

PART ONE THE STANDARD OF THE FIVE HUNDRED GODS

I

On 5 February 19** there was great excitement in Paris. The Société de Géographie was holding an extraordinary general meeting of its members at midday in the great amphitheater of the Sorbonne, to which all the illustrious individuals representing the new movement of the twentieth century had been invited.

Everyone knows that since the Treaty of Paris had restored the beloved lost provinces to France, and the fall of the German Empire had substituted the Germanic Confederation for the Hohenzollern autocracy, our fatherland, liberated from the burdens and anguish that had forced it to maintain excessive armaments for so long, had been able to devote all of its vital energy to intellectual studies, and merited more than ever the title of the World's Brain.¹

In all branches of human knowledge, France had resumed its leading role; its literature, freed from the excess of a forgotten naturalism, was the most perfect expression of the ideas of the present and the hopes of the future. With no more internal shocks, Parliament was able to devote itself entirely to the reform of the Law and the great social questions on which universal wellbeing depends. The ordering of financial affairs, the momentum acquired by industrial enterprises and the renovation of our agronomic systems ensured the country a prosperity that nothing seemed able to compromise.

Great interest was, therefore, taken in new discoveries, especially when, as had been recently announced by the entire press, it was a matter of an application of electricity that might be even more marvelous than the telegraph and the telephone.

The invention that had impassioned all curiosity, the experimental demonstration of which was awaited with a quasi-feverish impatience, presented the very particular character that it was due, not to a conventional scientist, a qualified academician or a graduate of the École Polytechnique, but—unbelievably—to a simple poet...my God, yes!

Guy de Norès, who was not yet thirty, had revealed himself to the literary world in a little volume rather disdainfully welcomed at first, *Rêves vrais*, copies of which remained sadly stacked up on the publisher's shelves. Then, one day, a critic, the most respected and, to tell the truth, the least benevolent of the era, had devoted a two-column article to it, concluding thus:

Guy de Norès is better than a poet, better than a writer; he is a seer whose genius, engaging the unknown in hand-to-hand combat, has forced it to deliver its secret to us. In these few pages there is more real science than in the heaviest quarto volumes of our official doctors. This little book contains the scientific gospel of the twentieth century.

It was realized then, Panurge's sheep being eternal, that we were in the presence of one of the most original individuals, that the sculptor of rhymes was also a mathematician of the first rank, and that each of his short poems provided a hypothetical but possible solution to one of the great scientific problems.

Indifference had been succeeded by the most passionate infatuation; journalists had seized upon him as on a prey, his life had been searched in the hope of discovering alluring mysteries, but with great disappointment. Guy was a simple individual, working fifteen hours a day, going without pause from his study to his laboratory, simultaneously a chemist and a man of imagination, speaking all known languages, systematically deprived of all diplomas and refusing all distinctions. He was sincerely modest, patient and courageous, and above all, patriotic through and through, dreaming of giving his country the most beautiful of all glories, that which attaches to human conquests of nature.

For three years he had published very little: one semi-philosophical and semi-social novel, based on the influence of wellbeing on civilization and had enjoyed a *succès d'estime*. With the versatility that characterized the great city of Paris then as of old, people had begun to forget him; his friends, or those who claimed to be such, declared in hushed voices that he was finished—burned out, to use a popular nineteenth-century expression—when

¹ Lermina could not know, of course, that there really would be a Great War prior to the 1920s, when his story is set, which would end in a German defeat, thus terminating the Hohenzollern Empire, and that one of its results would be the return of Alsace and Lorraine to France under the Treaty of Versailles, following a crucial French military takeover of the region that concluded with the occupation of Strasbourg.

the announcement suddenly appeared in all the newspapers of the meeting organized by the Société de Géographie, in which Guy de Norès would demonstrate the possibility of seeing, as clearly as in a mirror, what was happening a hundred, two hundred or a thousand leagues from Paris.

Curiously enough, the sympathy previously inspired by Guy, which had become somewhat dormant, reawakened with more force than ever; it must be said that the renown of the society that was sponsoring him, the indiscretion of reporters and anticipatory descriptions of the discovered methods, albeit vague, contributed to giving the promised experiment the most serious character.

Finally, to reveal all, what had perhaps contributed more than anything else to the universal benevolence was a sentimental story that had spread surreptitiously and which, given feminine sensibility, had in his favor disposed the weaker sex, both ladies and demoiselles alike.

This is it: Guy, having not yet made a fortune, was in love with a young woman whose name was not pronounced but who belonged, apparently, to one of the most highly-placed families in the scientific world. The father, it was said, had placed the condition on his consent that Norès must realize at least one of the items of progress of which he had made himself the apostle—but until then, he must remain separate from the woman he loved...doubly separated, since she was traveling with her father in the Far East.

People take an interest in these tender matters, and everyone wanted the young man to succeed. Generous hearts felt anxious. So, when Admiral Trécourt, who was presiding over the numerous assembly—nearly two thousand strong—that was crowded onto the benches of the Sorbonne's amphitheater, announced that Guy de Norès was about to commence the advertised lecture, a murmur of sympathetic curiosity ran around the hall.

