would have made some of the banker's existing investments obsolete. In any event Mr. Morgan could not be expected to be enthusiastic about the prospect of beaming electricity to penniless Zulus or Pygmies.

Morgan replied that he would agree to finance Tesla to the extent of \$150,000. That, however, he warned, was as far as he would go. Although he advanced only a portion of this sum and although the country was in the throes of rampaging inflation, which caused Tesla's bankroll to begin shrinking immediately, the latter was nevertheless ecstatic.

The relationship (no doubt a familiar one for Morgan) quickly became like that between courtier and king. Morgan was 'a great and generous man.' Tesla's work would 'proclaim loudly your name to the world. You will soon see that not only am I capable of appreciating deeply the nobility of your action but also of making your primary philanthropic investment worth 100 times the sum you have put at my disposal in such a magnanimous, princely way....'

Morgan, who had no interest in philanthropic business arrangements, responded by sending Tesla a draft of their agreement and asking him to sign over 51 percent interest in his various radio patents as security for the loan.”

“With financing apparently assured, Tesla now set about acquiring land on which to build his transmitter. James D. Warden, manager and director of the Suffolk County Land Company, who owned two thousand acres on Long Island, made two hundred acres at Shoreham available to the inventor. The parcel, isolated and wooded, was adjacent to the farms of Jemima Randall and George Hegeman, and sixty-five miles from Brooklyn. The delighted Tesla christened the site Wardenclyffe and visualized it as becoming one of the first industrial parks. Two thousand persons would be employed at the world broadcasting station while their families resided in the surrounding development.”

Meanwhile Marconi does something impressive:

‘He [Tesla] soon had cause for bitterness. As the year 1901 drew to a close the world press blazoned the news that Marconi, on December 12, had signaled the letter ‘S’ across the Atlantic Ocean from Cornwall to Newfoundland. What astonished Morgan and many others was that he had done it without anything like the great plant that Tesla was building.

They doubtless did not know that Marconi had utilized Tesla’s fundamental radio patent No. 645,576 filed in 1897 and issued March 20, 1900. Small wonder that Tesla began to refer bitterly to the ‘Borgia-Medici methods’ by which he was being deprived of credit and fortune. But radio technology was then a mystery to most scientists, let alone the average investment banker.

Angry though he was, Tesla wasted no time on sour grapes but he kept his eyes on the magnificent obsession rising from the farming land of Long Island. At first he nursed it along from a private home near the construction site. When Scherff moved out from Manhattan to expedite the work, Tesla returned to his stylish retreat at the Waldorf-Astoria to keep a finger on the pulse of Wall Street. Each day he and Scherff exchanged several wires and letters. And since Wardenclyffe was only an hour and a half from New York by train, at least once a week the inventor, elegantly attired down to his gray spats and accompanied by a Serbian manservant bearing an immense hamper of food, entrained for Long Island.

He worried constantly about security. Across the Sound residents of New Haven watched in fascination as the octagonal tower rose like a mushroom grower’s fantasy above the tree line of the North Shore. As for the townspeople in nearby Shoreham, they believed themselves to be on the brink of fame and industrial prosperity.”

Wardenclyffe: “As the ‘wonder tower’ lifted its airy spars ever higher, Tesla drove himself and a large staff without mercy. He sent money to Germany for radio engineer Fritz Lowenstein’s return, and the latter soon joined the Wardenclyffe team. Another well-known engineer, H. Otis Pond, who had worked for Edison, helped build the laboratory.

Years later Pond was to say that he disagreed with history's assessment of the two inventors. Edison was 'the greatest experimenter and researcher this country has produced-but I wouldn't rate him as much of an originator,' he said. Tesla, however, he considered 'the greatest inventive genius of all time.'

Pond often accompanied Tesla on long walks. They were together on the day in December 1901 when Marconi sent the first transatlantic signal. 'Looks like Marconi got the jump on you,' he said.

'Marconi is a good fellow,' replied Tesla. 'Let him continue. He is using seventeen of my patents.'"

