The Fox 291

Chapter 291: Trade and Prosperity

Dessalines toured various parts of France and eventually made his way to Paris, accompanied by those who praised it as the "City of Miracles." His first visit in Paris was with the Minister of Truth, Lucien, at Montmartre Heights.

Lucien had two possible locations to receive Dessalines, and one was the official Ministry of Truth building, which was originally the Bourbon Palace. (In its original history, this building had fallen into the hands of Murelle, becoming his residence and was named the "Elysée Palace.") The other option was the Palace of Bliss on Montmartre Heights.

The Palace of Bliss was Lucien's private residence, built at the location where the "Sacred Heart Basilica" existed in another timeline. It was in close proximity to all the places of revelry on Montmartre Heights, yet it offered relative serenity. Perhaps in another timeline, the "Sacred Heart Basilica" was constructed here for the same reason. However, unlike that other timeline, in this one, it was a place of earthly pleasures. If one were to find any similarity between them, it would be in the building's materials and colors.

Just like the "Sacred Heart Basilica" in the other timeline, the "Palace of Bliss" was primarily constructed with a special white stone called "London Castle Stone." When this stone came into contact with rainwater, it would dissolve into white fragments commonly known as glass shards, giving it the characteristic of becoming whiter over time when exposed to wind and rain.

After Dessalines's arrival in France, the Ministry of Truth and the Department of Public Safety had been closely observing him, recording his every move, and sending these records to their respective analysis centers to determine his character and inclinations.

Both the Ministry of Truth and the Department of Public Safety mentioned a couple of key observations about Dessalines. Firstly, he was quite sensitive and could appear proud on certain matters. In truth, he had a certain level of insecurity about his background because he was highly sensitive to the politeness with which he was received. To put it more bluntly, he had a slight vanity problem.

Secondly, Dessalines had a strong aspiration for a luxurious "high-end lifestyle." For instance, when dining, he seemed to prefer gourmet foods like "truffles" and "caviar," even though observers could detect from his mannerisms that he didn't genuinely enjoy the taste of these delicacies. Truffles, for instance, had an odd flavor that only a minority appreciated on their first try. However, analysts believed that his love for truffles and caviar stemmed from their representation of status and luxury.

Taking these observations and other details into account, Lucien chose to receive Dessalines at his private residence, the "Palace of Bliss."

Before this meeting, some preparation was needed. For instance, Dessalines had to be subtly informed that Minister Lucien rarely received anyone at the "Palace of Bliss." Only those most highly regarded would have the honor. The Ministry of Truth building was usually crowded and not suitable for receiving esteemed guests; it was reserved for ordinary individuals. Furthermore, the "Palace of Bliss" was the most opulent and prestigious place in all of France, and not having visited it would be seen as a sign of ignorance by those of true importance.

With these preparations in place, when Lucien extended his invitation and asked Dessalines to visit the "Palace of Bliss," Dessalines was almost unable to contain his excitement. His heart was filled with gratitude toward Lucien and the Bonaparte family.

Two days later, Lucien welcomed Dessalines at the "Palace of Bliss." He inquired about Dessalines's life in France, and Dessalines expressed profound gratitude for the warm welcome he had received from the French people.

Dessalines told Lucien that his trip to France had broadened his horizons, leaving him deeply impressed by the wealth and power of France. He hoped to receive France's assistance in transforming Saint-Domingue into a democratic and prosperous oasis, making it the Black France of Central America.

Therefore, he stated that France was the world's beacon of democracy and liberty, illuminating the path for people around the globe. France was also the helmsman guiding the progress of humanity. Only under France's leadership could the world's people achieve prosperity and liberation. The black population of Saint-Domingue was willing to follow the lead of France, under the guidance of the great leader and First Consul, Mr. Napoleon, towards freedom and prosperity.

Of course, the official statements were quite different. According to some "historical inventors," the meeting between the two men was far from formal. They spent their time indulging in food, drink, and playful banter. In the end, Dessalines posed a question to Lucien.

"Respected Minister Bonaparte, I am very curious to know how much salary you receive each year that allows you to own such a magnificent mansion."

Lucien led him to the rooftop of the "Palace of Bliss" and pointed to the roads leading from Paris to Montmartre Heights.

"Do you see those two-way four-lane roads?" Lucien asked.

"Am I seeing things, Minister?" Dessalines replied, puzzled. "All I see are some one-way two-lane roads."

"That's because the other two lanes are currently under our feet," Lucien answered.

Several years later, after Dessalines came to power through a coup and became the new president of Haiti, the newly appointed French ambassador visited him to present his credentials. In casual conversation, the ambassador asked him almost the same question. President Dessalines then took the ambassador to the balcony of the presidential palace, overlooking the harbor below, and said:

"Ambassador, do you see the shipyards and power plants over there?"

"I don't see anything," the ambassador replied.

"Oh, that's because they are now under our feet," President Dessalines said with a smile.

Of course, these legends are highly unreliable and were likely fabricated by the British. However, according to the renowned historian George Le Fevre in his book, "A New History of the Roman Empire," the two men did have a somewhat similar conversation.

"Minister Lucien, being in France and witnessing such wealth here, I am both envious and curious. I want to know how France became so prosperous," Dessalines asked.

"Of course, it's through trade," Lucien replied. "Trade is the source of wealth. For example, even if someone has vast land that yields wheat every year, enough to fill thousands of carts, will they be rich if they just hoard it in their storehouses without selling it? No, because things that don't enter the market aren't wealth. That wheat will only rot in their granaries until someone else can use it to grow cabbages. Will that person become rich? Of course not. They are merely a beggar guarding a treasure trove.

Trade is the true source of wealth. Take me, for example. Do you think the salary of a French minister could afford me such a palace? Impossible! But I'm involved in a lot of trade, and these trade ventures have made me wealthy. Saint-Domingue is a place rich in resources, capable of producing many things with tremendous trade value. If you can master trade, you can become as wealthy as I am."

After a friendly conversation, the two parties reached a general consensus on Saint-Domingue's status. According to their agreement, Saint-Domingue would become an autonomous territory of France until it could pay the full amount for purchasing its national territory. Afterward, Saint-Domingue would become an independent nation allied with France. France would assist the new black republic of Saint-Domingue in establishing its industries and protecting its land and trade security. Saint-Domingue would accept French guidance in foreign affairs and domestic policies and implement a French priority policy in trade.

It is said that after essentially reaching this agreement, Lucien reminded Dessalines, "One principle in trade is that a person cannot possess all the benefits because nobody can trade with themselves. Sharing interests creates a solid community and enables more talented individuals to stand by your side."

Later, after returning to Saint-Domingue, Dessalines voluntarily relinquished his position in the local army and offered his services as the Minister of Foreign Trade for the Autonomous Territory of Saint-Domingue. In this role, he utilized his position to enrich himself and many others, particularly those who had joined him in the initial uprising.

These black individuals who gained wealth through trade saw Dessalines as irreplaceable because he could lead them to prosperity. This strengthened his influence within the military despite officially stepping down. With the support of the military, he eventually led a coup, overthrowing the lifetime ruler of the Haitian Republic, Toussaint Louverture. He ascended to the position of the President of Haiti and became the richest black man on the "Businessman's Gazette Wealth List."

In his memoirs, he acknowledged that his mission to France, especially his conversation with Minister Lucien, taught him many valuable lessons that greatly benefited him in his political career. This contribution led to the newly-formed Haitian Republic becoming one of the more prosperous nations in Central America. (Of course, it also became one of the world's most economically disparate nations, with no close rivals.)

Now, having reached an agreement with Lucien, Dessalines's only task was to patiently await the summons from the First Consul.

Chapter 292: The Key to the World Empire

After reaching a basic agreement, both sides began to discuss the future education of the people of Saint-Domingue.

Dessalines said to Lucien, "I've noticed that France's prosperity is closely tied to its advanced industry and agriculture. Advanced science and technology play a vital role in this equation. We hope that France can assist Saint-Domingue in the field of education."

Lucien responded, "Helping people worldwide achieve prosperity is a responsibility France cannot shirk. France is willing to offer any assistance within our capacity to any nation pursuing freedom, democracy, and prosperity."

So, an agreement was reached regarding the education and training of black officials from Saint-Domingue in France. From now on, Saint-Domingue could send a group of officials to France each year for various technical training. This would help them acquire new ideas and skills to better serve the people of Saint-Domingue.

In reality, this was a way of nurturing France's advocates of interests in Haiti, or, to put it more plainly, creating a pro-French party.

When the Saint-Domingue issue first arose and the three brothers discussed how to handle the situation, Joseph brought up the concept of "soft colonization" versus "hard colonization."

"Our productivity is increasing rapidly, and European demand can hardly support our rapid development. We need more colonies. However, there are two modes of colonization: hard colonization and soft colonization. Hard colonization means seeing a piece of land and then sending troops to seize it, making the indigenous people there slaves or killing them. Then, they put their people there to cultivate the land. This is what the Spanish and British did.

As for 'soft colonization,' there is a precedent for it as well. In the past, Europeans organized 'slave-hunting teams' to capture black slaves in Africa. However, the black people resisted fiercely, and the Europeans suffered losses. Moreover, there were losses during the transport of black slaves, which made the cost of acquiring black slaves too high, and they couldn't be sold, or even if they were sold, they wouldn't make much profit. If this situation continued, the black slave trade would have collapsed long ago.