"Mesdames et Messieurs," the Admiral added, "before handing the floor to our young colleague, may I be permitted to say one thing more: what is about to pass before your eyes will appear so strange, and so improbable, that some of you will be tempted to doubt the reality of the phenomena that you will witness. My presence, and that of several of my colleagues in the Académie des Sciences, is a guarantee that these experiments are not based on any subterfuge. We have only authorized these experiments—which I would call marvelous, if you were not all aware that miracles are not of this world—after having acquired the certainty of their astonishing perfection. You can, in total security of conscience, applaud the man that we are happy to call our friend...and, I will say, our master."

One can imagine the effect produced by this little speech, which the Admiral had made in an emotional voice. So, when the man whom the most illustrious were already calling a master advanced to the podium, there was such an explosion of curiosity throughout the auditorium that, within the blink of an eye, everyone was standing on the benches.

Guy de Norès appeared to be about thirty. Tall and very thin, he walked with a slight stoop, as if his head that seemed at first glance to be enormous were too heavy for his shoulders. His thick black hair surmounted a broad forehead of unusual amplitude. His eyes were large and wide open, his gaze escaping like a gleam. His nose was prominent, his mouth wide and his lips as red as those of a child. That ensemble, however, revealed such a vitality, such an exuberance of thought, and such a masculine energy, that a murmur of admiration passed through the room.

He had straightened up now, and after a slight bow, devoid of embarrassment or arrogance, he started speaking with a voice that was slightly muffled at first but gradually became clearer—magnified, so to speak—in a tone that was both sonorous and soft, whose harmony was an additional seduction.

With a few very sober words, in excellent taste, he thanked the admiral for the exceedingly benevolent words that had introduced him and applied the term of master, which he did not accept, judging himself only too glad to be welcome as a pupil of great French scientists.

"Permit me, however," he continued, "not to say any more about that; if you have been kind enough to respond to the appeal of the Society whose hospitality is for me an honor of which I am proud, you are all impatient to know whether it really has been given to me to lift a corner of the veil that nature extends so jealously over her secrets, and I ought not to delay any longer before satisfying your legitimate curiosity."

At the front of the stage was a table covered with a large sheet. At a signal from the speaker, and assistant lifted it up, and an instrument then became plainly visible whose form was strongly reminiscent of a star. The central point was constituted by a large copper ball, and the radii consisted of copper wires fixed to the copper ball at one end while the other was attached to a nickel circle forming an exterior circumference, fitted with as many buttons as there were wires.

"These wires," said Guy, "are in communication with the various telegraphic systems that put Paris in communication with the entire world. By putting pressure on this copper handle, I can open or close at will a current communicating with one of those wires, and, in consequence, with the telegraph wire of which it constitutes the first link."

Then he picked up a mirror, the foot of which he screwed into the copper ball.

“You have before your eyes, Messieurs, my entire apparatus, with the exception of the dry piles producing electricity, which are installed in the basement of the auditorium. Finally, I call your attention to the frame that you see suspended on the wall to the right of the hall, which, I declare to you immediately, is simply fitted with a screen designed to receive, in magnified form, the images that will shortly be produced in the central mirror.”

These explanations, clearly given in a distinct voice, aroused increased attention. Not the slightest sound could be heard; everyone was waiting.

“Messieurs,” the young scientist continued, “in the book that you might perhaps have forgotten, but which constituted the first phase of my research, I posed this problem. Already, thanks to electricity, human speech passes from one end of the earth to the other, either via the telegraph or the telephone, whose systems radiate throughout the whole world. In a few more years, it will be possible to converse from this very spot with the people of all the nations of Europe, Asia, America and Africa. You know that cables are being laid at present between Australia and the American continent, closing the circle enveloping the entire globe. Electricity has given you light and, thanks to the central beacon of the Hôtel de Ville, the magnificent apparatus that is the finest entitlement to glory of our great Sametel...”

As he pronounced that name, it seemed that the young man’s voice suddenly weakened slightly; there was a slight interruption of which people took advantage to applaud the name of the man who had been nicknamed, in memory of the famous American, the French Edison.

Guy continued: “Electricity has given us heat, and, last winter, which was unfortunately too rigorous, the immense heater in Les Halles, suppressed suffering and misery, so to speak.

“Has electricity, then, said its last word, and must we renounce any further demand on that benefactor? Perhaps, if we had to rely solely on its power—but it is possible to provide it with an ally, to combine its energy with energies even more powerful than its own, and we can hope realistically to constrain it to produce new miracles. That is what I have attempted, Messieurs, and I can say without boasting, because the results are to hand, that I have succeeded...”

“That idea is, as you have guessed, the magnetic force of the terrestrial globe, the seemingly so mysterious influence to which, for many centuries, the compass has owed its observed, but always unexplained, action.