"The inventor's hectic schedule often gave the impression that he was three or four individuals. His New York laboratory had become a meeting place for scientists from all over the world. The nights were filled with social activities, arduous experimental work, the writing of patent applications, professional-journal articles, and letters to editors.

Seeing and being seen by the 'right' people compelled him to function as both a day and night person; nights in a row passed during which he scarcely closed his eyes. An inevitable consequence of his frenetic schedule was that his friends became compartmentalized, occupying cells of his life that others were unaware of. Intimates such as the Johnsons, for example, had no idea of the prominence or even the identity of some of his newer confidants, which is not to say that they were ever displaced in his affections.

The daylight hours were important for beseeching his patron, Morgan, to advance funds more rapidly; for reminding him that inflation was threatening to sink the ship. He met with other potential investors. He pleaded with manufacturers to expedite machinery and advance credit. And while he remained in New York, he wrote daily letters of instruction to Scherff."

"In June Tesla moved his laboratory from Manhattan out to the new brick building at Wardencllyffe. Here, except for the exigencies flowing from the project itself, the demands on his time would be fewer. Only workers were admitted to the grounds. The isolation and quiet were just what he needed."

Diminishing fame:

"Marconi remained the hero of the hour in America as elsewhere. Tesla's doings, by comparison, seemed merely mysterious. In February 1903 the *Electrical Age* carried a critical article about 'Nikola Tesla – His Work & Unfulfilled Promises.' Wrote the author: 'Ten years ago Tesla was the electrician of great promise. Today his name provokes a regret that a promise should have been unfulfilled.' It had been too long since he had scored a clear triumph, and he was learning how short mortal memories could be.

Tesla's Problems: At this point, I don't believe this is the actual height of problems. Maybe. He still has forty years of life left! But this seems important:

“When coal for the Wardencllyffe generator could be afforded, the inventor wired Scherff to stoke up for a weekend of tests and took a train to Long Island. ‘The troubles and dangers are at their height,’ he wrote Scherff on one occasion. ‘Coal problem still awaits solution. The Wardencllyffe specters are hounding me day and night.... When will it end?’

In an earlier and better time, as the inventor told her, he had been able to get money from Morgan just by asking for it. On one occasion the financier signed a blank check and told Tesla to fill in what he needed. Tesla said the amount was \$30,000. But now Morgan’s disenchantment with Wardencllyffe was final. Tesla, equally firm in his determination to forge on, sent more letters – at first persuasive and beseeching, then angry, accusing, and bitter. They pursued the banker by special messengers everywhere, even to the pier as he embarked on yet another grand tour of the Continent.

Inevitably rumors spread that Morgan had acquired Tesla’s radio patents just to prevent their development; but there was no proof. When bad news whispered along Wall Street, it gained strength from itself. Word that Morgan was dropping out of the world system venture – he actually had been only a lender – convinced other potential backers that it must be a soap bubble.

Tesla knew such rumors were killing him; but there was little he could do except live each day trying to dodge bill collectors, pleading with other bankers and rich acquaintances, working out scientific problems of the project, seeking to market other inventions, and bidding for consultancies.”

“Then for a time it seemed as if his luck was turning. Money began trickling in from the sale of medical coils, which were now being manufactured on an assembly line at Wardencllyffe for hospitals and research laboratories. And he managed to invent a new turbine of revolutionary design, which he felt sure would restore his fortune and reputation.

Although partying with his friends continued, there was a new frenetic quality about it, as if the celebrants had begun to sense the tragedies ahead and were determined to lose no opportunity for laughter.

“Many in the business world appear to have believed that Tesla was still receiving ‘princely’ royalties from Westinghouse on his alternating current patents, not realizing that he had been bought out at bargain rates in 1896. This was made clear by an article in the Brooklyn *Eagle* of May 15, 1905, calling attention to the ‘expiration’ of Tesla’s valuable patents. The newspaper reported that ‘a great stir’ had been created among electricians by announcement that his patents had expired: ‘There will be a grand scramble everywhere to make the Tesla motor now universally used without paying any more royalty to Tesla. The Westinghouses announced they have a number of subsidiary patents, and will fight.’