But some ingenious Europeans invented a high-end method of 'using black to control black.' They no longer captured black slaves themselves but used various industrial goods to buy off certain black tribes, making them attack other tribes and then selling the captured black people to them.

As a result, white people supported one tribe, and other white people supported another tribe. Black people fought against each other, turning other black people into slaves. White people reduced their costs, avoided risks, and made a lot of money. Well, this is the precedent for what I call 'soft colonization.'

However, these operational methods are still too crude and can only be considered at the beginner level of soft colonization. True soft colonization means that this piece of land is not marked as a colony of a certain country on the map but is directly marked as that country. It looks like a completely independent country, but its economy is closely connected to ours. They provide us with raw materials, and we sell industrial goods, or we use them as a base to sell industrial goods to more places.

The rebellion of the black people in Saint-Domingue is just the beginning, indicating that hard colonization is beginning to encounter increasingly significant problems. In the Americas, both North and South, the situation is becoming less optimistic. In North America, with the example of

the United States, the stability of Spain's colonies is deteriorating. This is one of the reasons why they were so generous in returning Louisiana to us. But once we take over Louisiana, can we keep it?

France does not have so many surplus populations to transfer to Louisiana, so the population that moves there will primarily come from various European countries. The French will not have a significant advantage, but that is not the most significant issue. The most significant problem is the inherent tendency of traditional hard colonies to separate from the motherland because their interests do not align with the motherland. This is true even if they share the same bloodline and culture."

"So, can soft colonization solve this problem?" Napoleon asked.

"Not necessarily, but it will improve the situation. The hostility of the colony's population will no longer be directly pointed at us; instead, it will be aimed at figures like Dussan Lavidor or Dessalines. This creates an extra layer of buffer. If we can establish a genuine 'democracy' there that allows them to change governors peacefully, avoiding violent revolutions, our control may become more covert and long-lasting. Moreover, by making their economy entirely dependent on us, we can give them a slightly better life, reducing centrifugal forces. Also, we can stir up conflicts between them and neighboring regions, forcing them to rely on our protection."

"Like what's happening between Canada and the United States today?"

"If we can solve the communication technology, we could simply make Louisiana part of mainland France and call it the Province of Louisiana, just like any other province in France. But now, Joseph, when will your contraption be ready? I've already poured so much money into it! If this money were turned into cannons, I could land in Britain," Napoleon exclaimed.

"Rubbish! How much have you spent on this, really?" Joseph retorted. "Land in Britain? Where are you going to land? Dover? Have you even seen the terrain at Dover? The British fortifications there are so strong that you couldn't beat them even if you dragged your entire navy up there! The whole English Channel, on our side at least, is cliffs and steep cliffs. To land, you'd have to go around to Scotland, and with such a long supply line, what are you waiting for? Will that amount of money be enough?"

"That's because of you! It's your invention in Verdun that has turned Dover Fort into what it is now. You're ripping me off!" Napoleon retorted, unfazed, as he swung a massive pot down on Joseph's head.

"It's almost ready, I promise you, Napoleon. The crucial preliminary technology is on the brink of realization. It's really close, and I assure you, Napoleon, give me another month, and I won't need your funds anymore; I can get it done," Joseph responded in a somewhat unusual manner, without the usual argument.

"No, something's not right," Napoleon said. "You must be hiding something from me. You've undoubtedly been taking my money and using it for something else, haven't you, Joseph?"

"Not at all; it's all been spent on research into preliminary technology," Joseph explained. "Moreover, the research itself can be profitable."

"You're using the country's money for personal affairs."

"What country's money? What personal affairs? The country is ours, isn't it? To borrow a line from the Sun King, 'We are the state!' What country's money?" Joseph scoffed.

"All right, I like that saying," Napoleon admitted. "So, tell me, what is this preliminary research of yours and what have you gained that can make money?"

"Well, this involves some highly advanced science. Currently, these things haven't been made public, and very few people know about them. Of course, you can take a look, but whether you'll understand it, I can't guarantee... In any case, based on certain experimental phenomena, along with mathematical calculations, we've drawn a conclusion that there is a form of wave that can travel through space at the speed of light. We call it an electromagnetic wave. We believe this can be used for information transmission, just like sound waves..."

"You told me about this last time; I understand that part. I figured that out," Napoleon said, slightly irritated by Joseph's condescension. "Have you forgotten? It seems your brain is deteriorating."

"Okay, I must have remembered incorrectly," Joseph admitted, unfazed. "Everyone makes mistakes."

"Fine, cut to the chase. What exactly is this preliminary research and what can be gained from it?" Napoleon demanded.

"We've developed a lamp that uses electricity for illumination," Joseph explained. "We discovered before that an electric current causes heating. When a conductor becomes very hot due to the current, it emits bright light. This led us to one of our research goals: developing an electric lamp. While researching electric lamps, we stumbled upon a new phenomenon: when one electrified conductor is at a high temperature, it can induce an electric current in another conductor that is not in direct contact with it. Based on this phenomenon, we created a device called the oscillatory circuit, which is a key technology for wireless communication. However, the lifespan of this device is quite short, and it quickly becomes damaged. We combined it with our research on electric lamps and, lately, have finally seen the dawn of success. As for the byproduct, it's the electric lamp for illumination. It won't be long before you can build another grand spectacle in Paris, Napoleon."

Chapter 293:The City That Never Sleeps

Joseph's words were, in fact, somewhat exaggerated, but he couldn't just tell Napoleon that he had time-traveled and had a head start in developing light bulbs and vacuum tubes, could he?

Whether it was the light bulb or the vacuum tube, their technological roots were almost the same, and they shared similar technical challenges. Overcoming one meant you were on the path to mastering the other.

First and foremost, there was the challenge of creating a vacuum. The filament in incandescent light bulbs had to be heated to two or three thousand degrees Celsius to emit brilliant light. However, at such temperatures, any conducting material would undergo violent oxidation reactions with the oxygen in the air, leading to combustion. So, the first technological hurdle in creating usable incandescent bulbs was achieving a vacuum.

Another challenge was filament manufacturing. In the original history, Edison had reportedly experimented with over a thousand materials before settling on carbonized bamboo filaments.

Joseph knew, of course, that future filaments were made of tungsten. However, during this time period, tungsten had just been discovered, had extremely low production levels, and had an extremely high melting point. It was nearly impossible to smelt it; it had to be obtained through chemical purification and powder sintering before forging and drawing. Yet, due to tungsten's inherent hardness and relative brittleness, drawing it was no simple task, and the conventional high-carbon steel drawing dies were useless for it. Only diamond drawing dies could handle it, and they weren't manufacturing synthetic diamonds during this era.

Thus, producing tungsten filaments, while not impossible, had unacceptable production levels and costs. Moreover, given the technological gap in vacuum technology with the future, even if they used tungsten filaments, the lifespan of incandescent bulbs would still be limited. In comparison, manufacturing carbonized bamboo filaments was much cheaper and simpler. So, after a brief experiment, Joseph decided to follow Edison's path and use carbonized bamboo filaments.

Of course, the attempt to draw tungsten wire was not in vain. In the process, Joseph's laboratory successfully produced tungsten carbide. Although the process for obtaining this substance was not yet perfected, it had significant potential for future use in metalworking.

Now, Joseph's light bulbs could continuously light up for several hundred hours, which was passable. There were no competitors globally, so there was no immediate need to improve the product's performance. In fact, in some sense, it was better to keep it small and inconspicuous.

As for the electron tube, it was relatively more complex, and the production process was not yet highly efficient at this stage. However, considering there were no competitors, the performance, though slightly inferior, was still good. So, having no competitors was truly a blessing.

"What's this marvel you're talking about?" Napoleon perked up as soon as Joseph mentioned "marvel."

"Of course, it's the 'City That Never Sleeps,'" Joseph replied. "Just imagine, we replace all the gas lamps in Paris with electric lights, and then adorn the most iconic buildings in Paris with electric lights. At night, the entire city is as bright as day. Isn't that a marvel?"

Napoleon shook his head, saying, "I thought it was something extraordinary. Paris already has street lamps; what's so special about that?"

"Street lamps? Those gas lamps? Their brightness, compared to electric lights, is like comparing fireflies to the full moon—completely incomparable. Do you want to come to my lab and see the effect?"

Napoleon raised an alert eyebrow. "Joseph, are you sure that what you can achieve in your lab can be replicated in a factory? I won't be fooled again!"

"What do you mean by 'fooled again'? Everything I can achieve in my lab will eventually be realized in a factory; it's just that some things require a final process." Joseph reassured, but he noticed the look in Napoleon's eyes and added, "But this time, you can rest assured that this can be mass-produced in the factory immediately."

"Alright," Napoleon agreed. "Shall we go see it now? And why not bring Lucien along?"

Joseph thought for a moment. To promote the product, Lucien was definitely someone who could help, given his various connections. He nodded and said, "Sure, let's bring him along. But, at this moment, he's probably already—"

"Who cares? Even if he's busy, we'll call him, and he won't dare to refuse, right? He's not thinking of rebelling, is he?" Napoleon said. In reality, he was quite pleased that he had a legitimate reason to disturb Lucien's work.

"Ah, Napoleon, you seem to be quite jealous of him. That's almost certain," Joseph commented, while adding in his mind, "This quote is indeed from Lu Xun."