“I shall content myself with that indication, the technical details of which will be set out in the brochure that will be handed to you at the end of the session.

“Having said that, permit me to draw your attention briefly to a fact whose first revelation was made in the final quarter of the last century, but which was not accorded the attention it merited.

“You are all familiar with selenium, the metalloid of the sulfur family whose electric conductivity, as Willoughby Smith discovered fifty years ago,² varies in accordance with the intensity of luminous radiation. That metalloid, which is produced by treating the mineral known as *zorgite*³ with hydrochloric acid, could not be obtained in considerable quantities until the recent discovery of *zorgite* mines in the United States of South America.

“Selenium is modified under the combined action of electricity and light, in proportion to the intensity of the current and the radiation that affect it. In addition, submitted to the action of terrestrial magnetism, which acts in its regard like photographic fixing agents, selenium retains the imprint of images that are communicated to it by the double influence of electricity and light, the former being, in a sense, the vehicle of the latter.”

The orator then entered into a few considerations to which the audience listened with the greatest interest, which he summarized as follows:

“So, Messieurs, if you have understood me fully—or, rather, if I have been fortunate enough to explain myself clearly—this is the sequence of events that you are about to witness: at the initial point of the telegraphic lines whose network terminates here beneath my hand, a *camera lucida*, set up at a point where a part of the city is reflected on a screen, with its life and movement, is put in communication with the electric wire, which transports the fluid influenced by the light, in its various degrees of intensity; that fluid strikes the selenium mirror that you see here, fitted to the copper button, which itself contains a magneto-electric apparatus; and on that mirror will be depicted, in all their clarity, the scenes that are passing on to the screen of the *camera lucida* situated fifty or a hundred leagues away...and even further, as you will see shortly...”

² Willoughby Smith published his paper on “The Effect of Light on Selenium during the passage of an Electric Current” in the 20 February 1873 issue of *Nature*, so this statement implies that the story is set in 1923, or perhaps, if “fifty” is assumed to be approximate, a year or two either side of that date. Given that Lermina deliberately plants this indicator and another a few lines thereafter, it is not obvious why asterisks are used in the dates specifically cited at the beginning of this story; I do not know whether the same convention had been used in the serial version.

³ Copper-lead selenite.

"These images will be reflected, thanks to an optical apparatus of the greatest simplicity, onto the framed screen that you see fixed to the wall, with the result being that in a moment, while being in Paris, you will see—see in their absolute, positive, living sincerity—the scenes that are unfolding at this moment in the capitals of Europe and...elsewhere."

Guy interrupted himself in order to drink a few sips of water. Everyone took advantage of that moment of silence to manifest their sentiments, and it must be admitted that they were not unanimously favorable to the orator.

"It's incredible!" said some.

"Impossible!" said others.

A peevis professor, who had never invented anything and declared himself incredulous in advance of all progress, even exclaimed: "This is charlatanism!"

Guy de Norès was still smiling, waiting for calm to be restored.

The president rang his hand-bell. "Mesdames et Messieurs," he said, not without irony, "those who speak of impossibility are in error; those who speak of charlatanism are committing an impertinence. But Norès will not take exception, sure as he is of his imminent triumph."

By virtue of one of the habitual mood changes of crowds, there was wild applause.

"Continue, Monsieur de Norès," said the Admiral.

The young man took out his watch. "It is one o'clock, Messieurs. From one end of Europe to the other, the difference in the actual time is more than two hours. In round numbers, it is one o'clock in London and two o'clock in Vienna, two-thirty in Constantinople and three o'clock in St. Petersburg, noon in Madrid and two o'clock in Stockholm and Rome. I'm reminding you of these facts in order that you will be able to explain the differences that you will observe in the atmospheric light of the various countries that will appear before our eyes. If you will permit, we shall commence with our neighbor on the far side of the Channel, whose Parliament finally voted two days ago for the construction of a tunnel that will link the French and English coasts—to London, then!"

He raised his hand and rang a bell; the room was plunged into darkness.

"Keep your eyes fixed on the selenium mirror to begin with," said Guy. "Then look at the screen."

After a few seconds, the surface of the mirror was seen to brighten with a singular blue-tinted light, which gradually turned red, while all beams of light seemed to spring forth from all its parts with such an intense vivacity that the eyes turned away to look at the screen on the wall.

A cry of surprise emerged from all throats.

On the white space, which measured about four square meters, the square of the Stock Exchange appeared, with its stupefying tumult of vehicles and its swarming crowds of people. The production was so bright, so clear and so vivid, the faces, the forms and the movements so perfectly rendered in their activity, that it was the very life of the enormous city that was before their eyes.

There was no more applause, so intense was the attention.

Two Englishmen, in a tangle of vehicles, picked a quarrel and hurled themselves at one another, fists raised; one of them, struck in the face, fell under the wheels of a cab. There was a cry of terror in the hall, but a policeman had leapt forward and had pulled the man away by the arm. The latter, now furious with his savior, belabored him with his fists...