For it to become known that Tesla was receiving *nothing at all* would have cast him in a strange light, not to his credit in the world of nonpoets.

Late on the night of July 18, 1905, he wrote to Scherff, anxious at not having heard from him. ‘The last few days and nights have been simply horrible,’ he confided, referring to an unnamed illness. ‘I wish I

were at Wardenclyffe in a patch of onions and radishes. *Troubles are at their height.* As soon as things are ready I will come out. We must get much better results.'

"I have several chances and many hopes but I have been deceived so often that I am a pessimist.'

Scherff was with him there. But he eventually left the company. Scherff left in the fall of 1906. "He never ceased, however, to keep an eye on Tesla's financial affairs, working for him on evenings and weekends and almost always remembering to file his tax returns on time."

"The world system for broadcasting – a concept designed to incorporate almost every aspect of modern communications – was all over but the mourning. Yet as long as the tower stood, Tesla continued his efforts to complete it."

It was a wooden tower, no metal.

"The visitors found the laboratory filled with curiously complex apparatus. In addition to much glass-blowing equipment there were a complete machine shop with eight lathes, X-ray devices, a great variety of high-frequency Tesla coils, one of his original radio-controlled robot boats, and exhibit cases filled with thousand of bulbs and tubes. There were an office, library, instrument room, electrical generators and transformers, and great stocks of wire and cable. But after the watchman left, vandals entered, broke things, ransacked files, emptied paper on the floor and trampled them."

"'It is not too much to say,' wrote a Brooklyn *Eagle* reporter, 'that the place has often been viewed in the same light as the people of a few centuries ago viewed the dens of the alchemists or the still more ancient wells of the sorcerers. An atmosphere of mystery hung over the place, an unearthly influence seemed to be radiated from the alembic ... as if drawn down from interstellar space and spread over the countryside to inspire wonder and awe in the minds of the nearby farmers and villagers....'

Frustrations (fictional): It seems like it's necessary here, for dramatic purposes, to show Tesla's frustrations.

This means concerning money, concerning his memory and imagination-ability waning, and his negative attention in the press.

"The winter passed with his anxieties over Wardenclyffe mounting daily until it seemed there would be no end to his trials."

This he said later, but must have shared the sentiment at this time. He can probably talk about this with Twain:

"Never for the rest of his life would Tesla give up on his concepts of power transmission and broadcasting. It was not a dream, he declared, 'but a *simple feat of scientific electrical engineering*, only expensive – blind, fainthearted, doubting world.'

Humanity, he wrote, was not yet sufficiently advanced to be willingly led by 'the discoverer's keen searching senses.' But perhaps it was better 'in this present world of ours that a revolutionary idea or

invention instead of being helped and patted, be hampered and ill-treated in its adolescence-by want of means, by selfish interest, pedantry, stupidity, and ignorance; that it be attacked and stifled; that it pass through bitter trials and tribulations, through the strife of commercial existence. So do we get our light. So all that was great in the past was ridiculed, condemned, combated, suppressed-only to emerge all the more powerfully, all the more triumphantly from the struggle.”

Meeting with Twain (fictional): This is based on fact, but an improvised scene. Possibly useful.

“Mark Twain, seventy years of age and relishing his fame, returned to America. He and Tesla sought each other’s company as often as their work and other demands permitted, meeting usually at the Players’.”

Who knows what they can discuss? But this is a close friend to whom Tesla can vent his frustrations and from whom he can seek consolation.

The end of Wardenclyffe: Yes, a dramatic low of the story. Tesla’s failure.

“Tesla, in order to maintain his fashionable mode of life through the years, had given two mortgages on Wardenclyffe to the hotel’s proprietor, George C. Boldt. They secured bills of about \$20,000. He had asked that the mortgages not be recorded, fearing damage to his financial credibility. When in 1915 he was at last unable to make any payments at all, however, he signed the Wardenclyffe deed over to Waldorf-Astoria, Inc.