Napoleon, however, was unaware of this, and he smiled disdainfully, saying, "Jealous of him? Hah, well, Prussia has just got a cute little Crown Prince..."

In France, several important departments already had wired telephones, and the technology was relatively simple. Joseph even established a "Paris Telephone Company" and put Louis, who had just graduated from the University of Paris, in charge of it.

However, due to the high installation and operating costs (this era didn't have automatic exchanges, so all telephone connections needed to be established manually, which naturally increased costs), only the most important departments and the wealthiest individuals could afford this technology. Of course, Lucien met both criteria, so finding him was quite easy. Even his residence at the Moulin Rouge had a telephone.

When the call came through, Lucien had just arrived at the Moulin Rouge and was preparing to start working. However, in response to the summons from his older and younger brothers, he immediately put down his work and rushed over.

Upon reaching Joseph's laboratory, it was already completely dark outside. Lucien got off the carriage and saw his two brothers waiting at the door. He hurried over, saying, "Joseph, Napoleon, my place is a bit far, and I rushed over as fast as I could."

"We know that," Joseph replied.

Lucien heaved a sigh of relief and then asked, "Did you call me over for something important?"

"We have something incredibly important to show you," Joseph said. "Come inside with us now."

As he spoke, Joseph pushed open the door to the laboratory, and the three of them entered.

"Joseph, you're really something. It's so dark, and you didn't even light a candle... I can't see anything... Ah!" Lucien was in the middle of complaining when suddenly the room lit up intensely, making it impossible for him to keep his eyes open.

"What is this...?" Lucien shielded his eyes with his hands and squinted as he asked.

"This is an electric light. It's a brand new era that can keep factories running 24 hours a day," Joseph replied.

"Goodness, my eyes were almost blinded!" Lucien gradually adjusted to the brightness. "This thing is incredibly bright! Compared to this, candles and the like are like fireflies. So, can this be mass-produced? How long does it last? How much does it cost? I think the entire Moulin Rouge, inside and out, including the red windmill's fan blades, should be illuminated with this! If so, it would be absolutely..."

"Do you have no interest in the scientific principles behind this?" Napoleon interjected.

"Why would I need to?" Lucien said. "You have Joseph and Napoleon. What do I need to concern myself with? Besides, it's like how I enjoy eating tuna. Do I need to understand how the chef prepares tuna? By the way, Joseph, you haven't answered my previous question."

"It can be mass-produced, lasts for about 800 hours, and the price varies from 1 to 5 francs depending on the brightness of each bulb, with a 50% profit margin. This one is 1 franc. Once production scales up, the price can drop to one-third of the current price," Joseph answered.

"Is the 1-franc one meant for general use, or is it slightly too expensive? What about the 5-franc one? Joseph, do you know how to do business? Why would you sell it for just 5 francs? High-end ones should be sold for at least 50 francs! A penny spent, five lives lighted. One franc spent, five lives lighted. Do you understand? I deal with wealthy people every day, and I understand them best. When they buy these, it's not just about utility, it's about showing off. How does a 5-franc product achieve that? Now, how do you use this thing?"

Joseph looked at Lucien and shook his head, then pointed to a rope hanging on the wall:

"Pull it once, and the light turns on; pull it again, and it goes out. Want to give it a try?"

Lucien walked over and reached out to pull the rope, but then he suddenly stopped and asked, "This won't give an electric shock, will it?"

With the spread of electricity, incidents of electric shocks causing deaths were not uncommon.

"Idiot!" Napoleon exclaimed. "The rope is insulated!"

"I know, but I'm worried it might get wet..." Lucien hesitated.

"I just pulled it," Joseph reassured.

"Alright." Lucien composed himself, reached for the rope, and pulled it. With a click, the room plunged into darkness. He pulled it again, and another click, and the room was filled with light. Another pull...

"Why isn't it lighting up?" Lucien asked in the darkness.

"You've probably broken it with all that pulling!" Joseph said.

"Joseph, you said this thing could last for 800 hours!"

"Before you started yanking on it, it had already been in use for several hundred hours," Joseph replied.

Chapter 294: Renovations

Early the next morning, Robson, the manager of the Hanseatic Trading Company in Paris, had just boarded a light carriage on his way to the company when he heard a newsboy's cry, "Come and see, come and see, the 'Moulin Rouge' is undergoing renovations and will be closed for two weeks. Earthquake in Turkey, countless casualties. The First Consul receives the envoy from Santo Domingo..."

Robson couldn't care less about the earthquake in Turkey. It probably affected a fair number of Turks, Arabs, or other people, but that had nothing to do with him. He and the Hanseatic Trading

Company's reach didn't extend that far, and they had no business in Turkey whatsoever. Who cared if they perished?

As for Santo Domingo, it was somewhat related to him. The coffee he enjoyed came from Santo Domingo. However, the coffee and sugar trade was mostly controlled by French, Spanish, or British companies. The Hanseatic Trading Company couldn't get a foothold in this business, so, in reality, it didn't concern him much. Nevertheless, if the First Consul could receive the envoy from Santo Domingo, it meant that the two sides weren't breaking ties yet, and that meant Robson could continue to enjoy his coffee. That was a silver lining.

But the fact that the "Moulin Rouge" would be closed for two weeks was a different story. He had already made plans to host some "friends" from the business there in a few days, and now he might have to make alternative arrangements.

With these thoughts in mind, Robson called out, "Newsboy, newsboy, give me a newspaper with the news about the 'Moulin Rouge' closing for renovations."

The news of the upcoming two-week closure of the "Moulin Rouge" immediately drew widespread attention. Many people even began to worry. They weren't concerned about the possibility of the "Moulin Rouge" pulling a scheme like some unscrupulous clubs, using the excuse of renovations to disappear with their members' money and set up shop in the New World. If such a thing happened to the "Moulin Rouge," they'd be delighted because they were all in the same business. However, they knew how profitable the "Moulin Rouge" was, and it would be foolish to do anything that could jeopardize their income.

What they were concerned about was how the "Moulin Rouge" would be renovated and whether they would be able to keep up with it after the renovations. The "Moulin Rouge" was now the trendsetter in all of Paris, if not all of France, and even all of Europe. While the Austrian, British, and Russian royal families openly scoffed at the "Moulin Rouge" style, calling it "decadent and corrupt," rumors had it that whenever the "Moulin Rouge" introduced a new fashion, you'd see a similar style in Austrian and British courts a week later, an exact replica in the Sultan's palace in Turkey three weeks later, and a nearly identical outfit in St. Petersburg five to six weeks later.

Apart from fashion, the architectural style of the "Moulin Rouge" was also an object of imitation throughout Europe. Despite the upper echelons of European society outwardly disparaging the "Moulin Rouge" style, they couldn't help but be influenced by it in their new construction projects and renovations of old palaces. Even if they tried to imitate it, they couldn't really measure up to the "Moulin Rouge," but even a little imitation could help them maintain an edge over their competition.

"The renovation of the 'Moulin Rouge' will cost a fortune. I had just made some money, and I had plans... now it seems I might have to put everything into this project! That darn 'Moulin Rouge,' why can't it just make money without these extravagant renovations? It's like it's trying to rob me!" Cadreus, who was also trying to expand his business on Montmartre Hill, cursed vehemently upon reading the news.

He owned a nightclub called "Royal Gems." Of course, it couldn't compare to the "Moulin Rouge" in terms of business, but it brought in a decent monthly income. After covering the daily operating expenses and settling matters with people on both sides of the law, he was left with a good sum of money. Cadreus had been planning to buy a small estate in his native Italy by the autumn of this

year, and then he could flaunt his wealth in front of his acquaintances. However, now it seemed that this pleasant dream would have to be postponed.

Like Cadreus, the other nightclub owners were nervously watching the "Moulin Rouge's" actions, using their connections to find out what exactly the "Moulin Rouge" was up to. They were also trying to gather funds quickly so that they could keep up with the "Moulin Rouge's" pace when the renovations were complete.

"We're just a bunch of unlucky folks who ran into a tiger in the forest, and the 'Moulin Rouge' is that terrifying tiger. Every time that big tiger moves, we have to run for our lives, and anyone left behind dies. Our way of survival is to make sure we run faster than the others. So, running a nightclub on Montmartre Hill, although very profitable, is also exceptionally tough. You have to keep one eye open even when you're sleeping, always keeping a close watch on the 'Moulin Rouge.' That's been my way of survival for so many years." It's said that a guy who also owned a nightclub passed on this wisdom to his son when he entrusted him with his business.

But to find out the secrets of how the "Moulin Rouge" was planning to renovate before its reopening was not an easy task. Not because information was hard to come by, but because there was just too much of it.

In fact, every time the "Moulin Rouge" made a move, there were rumors flying left and right. Some of the rumors were obviously unreliable, but others sounded quite plausible. However, those who tried to act on these rumors often found themselves running in the wrong direction, far from being on the same track as the "Moulin Rouge."

But ignoring these rumors entirely wasn't an option either, as some of them were actually true. Being prepared at least allowed you to get a head start.

This time, there were all sorts of rumors and predictions about the "Moulin Rouge's" renovation, but no one rushed ahead. Instead, they were busy contacting manufacturers of gold leaf, crystal products, and mirrors. This led to a noticeable increase in the prices of these products in the futures market.