It was not cold and dead photographic projection, but the absolute transportation of life itself.

"Now, Messieurs," said the clear voice of the demonstrator, I am putting the apparatus in communication with the telephone. Listen."

That was something else entirely: over that vast audience, transcending all encumbrances, an immense river of English voices now flowed. The reality of the scene took on fantastic proportions. The flood went on and on, with its own sound, making of a synthesis of all sounds. Sometimes, words stood out, including the cries of coachmen: "Keep left!" and other appeals: "Come here, boy!"

The effect was amazing.

"Now to Saint Petersburg," said Guy.

The English scene disappeared; the selenium mirror seemed to fade out. Then there was the click of a switch, and on the screen, the Nevsky Prospekt extended bleakly, covered with snow, with the occasional sleigh drawn by Ukrainian ponies, and muzjiks disappearing beneath their sheepskins, dragging themselves along, numb with cold.

"Twenty-nine degrees Réaumur,"⁴ said Guy. "The Russians are at home around their enormous stoves."

All hands clapped: there was an enthusiasm tending toward delirium. Was it not a true miracle?

⁴ This must be a mistake; it seems improbable that the author means minus 29°, so it is more likely that he means to indicate the Fahrenheit scale, on which 29 is three degrees below freezing.

No criticism was possible; the solution had been found of the most curious problem that scientists had yet posed—and to what applications might such a discovery lead!

“To Vienna,” said de Norès.

And it was the Prater that appeared. Then to Madrid, the Puerta del Sol with its swarm of idlers. An exceedingly pretty Spanish woman, with her head covered by a mantilla and her hair boldly curled, was swinging her hips as she went along, which earned a well-deserved applause. Then there was a silence. But as old Zorrilla,⁵ the founder of the Iberian Republic, almost a nonagenarian, was passing in a carriage, the telephone reproduced the cheers that greeted him.

The scene disappeared. Then the lights in the hall were switched on again.

Guy was in his place, only slightly pale.

No man ever received such a vibrant ovation. The Admiral had come down from the stage and, taking the young man in his arms, embraced him effusively. More than ten minutes passed before calm could be reestablished; curious individuals had even leapt over the balustrades in order to examine the apparatus at closer range; it was extremely difficult to get them to resume their seats.

Finally, Guy began speaking again. “Messieurs,” he said, “I can’t tell you how touched I am by your expressions of sympathy; in my work I have done my duty as a Frenchman, and you are rewarding me beyond my merits...”

“No, no! Bravo! Vive Guy de Norès!”

“I hope to live long enough,” he said, smiling, “to do better still. But permit me to show you one more experiment. Thus far, you have not left Europe. I want to take you further: to Peking.”

There was an explosion of joyous laughter—not because there was any doubt now, but because the idea seemed particularly amusing to be a few steps from the Luxembourg and yet see what was happening in China, eight thousand kilometers from the towers of Notre-Dame.

A lady leaned toward her neighbor’s ear. “His master Sametel is in Peking...and it’s Sametel’s daughter with whom he’s in love...I hope he sees her...”

And as the whisper ran through the feminine ranks, more than one heart began to beat faster, perhaps with a little jealousy. Guy could have placed his affections much closer to home...

Meanwhile, the young man, having ordered darkness again, resumed speaking—although it was observable that his voice was trembling slightly.

“Messieurs,” he said, “at this moment it is nine o’clock in the evening in Peking—which is to say that our apparatus is functioning by night. But I know that today, the fifth of February, is when the Chinese are celebrating their festival of the New Year, the first day of the month Li-Chun in their calendar.⁶ The Chinese are masters in matters of illumination, and they must have produced a light akin to that of midday, inasmuch as”—he lowered his voice—“the great electrician Sametel will have deployed for the occasion all the resources of electric light. The apparatus is directed at the French Legation, where our compatriots ought to have assembled in order to enjoy the magical sight of the Celestial festival.”

He fell silent. The effluvia, blue-tinted and then red and sparkling, emerged from the selenium mirror, and the screen brightened. A general acclamation greeted the scene that unfolded.

On the terrace of a pavilion, bathed in floods of electric light, there was an elegant crowd, very French, of ladies and young women, naval officers and young men in evening dress. In one corner, two young women, next to whom a Russian officer was standing, were chatting animatedly.

“The telephone! The telephone!” cried all the voices.

The young man seemed to hesitate.

The lady who was so well-informed said to her confidante: “You see those two young women. The blonde is Sacha Batowna, the daughter of Prince Batow, and the Russian officer, the military attaché Sandorf Wintscheff, is her fiancé. The other, the brunette, is Marguerite Sametel, the object of our great Norès’ adoration...”

At that moment, not daring to resist the general will, Guy put his apparatus in connection with the telephone, and in the midst of the conversations of the guests of our ambassador in Peking, the voice of the Russian officer could be distinctly heard, saying to the young blonde: “I tell you that our dear Guy will succeed, and that I shall be a witness at your wedding...”

All the ladies, who were in the know, applauded.