The hotel corporation tried to convert its strange security into cash but no one in those days knew what to do with the ruins of a world broadcasting center. The War Department was approached for ideas but nothing came of it. Next it was considered as a site for a pickle factory. Tesla must have wept when he heard this. But nothing caught on. And in 1917, rumors began to circulate that German spies were holed up in the magnificent tower, spying upon Allied shipping and radioing signals to U-boats. On July 4, 1917, an explosion of dynamite was discharged inside the tower. Newspapers and even the *Literary Digest* reported that it had been blown up by the U.S. government to halt espionage. Tesla denied the rumor.

In fact the tower was destroyed under a salvage contract between the owners and the Smiley Steel Company of New York, but the inventor did not wish to disclose the real owners. And it was destroyed only in an effort to realize a few dollars from scrap.

The tower proved to be more strongly built than its destroyers guessed. They had to keep blasting away as if it were rooted to the spot by some mysterious force. On the ensuing Labor Day it collapsed, dynamite having triumphed at last over the merely celestial. It brought the corporation \$1,750 above salvage costs. A junkman noticed some of Tesla’s notes blowing down the street.

‘I did not exactly cry when I saw my place after so long an interval,’ the inventor wrote to Scherff, ‘but I came very close.’”

In his fifties: Lived at the Waldorf now.

“Despite the fact that his cornucopia of ideas flowed almost as richly as ever, he had reached an age when he could no longer ignore his own mortality. Friends and acquaintances began to fall away. Mark Twain died in 1910, and the loss affected Tesla deeply. Three years later Morgan also died, as great a pivotal figure in national affairs as he had been in Tesla’s own career.

Tesla’s psyche had always been a festival of neuroses, but now his behavior seemed to become, if anything, stranger still. No one knew when the inventor began gathering up the sick and wounded pigeons and carrying them back to his hotel. Usually, however, it was a mission that he carried out late in the day.

His whole routine was that of a night person. It was also that of a prince of the blood. To hotel servants he could be cavalier and cutting one moment, generously rewarding with tips the next.

As a night person he arrived at his office promptly at noon; as a prince of the blood he required that Miss Arbus or Miss Skerritt be standing just inside the door to take his hat, cane, and gloves. Then all window shades would be drawn to simulate the darkness in which he worked most productively. In fact, the only time when the shades were raised was when a lightning storm was flashing over the rooftops of the city. Then he would lie upon a black mohair couch to watch the northern or the western sky. His employees said that he had always talked to himself, but that during these lightning storms, when he insisted on being alone, they could hear through the door and he became positively eloquent.”

A lift in spirits: “But despite all the stresses and anomalous symptoms, Tesla’s creative genius remained unimpaired. In 1906, the year of his fiftieth birthday, in the wake of many trials, he built the first model of his marvelous turbine. Possibly it had been inspired by his childhood efforts to build a vacuum motor and by his plans, during the year he spent living in the mountains, for shooting mail through a tube beneath the ocean. Possibly the idea for the bladeless turbine went back even further – to his earliest memory of invention, when he had built a tiny waterwheel that had no blades but spun all the same.

Whatever its provenance, the model weighed less than ten pounds and developed thirty horsepower. He later built much larger ones that developed 200 horsepower. ‘What I have done,’ Tesla explained, ‘is to steam and to apply in a practical way, for the first time, two properties which every physicist knows to be common to all fluids but which have not been utilized. These are adhesion and viscosity.’

Julius C. Czito, the son of Tesla’s long-time machinist Kolman Czito, built several versions of the turbine in his machine shop at Astoria, Long Island. The rotor of the so-called ‘derby hat powerhouse’ consisted of a stack of very thin disks of German silver, mounted on the center of a shaft. They were enclosed in a casing provided with ports. ‘When deriving energy from any kind of fluid,’ Tesla elaborated, ‘it is admitted at the periphery and escapes at the center; when, on the contrary, the fluid is to be energized, it enters in the center and is expelled at the periphery. In either case it traverses the interstices between

the disks in a spiral path, power being derived from or imparted to it, by purely molecular action. In his novel manner the heat energy of steam or explosive mixtures can be transformed with high economy....'