Some even attempted to infiltrate the "Moulin Rouge" during its renovation, but they ended up failing disgracefully. After all, the "Moulin Rouge" was not just an ordinary gold mine; it was also a secret stronghold of the "Ministry of Truth." If such a place were easily infiltrated and secrets revealed, the "Ministry of Truth" would have a good laugh alongside the "Public Security Bureau."

However, there was one thing that couldn't be kept secret, and that was the observation that a thick power cable had been brought into the "Moulin Rouge. So, it was clear that the renovations of the "Moulin Rouge" were closely related to electricity.

This gave rise to a new set of rumors. Some said the "Moulin Rouge" was going to build a large fountain, while others claimed it was preparing a massive electric stage that could rise and rotate. There were even rumors about the "Moulin Rouge" using electric machines for the dancers. Although most of these rumors were likely unreliable, one thing was certain: the "Moulin Rouge's" renovation was strongly connected to electricity.

Some people also noticed that the "Elysium Palace" had begun closed renovations and had brought in a similarly thick power cable. However, getting information about the "Elysium Palace" was even more difficult than finding out about the "Moulin Rouge."

With all these speculations, time passed gradually, and the high fabric curtains surrounding the "Moulin Rouge" were removed, revealing the renovated "Moulin Rouge" to everyone.

"It doesn't seem like there's much of a change, does it?" Many people asked in confusion.

Indeed, the exterior of the "Moulin Rouge" appeared mostly unchanged. The most prominent feature was still the enormous red windmill. The only difference was that the red windmill had been adorned with glass decorations along its edges. In the evening sunlight, these decorations refracted a faint red light.

In the small square in front of the "Moulin Rouge," there was indeed a newly added fountain. At the center of the fountain was a marble sculpture of Prince Paris of Troy and Queen Helen of Sparta in an amorous encounter, surrounded by a ring of smaller fountains.

Apart from the fact that the water from the small fountains didn't scatter but rather formed small bubbles, the fountain didn't seem particularly remarkable.

In addition to this, on the ground near the main building of the "Moulin Rouge" and by the red windmill, there were stone-like objects. However, they had a thick, transparent glass surface facing the "Moulin Rouge" and the red windmill, and upon closer inspection, one could see that they contained glass bottles-like objects inside. These "stones" were actually made of iron but were painted to look like stone. They had several holes on their surface, though it wasn't clear what they were for.

But by this time, there was no need to rush for information because in just one more hour, the "Moulin Rouge" would be reopening.

Chapter 295: A Miracle

The sun slowly descended, casting a dimmer light around, and the gas lamps on the streets began to illuminate. The small square outside the "Moulin Rouge" was filling up with people, as it was almost time for the reopening of the famed establishment.

At that moment, a slim gentleman, accompanied by a beautiful lady in a low-cut evening gown, arrived at the entrance of the Moulin Rouge.

"Oh, it's Monsieur Hotin..."

Whispers circulated through the crowd.

Sémeré Hotin was the proprietor of the Moulin Rouge, although some claimed he was merely a front for certain other interests, and his ownership stake in the establishment wasn't substantial. Yet, he commanded great respect throughout Paris.

Hotin stood by the entrance of the Moulin Rouge, waving to the gathering crowd. They fell silent, eager to hear what he had to say.

"My dear friends, it has been two long weeks since I last saw all of you. I missed you terribly!" Hotin declared. "Did you miss me?"

Laughter echoed through the crowd.

Hotin glanced around and then turned, looking smug, at the lovely lady by his side. "Nicole, look, they adore me!"

Nicole, the girl by his side, had been one of the star attractions at the Moulin Rouge during this time. She smiled and stepped forward, emulating Hotin's gesture. "My dear friends, it's been two long weeks since I last saw all of you. I missed you terribly... Did you miss me?"

"Nikole! Nikole!"

"We love you, Nikole!"

"We missed you so much, Nikole!"

The crowd erupted in cheers, catcalls, and shouts, almost causing people to stumble over each other.

After some time, the excitement subsided, and Nicole grinned at Hotin. "Monsieur Hotin, you see, I'm even more popular than you."

Hotin chuckled. "Yes, in terms of popularity, no one here can compare to you. In fact, any girl at the Moulin Rouge is more popular than me." He turned to address the crowd again. "Well then, I won't keep you waiting any longer. I hereby announce the reopening of the Moulin Rouge. Welcome, everyone!"

With his announcement, the world before their eyes suddenly transformed. The glass jewels embedded in the Moulin Rouge and the windmill sparkled like stars fallen from the heavens. The stones in the square cast brilliant beams of light toward the building, making the Moulin Rouge shine brightly, not just illuminating the surroundings, but becoming a radiant source of light in itself.

Considering the relatively elevated position of the Moulin Rouge, this radiant spectacle was visible from afar. Even people who had not come to visit, even those who couldn't afford to visit, now saw the brightly shining building from nearly an hour's distance by carriage.

"Dear Lord, what is this...? It's the Moulin Rouge! It's like a castle suspended in the sky!" André, who had just stepped out of the laboratory at the University of Paris, saw the Moulin Rouge from a distance. Amidst the pitch-black surroundings, the Moulin Rouge stood out brightly, and from André's vantage point, it truly appeared to be floating in the night sky.

"It's absolutely beautiful!" At the University of Paris, at the Place du Dieu de la Guerre, and all over Paris, people gazed toward the Moulin Rouge and marveled at this breathtaking sight.

"Ah, but Joseph and Monsieur Bonaparte always want me to keep a low profile. Otherwise, my 'Paradise Palace' could be just as much of a sensation." From his own balcony, Lucien gazed at the brilliantly lit Moulin Rouge not far away and couldn't help but sigh.

In the vicinity, people were left speechless, overwhelmed by the radiance. They initially fell into silence, then began uttering various strange noises—mostly incoherent exclamations.

After a while, these spectators gradually regained their composure.

"It's a miracle, an absolute miracle!"

"Oh Lord, let your kingdom come!" A bishop, who had arrived in disguise seeking amusement, inadvertently shouted this.

"Look at the fountains!" someone suddenly exclaimed.

Everyone turned their attention to the fountains and saw multicolored beams of light illuminating the water jets. The fountains danced in time with the music, as if they were a group of dancing maidens.

"This is... simply beautiful..."

Among those present were many self-proclaimed or aspiring artists and poets. Yet, at this moment, they felt that words had lost their power. Their attempts to express their awe resulted in only one thing—a simple exclamation of admiration.

This design was undoubtedly Joseph's creation, and while music fountains like this became common in the future, they were truly a marvel in this era.

What set these fountains apart was their reliance on human intelligence rather than artificial intelligence. Talented musicians played the music, and every movement of the fountains was guided by humans with intellect far surpassing that of any computer.

At this moment, the doors of the Moulin Rouge swung open, and once again, a radiant light emerged. Gazing inside, the hall was brilliantly illuminated, with giant crystal chandeliers and wall lamps casting a dreamlike atmosphere.

"Gentlemen, please join us, and step into this dreamy stage of a new era," Mr. Hotin exclaimed.

Finally, people began to regain their senses. Following the two figures, they entered the Moulin Rouge, still discussing the miraculous lights.

It wasn't until he stepped through the doors of the Moulin Rouge that Cadreus snapped out of his stupor. He saw Mr. Hotin preparing to leave before the performance even started and quickly caught up to him.

"Mr. Hotin, Mr. Hotin..."

Hotin halted and glanced at him, then smiled and said, "Mr. Cadreus, I know what you want to ask, but please allow me to keep this secret for one more night. You'll find out everything you want to know in the morning papers."

With those words, Hotin reached for a glass of wine, gleaming like a ruby, from a nearby waiter's tray. He raised it, showing it to Cadreus and the others, and said, "Gentlemen, eat, drink, sing, and enjoy yourselves to the fullest! I must take my leave for now."

Cadreus couldn't help but think, "Is it really necessary to keep secrets at a time like this? We're not even in competition. They're the lions, and at best, we're just vultures."

He then examined the hall's decorations meticulously, noting that they had undergone significant changes. He kept a mental record of each change and pondered their costs. "Everything else is fine, and I can manage the expenses, but these lights... I wonder how much they cost."

Cadreus wasn't the only one engaging in such calculations. In a short ten minutes, he encountered several colleagues who were continually surveying the surroundings. Suspicion and envy were evident in their gazes as they looked at each other.

Next, Cadreus spotted another noteworthy figure—Mr. Bonaventure, the banker. He was casually seated on a sofa, watching the performance.

"Why is he here?" Cadreus wondered. "Mr. Bonaventure isn't the type to enjoy these things. He must know something, and perhaps he has investments in this. But isn't he in financial straits right now? What could be more fortunate than running into a banker when you're strapped for cash?"

Cadreus hurried over to greet him. "Mr. Bonaventure, it's quite a surprise to run into you here."

"Well, I've invested some money here. I couldn't sleep without personally witnessing the results," Bonaventure replied. "Mr. Cadreus, you and Mr. Hotin are colleagues. Do you think the renovations at the Moulin Rouge will improve his business?"

"It most certainly will. Mr. Bonaventure, while the Moulin Rouge's capacity won't increase, people will be more willing to spend their money here."

"You're right. I share the same sentiment. Cadreus, what brings you here?"

"Naturally, it's for learning purposes. May I take a seat here?"

"Please do," Bonaventure said.