⁵ Manuel Ruiz Zorrilla (1833-1895) was twice Spanish prime minister, albeit briefly, in 1871-3, but failed to establish the Republic of which he dreamed; he would have turned 90 in 1923 had he lived.

⁶ The movable feast of the Chinese New Year fell on 16 February in 1923, but it fell on 5 February in 1924.

At the same instant, however, an enormous, monstrous clamor sprang forth from the bright screen, mingled with cries of terror. All the women were fleeing in tumult. Sandorf had placed himself in front of the two young women, as if to defend them...and at the base of the terrace a hideous spectacle appeared: a whirlwind of people, shouting and running, while one of the wretches was carrying at the end of a blood-stained pike, suspended like an infamous trophy, the corpse of an old man, whose wrists were bound to his ankles by cords.

And the multitude of murders shouted: "Death to the foreigners! Death to the devils from overseas!"

Very few people in the auditorium of the Sorbonne understood the words proffered in Chinese, but they all divined the terrible meaning of that scene of horror.

The Chinese crowd rushed to assault the pavilion. Sandorf was seen to fire his revolver at the assailants. Then everything disappeared.

And in the hall, Guy de Norès, haggard, his fists clenched, shouted like a madman: "Help! Help! Marguerite...here I am...!"

And before anyone could stop him, he hurled himself at the wall, as if he wanted to pierce it in order to go to the rescue of the woman he loved.

The impact was so violent that he fell back, unconscious, into the arms of those surrounding him.

The Admiral shouted: "The wire to Peking has been cut. Oh, our poor Frenchmen! It's a massacre!"

Emotion was at its height. As the young man had collapsed into the surrounding arms, two screams had been heard, and two women, standing up abruptly in the first row of the assembly, had run toward him, cleaving through the crowd.

One of them, with a crown of hair as white as snow, dressed in the mourning that widows wear after the death of their husbands, was Norès' mother; the other, an adorable young blonde woman, was his sister.

Fraying a passage, they arrived beside him, and the mother, taking her son's head, set it on her knees, while Marie de Norès placed a bottle of smelling salts beneath his nostrils.

"We need to take him to the library," said a voice. "He needs air."

Vigorous arms grabbed the young man, and a few moments later, he was lying on a sofa, with the two women kneeling beside him, watching for signs of life.

A physician, Dr. Sabirat, who happened to be in the hall, administered his expertise.

In the crowd pressing at the door, comments flew back and forth.

In truth, they were still having difficulty believing that the scene they had just seen unfolding before their eyes belonged to the domain of reality. The effect was nevertheless prodigious, as the individuals evoked on the screen had all the appearances of life. It will be remembered, however, that it was a matter of events happening at that very moment at an enormous distance, beyond the deserts of Asia, beyond the sea, and they were wondering whether they might have been the victims of some astonishing trick.

Admiral Trécourt, however, imposed silence on the incredulous. "Once again, Messieurs, I remind you that I have given you my word—which is that of an honest man and a soldier, which I cannot suppose that you can doubt—that you have witnessed scenes that are, alas, only too real. At this very moment, the greatest danger is threatening our compatriots in the Chinese capital. I wish to God that it was only an illusion, but science does not lie..."

"My son is coming round!" cried Madame de Norès. "My child, my love!" she added, embracing him feverishly.

Indeed, Guy opened his eyes.

First of all he looked around haggardly, unable to remember where he was.

"Mother? Sister? What's happening?"

As he fell silent, in the fear of waking up too soon to dolorous memories, he suddenly put his hands over his face. Then he straightened up.

"Marguerite! Help! They're killing her, murdering her! Didn't you see? We have to run, make haste..."

He stopped abruptly. Then, with a burst of heart-rending laughter, he said: "Two thousand leagues away! Oh, accursed science...you've only revealed that catastrophe to me...are you impotent, then, to do anything about it?" He had drawn his mother and his sister toward him. "You, my dears, understand how I'm suffering..."

"Courage, Brother," said Marie.

"Yes, yes, you're right...a man doesn't have the right to despair while strength and life remain to him." He saw the Admiral, and extended his hand to him. "Who would have supposed that my first experiment would bring me such pain? For you saw, as I did—didn't you?—that furious mob rushing toward the French ambassador, threatening the lives of all those we love. You don't doubt it?"

"No, unfortunately," said Trécourt. "Terrible events are occurring out there...but as you say, what can we do to prevent them?"

The young woman leaned in close to her brother's ear and whispered a few words to him.

Guy shook his head. "A very feeble hope," he murmured. "All things considered, though, I don't have the right to abandon it." He turned to the Admiral. "Can I count on your benevolence, Master?"

"Don't you know that I'm entirely at your disposal?"