He saw no limits to its uses. With gasoline fuel it could power automobiles and airplanes. It could drive ocean liners across the Atlantic in three days. It could be used for trains, trucks, refrigeration, hydraulic gearing (motion transfer), agriculture, irrigation, and mining – and it would run on steam as well as gasoline. He was even designing a futuristic automobile that he planned to power with it. Above all, he believed that the turbine would be inexpensive to manufacture compared to traditional models.

His spirits were greatly bolstered when the Tesla turbine began to be widely acclaimed – in concept. Even the War Department officers declared it to be 'something new in the world,' and said they were greatly impressed with it.' It seemed reasonable to expect that a fortune was to be made by the man who had designed a better rotary engine.

Tesla began to emerge from the endless trauma of humiliation and debt. The scalding nightmares were occurring less often in which the death of his brother Daniel so long ago, his mother's death, and the destruction of Wardencllyffe seemed all mixed up. All he needed now was capital, and the turbine would put him back on top. He began ticking off in his mind the names of possible investors."

Transition to modern time: Tesla died in the Waldorf-Astoria hotel. This would become the Empire State Building, which I find to be a pretty remarkable fact.

So I'd like to have a shot of the hotel from somewhat far away, or increasing in distance, and then slowly a transition to the present day. It's the Empire State Building. We see around it the busy streets. Meanwhile, I imagine, quiet music plays. The purpose of this is not only to show where Tesla died in modern reference, but to make the viewer think of the present, how Tesla affected the world. As soon as we get to the present day, I discuss how his inventions have affected us to the present day, and concluding with his quote about how he will receive his due credit in the future – which is now.

Debts: He still dressed well, but fought to get money. He hadn't made anything commercially successful in forever.

"The humiliating news of Tesla's financial distress following his loss of Wardencllyffe was further advertised in March 1916 when he was summoned to court in New York for failure to pay \$935 to the city in personal taxes."

"He was now forced to confess in court that he had lived for years on credit at the Waldorf-Astoria, that he was penniless and swamped with debts. The land on which Wardencllyffe stood was taken from him

and sold to a New York attorney, and it was even reported that the inventor might go to jail for contempt in connection with his tax debts.”

I can imagine a brief, passing scene in which Tesla goes to court to pay due fines.

About this time he visited his pigeons daily. He would be seen from head to toe, covered in pigeons, people staring at him – not something a distinguished scientist would do. And he’d help sick pigeons. He’d throw food all around him for the pigeons.

The Twenties: “Nikola Tesla, Victorian in manner and appearance, was not [attuned to the times]. He was, if anything, more estranged than ever from the world about him.”

“Now in his mid-sixties, Tesla was almost always hard up. At times strange illnesses troubled him. The businesses he had worked so hard to build up in Chicago were dwindling away. Wardenclyffe was no more than a sad memory, yet he never ceased to strive for the development of his world wireless system.”

Mestrovic and Swezey: Both people are important for the same reason – show Tesla’s character at this age. But I’ll probably narrow it down to just one of them.

Could very well use him. This would eliminate the need for a voice over. And besides, it shows that he did, indeed keep some contact with the world.

“Two special friends entered Tesla’s life in this period, a sculptor and a writer, whose respective talents would help to preserve his name and achievements from the obscurity that could befall even a famous person who had neither heirs nor a corporate identity to prod the public’s memory. The nineteen-year-old science writer, Kenneth M. Swezey, arrived on the scene to join the ranks of the inventor’s permanent coterie; and the Yugoslav sculptor, Ivan Mestrovic, middle-aged and already famous in Europe, came to New York to introduce his work in America.

Tesla and the sculptor cherished common memories of their childhoods in the mountains of Yugoslavia. Both were poets at heart. They met often in New York, talking about anything and everything. Both worked late into the night and had a similar problem. Mestrovic was forced to wrangle his hunks of marble from one hotel to another for lack of a studio; Tesla, to his great sadness, could no longer afford a laboratory. So they took long walks together, discussed Balkan affairs, their work, and shared their pleasure in reciting Serbian poetry. Along the way, Mestrovic was introduced to the daily routine of feeding the pigeons of Manhattan.