Cadreus swiftly took a seat beside Bonaventure.

Chapter 296: The Age of Electricity

Once seated, Cadreus wasted no time in inquiring about the cost of lighting renovations and expressed his interest in securing a loan from Mr. Borwann.

"Ah, you mean these electric lights? I do have some knowledge about them," Mr. Borwann responded.

Cadreus was aware that the banker Borwann had early connections with the military-industrial complex. It was said that back when Joseph was still running the Naval Research Institute on the other side of Toulon, dealing with various smuggling vessels, they already had business dealings, even though Mr. Borwann's business was somewhat limited at that time. Still, he made a fair amount of money through his transactions with Joseph. Later, when the military-industrial complex was established, Mr. Borwann was one of the earliest businessmen to join, and it was said that he had significant involvement in the procurement of supplies and financial transactions behind the scenes when General Bonaparte - well, we're talking about the older Iron Wall Bonaparte - was tasked with the defense of Valmy during dire times.

General Bonaparte later withdrew from the military and devoted himself entirely to becoming a scientist. So much so that now, unless you subscribed to specialized journals like "Nature," you would rarely come across his name. However, it was hinted by some high-status individuals that both President Bonaparte and Minister Bonaparte had a deep respect for their older brother.

Now, these electric lights, without a doubt, must be the product of President Bonaparte's laboratory, probably manufactured by Bonaparte General Electric. Mr. Borwann was said to hold shares in Bonaparte General Electric, so how could he not be aware of this?

"These electric lights, in terms of pricing, actually have various grades. Well, Mr. Cadreus, you may not be involved in the business of everyday products, but you should know that any product comes in many different grades. For example, wine has fine wineries and factory wines; and within fine wineries, there are distinctions between classified growth wineries, star wineries, and regional villages. Classified growth wineries further divide into grand cru, premier cru, and deuxième cru.

Mr. Cadreus, which category do you think has the highest profit margin among these wines? And which one has the highest total profit?"

"The highest profit margin should be the grand cru wineries, right? But when it comes to total profit, it should be the factory wines," Cadreus replied.

"Exactly, Mr. Cadreus. Any product, the luxury grades will be very expensive with astonishing profit margins, while the mass-market grades will be quite affordable. Just like a bottle of Lafite Rothschild wine, it's worth more than a factory wine like a hansom cab. But in terms of consumption, they're both consumable. Even someone like me, a nouveau riche, can't tell the difference between them," Mr. Borwann chuckled.

"Electric lights are the same. You see, places like the 'Moulin Rouge,' they use lights similar to their wine. While they can't guarantee that every bottle is from a grand cru winery, even the lowest-grade wine they use is from a star winery. Of course, their prices are exorbitant. They can sell star winery wine at grand cru prices. Well, electric lights are no different. They use luxury-grade electric lights, so the prices are naturally staggering."

"For example, the large crystal chandelier above us, with a six-meter diameter, uses tens of thousands of crystals alone. The price is… Oh, Mr. Cadreus, I believe you wouldn't be interested in this chandelier. The smaller crystal chandelier beside it, with an 80-centimeter diameter, might be more to your liking. It's roughly two to three thousand francs. Of course, if you're willing to lower your standards and switch to glass instead of crystal, and change the design, well, it might cost tens of francs, or even just a dozen francs."

"How big is the difference between this one and the larger chandelier?" Cadreus asked hastily.

"Is the difference between Lafite Rothschild wine and factory wine significant?" Mr. Borwann countered.

Cadreus was at a loss for words, and Mr. Borwann continued, "Actually, for a typical nightclub, the light fixture itself might not be the most significant expense. The biggest recurring expense might be electricity. Because electricity costs money."

"In that case, how is the electricity cost calculated?" Cadreus asked quickly.

"To the best of my knowledge," Mr. Borwann said, "Bonaparte General Electric, to rapidly expand its customer base, set relatively low electricity rates. If it's just a household with a couple of lights, lit for a few hours a day, it wouldn't cost much money, something an average working-class family could afford. Only this way can electricity quickly gain widespread use. But they have designed something called a tiered pricing system. They set electricity rates so that any household's consumption exceeding a certain limit would increase at a certain multiple, just like the story of placing grains of rice on a chessboard. So, if you truly want to make your nightclub resemble the 'Moulin Rouge,' I suspect the electricity cost could become a considerable expense."

"They're shifting the cost onto us!" Cadreus exclaimed. "I guess the simplest electric lights should be very affordable, right?"

Cadreus' perspective was undeniably valid. The electrification of Paris was a massive undertaking and such projects always incurred significant costs. To quickly introduce electricity to every household, both the cost of electricity and electrical appliances had to be kept low, making it accessible to the masses. However, Bonaparte General Electric wasn't keen on financing this

widespread expansion from their own pocket. Instead, they implemented a tiered pricing system to shift the burden onto heavy electricity consumers.

"The cheapest electric light?" Borwann smiled. "I've installed one in my study at home, and it's indeed very affordable, costing just one franc."

"Mr. Borwann, you use the cheapest electric light?"

"Yes, just like I can't distinguish between Lafite and factory wine. For me, a light just needs to shine. A one-franc light can do that too. Besides, Mr. Cadreus, look up at that six-meter crystal chandelier. Can you discern the difference in refraction between crystal and glass? They all tell me that the light from this kind of chandelier is richer, more flavorful. Can you sense the difference between it and a glass light?"

"Mr. Borwann, I haven't even seen the simplest glass light yet," Cadreus chuckled. "But I think, maybe, not necessarily, I wouldn't be able to tell."

Cadreus believed he could easily differentiate between these two types of lights, just as he could effortlessly distinguish between Lafite and factory wine. However, he couldn't express such thoughts in front of Mr. Borwann.

"Of course, for people like us, many things aren't just about utility but also about aesthetics," Mr. Borwann continued. "For instance, the light fixture in my living room costs a whole ten thousand francs. Hahaha..."

"Mr. Borwann, do you know the specific electricity rate tiers?"

"I've heard some information, but I can't guarantee its complete accuracy..."

After a lengthy conversation, Cadreus and Borwann reached a tentative agreement on the loan. Cadreus was planning to emulate the "Moulin Rouge" using relatively inexpensive methods, a common practice in such businesses. Just like how the wines at the "Moulin Rouge" ranged from star wineries to factory wines.

As for the electricity bill, it was indeed a concern. However, considering that the "Moulin Rouge" was in high demand and had hiked its prices, Cadreus believed that after the renovation, there would be an increase in consumption levels. In fact, there was still room to raise prices at the "Moulin Rouge," where money was never a significant issue for its patrons. Upgrading the consumption could also provide them with a decent profit margin. So, Cadreus felt confident that he could make it work. Just:

"Alas, I used to wholeheartedly earn money for myself. In the future, it seems I'll be working hard to earn money for the bank and the power plant," after finalizing their intentions, Cadreus couldn't help but mutter these words to himself.

The lively and bustling night passed. Early the next morning, as soon as the citizens stepped outside, they were greeted by newspaper boys running and shouting on the streets.

And nearly all of their shouts were related to electric lights.

Andrei had just left his house, preparing to head to school when he saw a newspaper boy running by, shouting, "The Electric Age is here, and the 'Moulin Rouge' spectacle revealed! Get the 'Scientific Truth Gazette' to uncover the scientific truth for yourself!"

"Revolutionary lighting technology is born, and darkness is no more! The door to wealth is swinging open! Get the 'Paris Businessman' to discover the short-term and long-term economic impact of this technology."

"Beauty shines under the light. Hurry and get 'The Sun Gazette' for an explanation of the 'Moulin Rouge's' new model..."

The newspaper boy had only shouted a couple of times before a crowd of people surrounded him. Andrei quickly turned to his assistant, Vaska, and said, "Vaska, go quickly and grab a few newspapers!"

"Sir, which newspapers would you like?" Vaska asked.

"It doesn't matter; get all of them!" Andrei replied. "Hurry!"

Vaska dashed over, and with his massive size and strength, he pushed a few people aside, then returned a while later, carrying a bunch of newspapers.

"Sir, look, I bought one of each," Vaska handed the newspapers to Andrei.

Andrei had originally intended to say, "Get me 'Scientific Truth Gazette' first." But then he remembered that Vaska couldn't read French, so he took all the dozen or so newspapers and began to sort through them one by one.

"Hmm, 'The Sun Gazette'? Let's not read this for now..." Andrei was about to set 'The Sun Gazette' aside when he heard a voice saying, "Andrei, you've made progress; you're even reading 'The Sun Gazette' now. That's really great!"

Andrei knew right away that the voice he heard belonged to his close friend, Anatole.

"I've got something for you to see," Andrei said without even looking up, "I'm looking for 'The Journal of Scientific Truths.'" He handed Anatole a copy of "The Sun."

Anatole accepted the newspaper and began reading. Meanwhile, Andrei quickly found "The Journal of Scientific Truths" and started reading it attentively.

"I see now! You're right. I should have known earlier. We studied resistance and heat just last month. And didn't we already have incandescent lamps with platinum filaments? I should have guessed it was an incandescent lamp!" Andrei's excitement was so contagious that the newspaper in his hand began to tremble.

"Well, last night was a bit wild. There was a special event, and, oh, I might have overspent a bit in the past few days..." Anatole, still holding "The Sun," started contemplating his expenses.