"Well then, listen." He drew him to one side. "I've succeeded," he said, "in bringing scenes unfolding thousand of leagues from here before our eyes, but the distance is only apparently suppressed. I've attempted more, attacking a problem that's perhaps more astonishing still. Thus far, I haven't succeeded completely, but who can tell whether, at this critical moment, I might be able to find the desired solutions? I'm going to my laboratory; then, in a supreme adjuration, I'll ask the sphinx to yield me its secret. In the meantime, I beg you, send word to the Chinese Legation and the Russian embassy...to enquire...perhaps news has already reached Paris that might enlighten us in regard to this horrible tragedy...and, as quickly as possible, pass on the information that you've gathered to me."

"I'll make enquiries personally," said the Admiral, "and don't worry; I won't leave you without news for long. Go and work coolly. Remember that we have two battalions of marines in Peking, in the embassy itself. They're vigorous soldiers, and—who can tell?—but for that interruption of the telegraph wires, perhaps we'd have seen those wretched hordes driven back and chastised. Have courage, then...and confidence!"

The young man shook his head. In spite of those hopeful words, an atrocious vice was gripping his heart. That was because he loved Marguerite Sametel profoundly, with a love unique in his life. Before she had left for Asia with her father, the great physicist who had set forth to enable modern progress to penetrate the remotest corners of Asia, the two young people had exchanged the kind of vows that bind people together for life.

In truth, Sametel had not erected any serious obstacle to that affection; he professed for Norès the most sincere esteem and amity, and if he had demanded a delay before the two young people could marry, he had done so primarily because it would be too painful for him to be separated from his daughter.

That mission to China, to organize the entire telegraphic and telephonic network in the Middle Kingdom, was the last that he intended to accept. His formal plan was, as soon as he returned, to grant the wishes of the two fiancés and warm up his old age at the hearth of their happy youth.

Why must people always delay their own happiness and that of others?

"It's necessary to avoid the indiscreet crowd," the Admiral said to Norès. "Follow me. I'll get you out, along with your mother and sister, though the back door. That way, you'll be able to get home more rapidly."

"Do you feel better?" Dr. Sabirat asked.

"Oh, you're here, my dear friend," Guy said. "Excuse me for not having noticed you sooner...yes, I do feel better."

"Don't you think, Brother, that it would be best for Monsieur Sabirat to accompany us home?"

The physician and the young woman had exchanged glances. Norès had seen that, and smiled in spite of his anguish.

"Sabirat is always welcome in our house, if he wants to come. Besides which, I might have need of his advice."

A few minutes later the four friends left the building behind in the Admiral's spacious carriage, which he had put at their disposal."

Not a word was pronounced during the journey. Guy was meditating profoundly. Marie had reminded him at the opportune moment of the boldest project of which he had yet dreamed.

For more than two years, he had been studying a motor whose power, adapted to locomotion, would, so to speak, abolish distance, by means of a rapidity of transit that would put railway engines, and even dirigible balloons, in the shade. Its employment was on the brink of practicality thanks to discoveries realized at the Institut Aérostatique de Chalais.⁷

Marie, who had a serious mind endowed with remarkable scientific faculties almost equal to her brother's, had followed those endeavors at close range, and his success seemed certain to her.

A hundred leagues an hour!

Such a dream had never been realized.

Guy de Norès' workshop was in a large building behind the École Militaire.

A vast courtyard was attached to the buildings, and it was there that Guy completely recovered his self-mastery half an hour after leaving to Société de Géographie.

The emotion felt by Madame de Norès, whose health was very delicate, obliged her to retire to her apartment. Norès was left alone with Sabirat and his sister.

⁷ The French government-sponsored Military Aeronautical Laboratory was established at Chalais-Meudon near Paris in 1877; it was to play a leading role in the development of both airships and aircraft long into the 20th century

The two young men were linked by a sincere amity, having worked together in academia, but to the same extent that Guy was audacious, enthusiastic and impulsive, the young physician was, by contrast, at least apparently, cold and suspicious of himself. He was, however, in the direction of his studies, one of the boldest of innovators in the wake of the likes of Bernheim, Luys and Charcot,⁸ whose works had brought about a revolution in therapeutics at the end of the nineteenth century, obtaining results by means suggestion and hypnosis that the ignorant still consider to be miracles, but which were nothing more than the applications of principles now universally recognized.

His sole fault was an excessive timidity, not in his laboratory in his clinic, but in social relationships. Thus, having loved Norès' sister for a long time, he had not yet admitted it overtly. It is true that his secret was so poorly guarded, in spite of his efforts, that neither Norès nor Marie was unaware of it, and Norès was only waiting for an opportunity to urge him to speak.

The affection that bound the three of them together, and their mutual interest in one another's activities, is comprehensible.

The prostration that had briefly afflicted Guy de Norès had now disappeared.

"In the face of danger," he said, "it's necessary to stand up straight; you understand my anguish, but I don't have the right to abandon myself to it. It certainly seems heartless to think of lending assistance those one loves when the peril that threatens them is two thousand leagues away, even if the telegraph lines had not been cut, but who knows? So long as communication exists, one can attempt the impossible, but here the problem is quite different; it's almost madness to search for a solution."