“As for young Swezey, on meeting the inventor for the first time in 1929, he was surprised to discover (as he wrote) ‘a tall skinny in a of upright posture’ who might go about for hours in a daze of

concentration, but who also had a side intensely human and ‘almost painfully sensitive with fellow-feeling for everything that lives.

Swezey himself, residing in a bleak apartment in Brooklyn, had few close ties to family or friends. He became both a journalistic champion of the scientist and a devoted admirer. The old man and the younger were often together. Although Tesla worked hard while others slept, he also knew how to refresh himself with long rambles through the city. Swezey often joined him on these nocturnal excursions.

He too was introduced to the pigeons. One evening as they were walking down Broadway, with Tesla discoursing intensely on his system for sending electrical power wirelessly to the ends of the Earth, the inventor suddenly lowered his voice. ‘However, what I am anxious about anxious about at this moment,’ he said, ‘is a little sick bird I left up in my room. It worries me more than all my wireless problems put together.’

The pigeon, which he had picked up two days before in front of the library, had a crossed break which had started a cancerous growth on its tongue so that it could not eat. Tesla had saved it from slow death and said that with patient treatment it would soon become strong and well.”

“He and Swezey, as they walked, talked of Einstein, diet, exercise, fashion, marriage. ‘Tesla’s only marriage has been to his work and to the world,’ wrote the young man, ‘as was Newton’s and Michelangelo’s... to a peculiar universality of thought. He believes, as Sir Francis Bacon did, that the most enduring works of achievement have come from childless men...’

The inventor confided to his young companion that mental anguish, fire, commercial opposition, and other trials had merely fanned his productiveness and that he still felt he could rise highest in the face of great resistance. He also said that he had earned in his lifetime over \$2 million. Yet, for him to have earned this sum he probably would have to have received the legendary \$1 million for his alternating-current patents from Westinghouse.

Tesla in his late life described the winter isolation of the house where he was born, and of his special friend, ‘the magnificent Macak, the finest of all cats in the world.’

At three years old, Tesla stroked the back of his cat Macak – that’s the first time he saw static electricity, and he was speechless. A loud crack. A sheet of light.

At 83, Tesla still didn’t know what electricity was.

The White Pigeon – love of Tesla’s life: St. Regis hotel! The birds would come onto his window ledge. But he especially cared for the sick birds. “He became unalarmingly ill in his office on 40th Street one day in 1921 and, as usual, refused to see a doctor. When it became apparent that he might be unable to return to his apartment at the St. Regis Hotel, he whispered to his secretary to telephone the hotel, speak with the housekeeper on the fourteenth floor, and tell her to feed the pigeon in his room – ‘the

white pigeons with touches of gray in her wings.' He insisted that the secretary repeat this urgent message after him. The housekeeper was to continue feeding the pigeon each day until further notice. She would find plenty of feed in the room.

Whenever in the past the inventor had been unable to visit Bryant Park with the feed, he had hired a Western Union messenger to take care of the errand for him. The white pigeon, it was apparent, was special to him. From his attitude, his secretaries thought he might be delirious.

He recovered, and the matter was forgotten – until another day, when he telephoned his secretary to say the pigeon was very ill and that he could not leave the hotel. Miss Skerritt recalled that he spent several days at home. When the pigeons had recovered, he resumed his usual routine of working, walking, thinking, and feeding the birds." What does thinking a bird mean?

Some more about pigeons: 'I have been feeding pigeons, thousands of them, for years,' he said. 'Thousands of them, for who can tell-.

But there was one pigeon, a beautiful bird, pure white with light gray tips on its wings; that one was different. It was a female. I would know that pigeon anywhere.

No matter where I was that pigeon would find me; when I wanted her I had only to wish and call her and she would come flying to me. She understood me and I understood her.

I loved that pigeon.

Yes, I loved her as a man loves a woman, and she loved me. When she was ill I knew, and understood; she came to my room and I stayed beside her for days. I nursed her back to health. That pigeon was the joy of my life. If she needed me, nothing else mattered. As long as I had her, there was a purpose in my life.