The two of them stood by the roadside, engrossed in the newspapers, oblivious to the approaching public carriage.

It was Vaska, their coachman, who finally reminded them, "Young masters, the carriage is here!"

"Ah!" Andrei snapped back to reality. He didn't want to risk being late for class. He grabbed Anatole, who was still counting his remaining money, and rushed toward the carriage.

During that day's class, Andrei learned more about electric lighting and received some exciting news: the library would soon be equipped with electric lights for nighttime use.

Apparently, this was a benefit secured by Monsieur Bonaparte, who had requested it from the government specifically for various schools in France. Currently, the benefit was only available in Paris, but it was expected to be extended to the entire country shortly. The benefit included providing two electric lamps for schools with more than a hundred students, along with six hours of free electricity for lighting. Schools that installed their own electric lamps could even get a discount on their electricity bills within a certain range.

Back at their lodging, Andrei met with some new friends from the "Patriotic Society" at a nearby café. He shared the news with them.

"I've heard about it too, Andrei. We might not be able to come here for coffee and study after school anymore. We'll all have to fight for seats in the library," commented Lev, who was studying chemistry. His workload wasn't as heavy as Andrei's, but it certainly surpassed that of the art students. Securing a spot in the library had become a required course for them.

"True," Andrei sighed, "but our teacher mentioned that he's applied to have an electric lamp installed in our laboratory, so I might not need to go to the library then."

"What? Ah, could our teacher do the same in our laboratory? I read in the paper that even the basic electric lamps are quite affordable. Though they have only half the usage time compared to the high-end ones."

"Well, it's visible that we Russians are falling behind in terms of civilization again," Ivan, who studied literature, chimed in, "It's not that we're dumber than the French, but let's be honest – the French get a better education. And it's a fact that more educated people are likely to come out of a population where everyone has the opportunity for learning. In the end, it's all about numbers. If we want to catch up, we need to improve our educational system and give our people a chance."

"You're absolutely right," Lev agreed, "Look at France. They're even providing every school with electric lights! And I heard this is just the beginning. They're planning to invest more in education. Once all these French kids who've had access to education grow up, France is going to see remarkable progress. If the lower classes in Russia had the same opportunities as the French or Prussian children for mandatory education, we could make Russia great again, maybe even restore the glory of Eastern Rome. But as of now, we're treating too many of our people like cattle. It's only pushing us further behind Europe. You know, my uncle once traveled through Europe. At the time, I asked him how much of a gap there was between Russia and Europe. He thought for a moment and said, 'It's probably as big as the gap between us and the Turks.' Back then, I thought he was exaggerating, but now, it seems he was either being very optimistic or, during this time, Europe has sped ahead while we've been left behind. The gap between us and them isn't the same as the gap between us and the Turks anymore. We're even getting closer to the gap between us and the Tatars. If we keep going like this, we might get expelled from the club of civilized nations. We need change, we need a revolution!"

"Revolution?" Andrei was taken aback. He wasn't entirely satisfied with the state of Russia, but he hoped for a more gradual transformation, or perhaps a more forceful one, similar to the reforms of Peter the Great. Revolution...

"Yes, revolution!" When Ivan mentioned the word "revolution," his face flushed as if he had just consumed fine wine.

"Many people use various means to slander and criticize the revolution, portraying it as a celebration of anarchy, unnecessary violence, and even a betrayal of God. But I'm here to tell you, it's all nonsense! If we talk about anarchy, aren't those who degrade naturally free individuals to the level of cattle the true anarchists? Unnecessary violence? Wasn't the violence against slaves necessary for their masters? As for God, when He created our ancestors, did He instruct them not to live as equals, not to love one another, but to exploit and persecute each other? Who has truly betrayed God?

Andrei, Lev, consider this: can the knowledge you're acquiring here in France really be put to use back in Russia? Look at the engineering students; how many of them actually return to Russia? Is it because they lack patriotism? No, it's because the knowledge they acquire here finds no application in Russia at this time!

Now, what about France? Is it inherently a place where anyone with knowledge can find purpose? No, not really, at least not before the revolution! France became what it is today because, during the revolution, they used thunder and flames to purge all the impediments blocking their path. Russia, on the other hand, has suffered far more than France. If just a fraction of the hardships our people endure were placed upon the French, they would have risen in rebellion a hundred times. We Russians have a bad habit of glorifying suffering, of celebrating endurance in the face of hardship. But isn't enduring hardship just another form of tolerating evil?

Andrei, Lev, I dare say, if Russia is ever to rise to the pinnacle of the world, it will be through a revolution akin to the one in France, using thunder and flames to sweep away the scum. I believe this is the path Russia must take to greatness."

"You're right, Ivan," Andrei chimed in, his excitement matching Ivan's, "When I first came to France, I only aimed to excel in science and technology and then return home to either start a factory or teach at a university, passing on the knowledge I've gained to others and slowly raising our people's faith in science.

But you're right; we don't have the luxury of time anymore. Our gap with France isn't narrowing; it's widening, and it's accelerating. If I pursued my earlier plans, Russia might progress gradually, perhaps reaching France's level in a generation. But by then, the French will have sprinted even farther ahead. We're chasing the horse-drawn carriage on a snail's pace. So, tell me, what can I do for Russia, for the revolution?"

"Andrei, my friend, my brother," Ivan responded, "The time for revolution isn't quite ripe yet, so for now, you should keep on studying diligently. When you return to Russia, you can spread knowledge of science and democracy, awaken more people who are willing to embrace revolution.

Andrei, I've studied the French Revolution. It didn't just happen out of thin air. The French people once endured suffering much like our own. But first, they had Voltaire, Rousseau, Montesquieu—the Enlightenment. After that, more French people awakened, leading to the revolution and eventually the prosperous France we see today.

As for us, we haven't even completed our Enlightenment yet. Without sowing, how can we reap? Right now, we need to sow the seeds. Of course, Russia's spring and summer are both brief, so our actions must be faster than the French were in their time."

Chapter 298: The Transformer Experiment

The advent of electricity into daily life was nothing short of lightning speed. Just a few days after the grand opening of "The Moulin Rouge," the library at the University of Paris was the first to be illuminated.

The lighting of the university not only meant that the library could now stay open at night, but it also introduced a new challenge for the police – catching cable thieves. Due to the lack of transformer technology, a significant amount of electricity was lost during transmission. To reduce these losses, there were two main solutions. The first was to build power plants in close proximity to the consumers.

Paris, with its abundant Seine River, appeared to be a perfect location for navigation, but it posed challenges for hydroelectric power. Therefore, the only solution for Paris was thermal power. However, this approach came with its own set of problems.

One issue was the source of coal. The coal from the Saar mines had to be transported to Paris, and there were no suitable waterways (cross-basin canals hadn't been developed yet). The only option was to use heavy horse-drawn carts to transport coal to the banks of the Seine River and then onward to Paris, but France's heavy draft horses were already in short supply. Additionally, laying a railway from the Saar mines to the Seine River would also take time.

Considering international trade, it was easier to import coal directly from England, load it onto ships, and transport it along the Seine River to Paris. In terms of transportation costs, it was even more economical than bringing Saar coal. As a result, many power stations along the French coast were using coal from England.

To account for the instability in their relationship with England, Napoleon had established coal depots at various coastal ports to store a portion of coal, thereby enhancing resilience.

Constructing multiple power stations in Paris to meet the city's growing electricity demands had a downside – it would result in severe pollution. If things went awry, Paris might even have to compete with London for the title of "fog capital."

Apart from building power stations nearby, the only other option was to work on the transmission lines. Generally, the larger the cross-section of the cables, the lower the resistance. Even though the power demand at the time wasn't particularly high, the transmission cables were made thick to minimize resistance.

Thick copper cables, combined with the high cost of copper, attracted many potential thieves. As the saying went, "Where there's copper in cables, there's usefulness in theft." Stealing cables became a burgeoning criminal activity, especially for those who refused to work or couldn't find employment. Despite the frequent reports of thieves being electrocuted while stealing cables, this criminal activity persisted. Back when electricity was introduced for agricultural purposes, cables were closely guarded. Whenever outsiders appeared, people became alert, suspecting them of being cable thieves.

In Paris, this issue was particularly pronounced. The electricity supply for the University of Paris originated from power plants that provided electricity to factories in Saint-Antoine, a less affluent area with a history of poor security. Providing power to factories was one thing, but as cables left the power plant's boundaries, crossed a narrow road, and entered the factories, they were vulnerable to theft. Protecting these cables became a daunting task for the police.

To address this issue, the responsibility for cable protection was given to the Department of Public Safety. Monthly allocations were made for this purpose, though the amount was not substantial. Upon receiving these funds, Minister Fouché promptly issued orders. The funds were distributed to precincts in proportion to the length of cables running through their areas, adjusted for the level of security challenge. Fouché's directive was clear, "If there are no cable issues in your precinct this month, consider this money your bonus. If, however, there is any damage to the cables in your area, these funds will be reallocated in proportion to precincts that had no issues."

The amount was not large, but for higher-ups, this "not large" sum was significant. Additionally, the funds allocated to Fouché came with the customary budget for "operating expenses." Fouché was not one to meddle too much with what his subordinates did with these "operating expenses," as long as they didn't go overboard and exceeded the standard amount. But Fouché himself refrained from using these "operating expenses." Consequently, when these small sums reached specific precincts, the final amount was more than one might expect.