He interrupted himself and passed his hand over his face. "And even if I found it, even if I were to risk that supreme experiment, I'd need...how long?—twenty-five, thirty, perhaps forty hours to get to China, and death is there, imminent and pressing. And yet, can I despair?"

His brow furrowed, his features contracted. It was evident at that moment that he had been gripped again by the demon of invention. He was silent, plunged in meditations so profound that he seemed to have forgotten where he was. The other two respected his silence.

"Let's go," he said, eventually. "Whatever the risks, it's necessary."

He headed for a door, beckoning to his companions to follow him.

They went into the aforementioned courtyard, along which there was a lengthy hangar. The courtyard was surrounded by high walls that defied the curiosity of the neighborhood.

Norès took a key from his pocket and opened the large battens forming the entrance to the hangar and stood aside.

"Go in," he said to the doctor and his sister.

It really was a workshop: tools of every sort, of carpentry or the locksmith's art, a forge, chemistry equipment—nothing was lacking to give the room a quasi-fantastic aspect, characterized above all by the semi-darkness due to the enormous blinds carefully lowered over the large windows.

What was most astonishing of all, however, was that in this vast space, which bore no resemblance at all, in its extent or disposition, to a mistress' boudoir, an atmosphere reigned that was saturated with a singular and exquisite odor, whose nature it was impossible to determine, so much did it seem to be compounded out of multiple perfumes synthesized into one alone.

Finally, in the middle, under a tightly-sealed tarpaulin, was an object of considerable size, rounded in form, the nature of which it was impossible to determine.

Guy had carefully closed the door behind him, not without having ordered a domestic to call him as soon as Admiral Trécourt arrived.

It was evident now that the young scientist had all his mental capacities.

"My dear friend," he said to the doctor who was looking around curiously, "no one except my sister has yet been in here, not because I'm afflicted by the stupid suspiciousness that sees every visitor as a potential stealer of secrets, but because, I confess, I devote myself here to research whose result is to bring into action unknown forces whose manipulation might well have caused the death of more than one imprudent individual. Marie is battle-hardened and more prudent: do as she does and, I beg you, don't touch anything, even objects that seem to be quite inoffensive.

"Don't worry; in our physiology laboratories we run similar risks, and employ similar precautions."

"I don't doubt it, but the warning was necessary. In chemistry, the forces are even more hidden, and one can awaken them just when one least expects it. Now, I'll come to the subject that interests me. Do you believe, Sabirat,

⁸ Hippolyte Bernheim (1840-1919), Jules Bernard Luys (1828-1897) and Jean-Martin Charcot (1825-1893), three of the significant pioneers of French neuroscience.

that it's possible to construct an apparatus that, launched through the air, would have a velocity almost ten times that of our railways?"

"The problem was posed a long time ago," said the physician. "At the end of the last century, one of our greatest scientists declared that the future belongs to heavier-than-air craft, but on the condition a motor compressing the maximum power into the minimum weight and volume could be constructed."⁹

"That's the very principle from which I started," Guy said. "But in your opinion, what sort of motor would that be?"

"Research has so far been directed toward electricity, but they've only partly succeeded. The results are already marvelous, though, since an airship moved by accumulators can be steered, provided that the wind velocity does not surpass a certain limit..."

"Even so, the speed doesn't seem able to exceed thirty leagues an hour—a figure almost obtained by our new locomotives with five-meter wheels. I'm talking about a minimum, you understand, of a hundred leagues an hour: a speed that can be indefinitely increased, provided that the resistance of the human organism can stand up to such lightning-fast transport."

Sabirat simply said: "Everything seems possible to me, especially after the experiments of which you gave us a demonstration a little while ago."

"That was mere child's play," said Norès, shrugging his shoulders. "From the moment when one has at one's disposal a conductive wire, the transportation of all physical effects is possible: after movement, sound; after sound, force; after force, light. In that I only had to follow in the tracks of my forebears...but this...!"

He stopped, as if frightened by his own thoughts.

"Brother, Brother," said Marie, "you've often told me that you'd reveal your secret to me when the day came. I know very little about it, but I have confidence."

"Dear Sister!" said Guy. "You don't know, my friend, what a precious collaborator this child has been. She has spent long nights here, preparing blueprints, and copying sheets of calculations and equations before which an astronomer would recoil. She's seen me working, knowing vaguely that every move I made might kill both of us, and never so much as quivered or hazarded an indiscreet question. If she saw me hesitate in discouragement, she re-stimulated my energy. I tell you, Sabirat, that it's to her that I owe the little that I am..."

"Oh, Guy, how can you say...?"

"But Norès is right," exclaimed the doctor. "Who can aid us in our work, encourage and inspire us, if not a good, devoted, faithful companion...?"

Sabirat was getting positively carried away. A little more and there would be a declaration that Marie was awaiting, almost smiling as she was.

Suddenly, however, timidity got the upper hand again, and the rest of the sentence was lost in an almost incomprehensible babble.

"Go on," he said to Norès, "and forgive me for having interrupted you."