Then one night as I was lying in my bed in the dark, solving problems, as usual, she flew in through the open window and stood on my desk. I knew she wanted me; she wanted to tell me something important so I got up and went to her.

As I looked at her I knew she wanted to tell me-she was dying. And then, as I got her message, there came a light from her eyes-powerful beams of light.'

Tesla paused and then, as if in response to an unasked question from the science writers, continued.

'Yes, it was a real light, a powerful, dazzling, blinding light, a light more intense than I had ever produced by the most powerful lamps in my laboratory.

When that pigeon died, something went out of my life. Up to that time I knew with a certainty that I would complete my work, no matter how ambitious my program, but when that something went out of my life I knew my life's work was finished.

Yes, I have fed pigeons for years; I continue to feed them, thousands of them, for after all, who can tell-.'

The writers left him in silence and walked several blocks along Seventh Avenue without speaking.

At this point I can imagine Tesla speaking to his white dove, telling her about his life. Maybe while she is normal, or maybe while she is dying.

Totally broke: “Three years later [after the death of the pigeon] Tesla was completely broke and his bill at the St. Regis Hotel had gone unpaid for a long time. One afternoon a deputy sheriff arrived at his office and began seizing his furnishings to satisfy a judgment against them. Tesla managed to persuade the officer to grant him an extension. When he had gone, there remained the matter of his secretaries, who had received no salaries in more than two weeks. All that was left in his Mother Hubbard’s cupboard of a safe was the gold Edison Medal, which he now removed. It was worth about one hundred dollars, he said to the embarrassed young women. He would have it cut in two and give half to each.

Dorothy and Skerritt and Muriel Arbus declined in one voice. They offered instead to share with him the small sums of money in their own purses. When Tesla was able to pay them a few weeks later, he placed an additional two weeks’ salary in each envelope. Yet on the day when he offered to divide up the Edison Medal, there had in fact been a little money in the office - \$5 in petty cash. But this he claimed at once for his pigeons, saying he was out of bird seed. He had asked one of his secretaries to go out and buy a fresh supply.”

This is all in the St. Regis hotel. But the final decade in the Hotel New Yorker – after moving around after St. Regis.

The future use of his inventions (very end): This is an idea which I’m pretty sure I won’t use (update: no I’m pretty sure I do want to use it). I’m afraid that I might not cover all the uses of Tesla’s work. The very name of the biography I’m reading about his is “Tesla: Man Out of Time”. The value of his work tended to be realized later. Either by text – as in one of those ending texts – which would actually be cool, or visually, I can commemorate him.

Think about the text, that idea seems better. I can imagine at the very end – Tesla dies, and then I write about how he impacted the world.

So either with a black screen, or with some background, let’s say New York – we see text which tells us about Tesla’s impact of the world.

The purpose of this is to one commemorate him, and the other, perhaps more important one, is to be impressed. Perhaps only at the very end do we realize his impact. Maybe something to the effect of his systems being used all over the world or a list of his inventions. Or maybe also how he continues to inspire students of engineering or electronics.

If I can find a great quote by a famous man, that would be great. Let's say Einstein said something highly positive about Tesla. We would want to see this.

But we are definitely intended to sit there in awe of this man, who died penniless, but who changed the world so much. A tribute, an honor. And the audience sits there, very impressed.

A fitting conclusion. So far, I think it's a good idea.

A final quote:

So I've shown how Tesla, doing his best for humanity, never received the recognition he deserved. And I will help his dream. I feel so proud of myself. This is the most honorable thing I can do both for science, for Yugoslavia, and for my family. I have shown the tale of the man who gave his life to the world, and who received nothing in return.

Even if I don't write something like this, the audience will DEFINITELY get the message in some way:

"To this day, Nikola Tesla is an obscure name, unappreciated for the many ways he has helped humanity. However, as the man himself once said:"

"Let the future tell the truth and evaluate each one according to his work and accomplishments. The present is theirs; the future, for which I really worked, is mine."

-Nikola Tesla (1856-1943)

There you go. That's the story.