In light of this, the young officers working in these precincts put in extraordinary effort, patrolling along the cables tirelessly, day and night. Even some small local criminal groups were cautioned, "My intention isn't just that you should stop such activities, but that if any cable damage occurs in this area, causing us to lose money and face penalties, we'll make you work to recover our losses!" As a result, those criminal groups that needed to stay in the area for the long term became, in a sense, protectors of the cables.

This concentrated effort ensured the safety of the cable running to the University of Paris. However, it was clear that this was a short-term solution. If electricity was to be widely promoted throughout the city, the police department simply wouldn't have the manpower to protect all the cables. In the long run, it seemed that crimes against the power system might remain difficult to control.

Joseph stated during the "City of the Night" planning meeting, "From a long-term perspective, transmission technology has become a bottleneck for us. If we intend to promote electricity throughout the entire city, relying solely on copper cables, the sheer quantity will become overwhelming."

And so, the challenges of bringing electricity to Paris continued, with Joseph and Napoleon Bonaparte at the helm, steering the course of progress.

"Fortunately, the military doesn't need copper as much these days," Napoleon sighed in relief. Otherwise, competing with the wonders for resources would indeed be quite troublesome.

"By the way, the last time you told me about resistive heating, you mentioned that you were working on a machine to increase the voltage. How's the progress?" Napoleon inquired.

"We've made some progress, and things have been going rather smoothly," Joseph replied. "However, there are still some experimental steps to complete. The experiments are currently being conducted in the south, where we have abundant hydroelectric resources, although the conditions are less favorable, and not all power stations are operating at full capacity. So, we've arranged the experiments there. An experimental transmission line has been set up, and if everything goes well, we should have results in a few days..."

"Then it'll take another half year to transition into industrial production, right?" Napoleon asked.

"Yes, that's correct. My friend, you shouldn't always expect to wake up one morning and see the wonder complete. Think about it, the Great Pyramid, the Temple of a Thousand Gods – which wonder didn't require time?" Joseph remarked.

"I actually think 'The Moulin Rouge' is already quite a wonder," Lucien chimed in, "and it's a wonder that keeps bringing us endless profit. It adds both smiles and gold coins – it's truly perfect..."

At the same time, in the south, construction of the new experimental transmission line was in progress. Workers erected tall electricity poles at intervals, hanging a string of ceramic bowls-like objects on top. These poles were all set up, and now, under the guidance of engineering technicians, the new wires were being hung on the poles.

Compared to the commonly used thick cables, these wires were much thinner, not even much thicker than a thumb. What made them even more peculiar was that they were entirely bare, without an insulating layer.

Unlike typical cables, these wires couldn't be mounted directly on the poles but had to be hung beneath the string of "ceramic bowls." On each pole, there was a string of "bowls" on both sides, with a bare wire suspended beneath them.

This wire extended all the way into a peculiar machine nearby, where it split into two thicker cables with insulating coatings. In this era, plastic had not yet been invented, so the insulating coating of the wires was usually a composite structure. The innermost layer, in direct contact with the metal, was asbestos. In later times, asbestos was banned in many countries due to its strong carcinogenic properties, but during this period, no one paid much attention to these matters.

Outside the asbestos layer, there was a thick layer of oiled paper, and the outermost layer was made of asphalt.

The responsibility for the experimental task in this area was entrusted to Joseph's student, André-Marie Ampère. At this moment, he was making final preparations for the experiment.

He checked the condition of the transformer: the iron core, coils, and the cooling oil they were immersed in were all in good shape. He carefully inspected other equipment and then said to the people around him, "Well, it's time to start the experiment."

Chapter 299: Genuine and Imitation

The experiment conducted under Ampère's guidance had been quite successful. It turned out that by using wires with a much smaller cross-sectional area, he managed to achieve lower losses compared to those as thick as one's arm. This single advancement had the potential to save a significant amount of precious copper. Moreover, although Ampère's experiment didn't reach the high voltages that future Oriental powers would employ, it hadn't even delved into the necessity of considering losses caused by reactance. Nonetheless, the voltage it achieved was just enough for relatively long-distance power transmission, making it possible to power a larger city from a substantial power plant. However, building a nationwide power grid? Joseph thought he might not live to see that day.

If we were to turn back the clock a few years, Ampère's experiment would likely have been dismissed as "the final equipment test." But in these past few years, Joseph had already accomplished plenty in the field of science. His discoveries in electromagnetic waves and the corresponding formulas alone had guaranteed that he would be loathed by students from secondary

school to university in the future. He no longer needed to boost his reputation in this area. Instead, Joseph preferred to enhance his moral reputation and cultivate a multitude of impressive disciples.

Imagine having disciples all around the world, who would dare to say that Joseph was wrong? His vast horde of disciples and perhaps even the entirety of the European scientific community would rise to his defense. Now that was exhilarating, wasn't it? It was like the "masters" of a certain future Oriental nation who, in many cases, were not as groundbreaking as they were made out to be, serving more as knowledge brokers spreading Western ideas. Yet, due to their numerous disciples, they were hailed as extraordinary. Those unfamiliar might assume they belonged to the same league as contemporaries like Russell, Sartre, and Heidegger.

With these considerations in mind, Joseph was more inclined to leave the credit for discoveries and honors to his disciples. Many times, these discoveries should have rightfully been attributed to the individuals who made them, but now, when they achieved these breakthroughs, they were eternally grateful to Joseph. Some even believed that if they had a different mentor, these discoveries could have easily been credited to the mentor instead. It was only someone like Joseph, with high integrity and little regard for fame and recognition, who could say, "I've made enough discoveries already, to the point where the Academy of Sciences is struggling to name some physical quantities. I've heard that students in both secondary and higher education curse me when they can't solve math problems. It's not a good situation, I believe it's time for you all to share this burden!" What a remarkable person he was, truly the moral paragon of scientists!

Therefore, when Ampère conveyed the successful results of the experiment through the telegraph, Joseph promptly replied:

"Hurry up and write your paper, let me see it, and then prepare for entry into the Academy of Sciences." Well, the word count was a bit excessive, but the telegraph system was a military-industrial complex; it was used internally, so no one was billed per letter.

Upon receiving the telegram, Ampère was moved to tears. Meanwhile, his mentor was pondering: "Well, this year's slots are filled again. Ha! I can make that Napoleon guy who's always after fame and glory wait until next year! Hmph! Want to get into the Academy of Sciences? Let me see how many more students I have..."

As for Napoleon, he certainly had no idea that his brother was planning to make him wait indefinitely. Nevertheless, he had thought of a way to circumvent Joseph's defenses. Napoleon decided to establish a social academy of sciences outside the regular Academy and then... "I'll get myself an Academy President position too!"

After the successful experiment, Joseph immediately called Napoleon and Lucien. He informed Napoleon that the "City of Lights" spectacle was ready for full-scale implementation. Of course, they needed to expand the power plant and gradually increase the light bulb's production capacity. However, advertising could start immediately, and these matters would also involve attracting private investments.

...

Cadreus entered a newly opened shop under the banner of Bonaparte General Electric in an inconspicuous corner to the east of Montmartre Heights. This three-story building had the first two floors as a shop and exhibition area, while the top floor was reserved for major clients.

With Cadreus's status and purpose, he could directly go to the third floor. However, he preferred to take his time ascending from the first floor, reviewing the various samples, and organizing his thoughts.

The first floor mainly displayed electric lights for common folks and general applications. The cheapest 25-watt carbon filament glass bulb was priced at just one franc. According to General Electric's salespeople, under normal usage conditions, it could work continuously for more than five hundred hours. Given its price, this performance was already quite satisfying.

However, as a seasoned businessman, Cadreus could hear the undertones. First was the phrase "normal usage," which implied that any failure before reaching five hundred hours might be due to not using it normally. The later statement that it could work "continuously for more than five hundred hours" was quite an interesting way of phrasing it because, really, who would keep their light continuously on for more than five hundred hours? So, if you turned the light off at any point and it didn't last five hundred hours, that wasn't a product quality issue.

A 25-watt incandescent bulb, by future standards, was quite dim. However, in this era, when compared to candles, whale oil lamps, and the like, it was incredibly bright. Of course, the brighter, the better, as long as you could afford the electricity.

The luminous efficiency of incandescent bulbs, compared to the energy-saving bulbs and LEDs of the future, was abysmally low. Therefore, for the same power, they appeared much dimmer, but if you wanted them brighter, you just had to increase the power. So, next to the 25-watt bulbs, there were also 50-watt and 100-watt ones, which were still commonly used. Their prices remained reasonable. For instance, even the 100-watt bulbs were only 10 francs.

However, on the second floor, Cadreus came across the kind of lamp that had illuminated the entire Moulin Rouge when it opened – the ones disguised as stones. This was a 1000-watt lamp, and its price jumped straight to a thousand francs. It was said that if you wanted to add a spotlight cover like the one at the Moulin Rouge, along with a casing and a small fan for cooling, the whole lamp would cost two thousand francs. And the bulb's lifespan was still listed as "under normal usage, it can work continuously for more than five hundred hours."

Cadreus calculated that if he were to place two of these lamps outside his own nightclub, not to mention the other costs, just the expense of changing bulbs every month would amount to two thousand francs. So, he considered and promptly marked a cross over this idea in his mind.

Apart from high-power bulbs, there was another type of bulb that was particularly expensive: crystal bulbs. According to the sales pitch, these bulbs, unlike the glass-blown bulbs on the second floor, were carved from a single crystal to form a polyhedron. Additionally, they used platinum filaments, a high-end and upscale choice. So, both the light output and the lifespan were significantly enhanced. For example, a 25-watt bulb, under normal usage, could work continuously for more than a thousand hours.

As for the price, it was like the difference between a fine Lafite wine and factory-made wine. These bulbs cost two hundred francs each. Cadreus promptly marked this one with a cross in his mind as well.

The salesman seemed to have noticed Cadreus's dissatisfaction with the prices. He then said, "Sir, we actually have a similar-looking bulb that's considerably cheaper."

"Oh, can you show me that one?" Cadreus inquired.

The salesman reached into the counter and retrieved a bulb that resembled the polyhedral crystal bulb.

"Sir, take a look at this one. I won't hide the fact that the casing is made of glass, and its transparency is slightly different from high-quality crystal, but not by much. It's not a standalone bulb; it's a casing that you can put over another bulb. Then, hang it a bit higher, and who will be able to tell?"

"Is this casing large enough to fit another bulb inside?" Cadreus asked.

"Sir, we have a specific type of smaller bulb that can fit inside." The salesman pulled out a few very small bulbs from the counter. "These are also 25-watt carbon filament bulbs. Under normal usage, they can work continuously for more than five hundred hours. However, you know that making things smaller isn't easy, so the price is a bit higher at 3 francs each. If you use them inside the glass casing, heat dissipation might be a bit more challenging, and the lifespan may decrease. However, they should still be fine for two to three hundred hours."

The salesman noticed that Cadreus was somewhat interested, so he continued to pitch the "crystal lamp," which was essentially a "big crystal chandelier" made from these. Cadreus did the math in his head, and it seemed that the price quoted by Bonaparte General Electric was somewhat higher than what he could assemble on his own. However, when it came to connecting the wiring and such, that was a technical job. Besides Bonaparte General Electric, he couldn't find anyone else who could do it. So, he didn't have many other options.

After examining various light bulbs, Cadreus proceeded to the third floor.

Chapter 300: The Industrial Revolution and the Habsburgs

While some progress had been made in long-distance power transmission, interregional power transmission was still impossible at this time. The proliferation of power plants had remained relatively unchanged, with the only noticeable difference being a reduction in cable theft.

Part of the reason for this reduction in theft was the decreased availability of copper in wires of equal length. Another reason was the sheer danger involved in stealing high-voltage cables. In Paris, a significant shift had occurred. It was no longer primarily outsiders who engaged in such activities. Foreigners from the provinces, the Highlands, Prussia, Poland, and Italy, seemed to be the main culprits. They would brazenly attempt to steal power cables when they found them unguarded, leading to some rather fiery consequences.

While the death of foreign thieves was hardly a significant concern, especially considering that the 19th century had just begun, it was not just the French who were indifferent to these deaths. Even the consulates of these thieves' home countries didn't pay much attention. To them, the deaths of a few lowly individuals were inconsequential, and some might even argue that such deaths helped reduce social instability.

However, the actions of these thieves, as "insignificant" as their deaths may be, caused major power outages in various regions. While these power outages generally didn't affect the most essential areas, they did result in significant economic losses for factories or the many bars and nightclubs in Montmartre. So, the Scientific Truth Journal had to run a special series on power safety, educating

the public about the dangers of high-voltage electricity. Just because a bird could sit on a wire without harm didn't mean it was safe for a person to touch!

But these issues were relatively minor. What truly bothered Napoleon was the recent decline in arms sales.

Austria had been a reliable customer for French arms. Every time the French introduced new weaponry, the Austrians would eagerly buy it. This was especially true after Prussia discovered copper mines and profited from them. The Austrians, too, surveyed the situation and found that the copper veins extended into their territory. So, the Austrians immediately took action, extensively developing their copper mines. Unlike the Prussians, the Austrians were not as thrifty when it came to hiring workers. They made a deal with Polish nobility, paying them some money and then promptly having the Polish serfs mine for copper.

Prussia, on the other hand, was not as bold. At this point, half of Prussia's population consisted of Poles. Due to cost advantages, the Austrians ended up stealing some of Prussia's business. Logically, with more money in their pockets, the Austrians should have been able to buy more French weapons.

However, the Austrians had a different perspective. They figured that they couldn't defeat the French in battle anyway, and considering their flourishing trade with the French, there was no reason for the French to wage war against them. There wasn't anyone else worth fighting at the moment. Moreover, the French upgraded their weaponry so quickly that buying new arms would make their existing stock obsolete in no time. The Austrians weren't like the British and Spanish, who could sell their old weapons to their colonies.

The result was that the Austrian orders for arms quickly dwindled.

In an effort to stimulate Austrian spending, Napoleon had considered conducting joint military exercises with Prussia or discreetly selling some small arms to the Poles. His aim was to stir up trouble and make the Austrians realize the need to spend their money.

However, both of these suggestions were met with opposition from Joseph and Lucien. Joseph strongly objected to arming the Poles, saying, "If the Poles cause trouble, the operation of the copper mines will inevitably be affected. If Austrian copper production decreases, the price of copper in Europe will surely rise. The money we make from selling weapons may not be enough to fill that gap."

Lucien, on the other hand, opposed the idea of conducting joint military exercises with Prussia. He believed it didn't contribute to the image of France as a nation that promoted peace and was a friend to all of Europe.

"You can threaten Austria a bit to get them to do business honestly, but, Napoleon, your methods are a bit too crude! There's no artistry in what you're suggesting."

Napoleon became angry and immediately played his trump card, "You say I can't do it, so why don't you do it?"

Lucien promptly replied, "This isn't my department, and I'm not an expert in this area. Don't pass the buck to me."

Joseph then proposed, "What if we sell some goods to the Russians?"

"Russians? Can the Russians afford anything? They're notoriously stingy," Napoleon said.

The economic situation in Russia was not good, especially in recent years. France's consecutive bountiful harvests had kept grain prices on the international market low, which dealt a significant blow to the Russians, who relied heavily on grain exports for foreign currency. The Russians were truly in dire straits and didn't have much money to spare.

"We can offer them loans," Lucien quickly chimed in. "Look, we provide loans to the Russians, they use those loans to buy our products, and then they use the money we lent them to pay us back, and slowly pay off the interest. Isn't that a great idea?"

"Why would the Russians want to borrow from us? They don't seem to be under any threat," Napoleon retorted.

"We can spread the word that the Ottomans are interested in purchasing a large quantity of weapons from us," Lucien suggested.

"That's not enough, Lucien, not enough," Joseph suddenly interjected. "We need to spread the rumor that the Ottomans and we have struck a deal, where we export a full arsenal factory to the Ottomans."

"In that case, what if the Russians inquire about buying an arsenal factory?" Napoleon asked.

"Then we sell it to them, and we can even include technology transfer," Joseph said nonchalantly.

"But is that feasible?" Napoleon inquired.

"Why not? Even if they have factories, can they produce products that can compete with us in the market without relying on various forms of support? And as you've said, the Russians' funds are quite limited. If they grit their teeth and buy our factories, they will have to find the money elsewhere. How will they do that?"

"They can either cut costs. After buying our factories and technology, they can save on research expenses. We can persuade them not to 'reinvent the wheel.' After all, their own research won't match what they buy from us, and it will be more expensive. So, why not cut research expenses? It's like someone wants to eat meat. They can either buy it from the market or raise their own livestock. But if they raise livestock themselves, due to lack of experience and technology, their self-raised livestock will be expensive and taste bad. Do you think they can continue this way? It's better for them to go out, or more precisely, come to us, to buy meat."

"In this way, they won't have to spend money raising livestock, and as long as they invest in this area, slowly build up their own team, their self-developed meat will eventually become better and cheaper. But by selling factories and technology at the right time, we can disrupt the accumulation of scientific and technical talent in Russia. We can continuously export specific technologies to them, making sure their researchers have no place to apply their skills. We can even take the opportunity to lure these 'useless' researchers to our side. Napoleon, don't you think this is an excellent idea?"

"But what if the Austrians and the British come up with similar requests?" Napoleon asked again.

"Every situation is unique. Well, the Austrians can be managed without much trouble, but the British will need some limitations. However, these limitations should be exercised by a committee, not directly by us. You see, we and the Austrians, the British, and the Russians have significant

differences in our political systems, don't we? We're a republic, aren't we? We can establish an organization for controlling technology exports, comprising the democratic countries in Europe, such as us, the Northern Italian Federation, and the Rhine Federation. We can call it the 'Export Control Coordination Committee,' and its headquarters can be in Paris, responsible for reviewing all technology exports to non-republican nations. Technologies and equipment and commodities not approved by this committee will not be exported," Joseph proposed.

"Yes, Napoleon, I think we can start by selling a factory to Turkey, then sell one to Russia, and then incite internal trouble in Turkey or Russia. Naturally, they will suppress it. Then we can let some 'opposition' media and other republican states accuse us of handing a butcher's knife to a tyrant for the sake of money. This will allow us to establish the committee with legitimacy," Lucien added. "In the process, we can sow plenty of thorns on the side of the real opposition."

Napoleon pondered for a moment and then said, "Well, I suppose that could work. Let's proceed with this plan."