Norès shook his hand, and said: "You're right. Today I have to be an egotist. I'm in a hurry to say everything, but first, I'll show you my apparatus and its mechanical structure. Help me to remove this tarpaulin. And above all, no abrupt movements."

Taking infinite precautions, the two men slid away the great leather sheath.

A kind of angular box appeared, about the side of the body of a large carriage deprived on wheels, but whose prow was equipped with a kind of steel spur forming a blade, which had to serve for cleaving through water...or air.

To either side of what would have represented the ear of the vehicle, two flat steel wheels were disposed like the sails of a windmill. Finally, above the box, there was a kind of helix placed directly in the center.

The box was hermetically sealed, with the exception of a door on one side, and a window-frame in front fitted with a very thick but immobile pane of glass.

"This is the vehicle," said Norès. "Its appearance is quite simple, and I expect you'd have no difficulty guessing the purpose for which it had been designed. It is, however, in that little box that I might shortly attempt the utopian project of going to China after a journey of twenty-four hours at the most."

In spite of his confidence in his friend's science, Sabirat looked at him with some incredulity. "Where's the motor?" he asked.

"There's the motor," said Guy, opening the door and pointing to an apparatus that resembled one of these machines with a double globe used in making Seltz water.

⁹ The reference is probably to Charles Richet, who was a neuroscientist, litterateur and pioneer of parapsychological research as well as an aviation pioneer, whose attempts to adapt steam power to heavier-than-air flight were frustrated by the problem in question.

The doctor uttered a cry of surprise: that definitely surpassed the bounds of the possible, and he wondered whether the emotion suffered by the young man a little while ago might have disturbed his mind somewhat.”

Norès smiled, like a man whose demonstrations are all prepared. “Wait,” he said.

He went to a corner of the room and came back carrying something in the palm of his hand. It resembled a vaporizer, but had no water in it.

“You see this?” he said. “Well, now roll that cannonball you see on the ground over here.”

“But it’s enormous; I could scarcely even budge it.”

“Try anyway.”

Sabirat went to the rounded block and tried to move it, but he braced himself and drew all his muscles taut in vain. The cannonball did not move.

“Don’t try anymore,” Marie said to him. “It weights more than eight hundred kilos.”

“Well, since you spoke, dear Sister, prove to our dear doctor that you’re stronger than he is.”

“What Mademoiselle! You can...”

“Oh, not with my hands,” she said, “but with this.”

And he indicated the pseudo-vaporizer, which Norès appeared to be adjusting minutely by means of an attached screw.

“Go on, Marie, and confound the skeptic.”

She approached the iron block in her turn, and directed at the mass the short tube of that we shall continue to call, for the sake of clarity, the vaporizer...and instantaneously, the enormous boulder rolled rapidly across the entire hangar, so rapidly that it would have knocked a hole in the facing wall if Norès had not shut off the current by throwing an enormous iron lever its path.

“That’s extraordinary,” said Sabirat. “I’m no longer in doubt. But what is that force?”

“That force,” said Norès, “is...perfume!”

At that moment, somebody knocked on the door. It was his domestic, announcing the arrival of the Admiral.

“I have to leave you briefly,” Guy said. “In the meantime, Marie, give our friend the explanations that you can.”

“Oh! I know so little...”

“I’ll complete it—above all, no imprudence.”

“Don’t worry.”

He went out. Sabirat made a movement as if to follow him. That was exactly what he feared the most: not exposing himself to the risk of chemical explosions, any more he would have recoiled in his clinic from the operation most dangerous to his life, but being alone with Marie!

How many others would have blessed that circumstance, which permitted him to talk discreetly and respectfully, but positively, about the sentiment that filled his heart? But that accursed timidity! Guy had scarcely disappeared when he felt himself blushing, going pale...

She was so lovely, with her bright chestnut curls, coifed à la Titus, which put a kind of aureole around her delicate face, with its child-like pink complexion and its gracious and smiling lips...

“So,” she said, gently raising her voice, “listen to your professor. Do you know, Monsieur Physician, how a particle of musk, placed in a room, fills the entire space with its odor, instantaneously to begin with, and then for weeks and months, but without the most in-fini-tes-imal—what a word!—balance being able to measure the slightest diminution of its weight? Don’t answer. That proves that matter can escape in molecules so refined and so attenuated that it requires billions of them to make up the hundred-millionth part of a gram. Is that clear?”

“You’re talking,” said Sabirat, who was thinking about something else, “of what we call, after William Crookes, radiation.”¹⁰

“Say molecular bombardment—the expression is more exact, if you think about the lightning rapidity with which those molecules spread out through space.”

“That’s right.”

“Good—you’ll make a very tolerable pupil. I’ll continue.”

She held her small finger in the air, like a little girl addressing reproaches to her doll. “That bombardment, whose rapidity is beyond calculation, is, like ordinary movement, a source of force. In its usual state, in fact,

¹⁰ William Crookes had invented the Crookes tube—an electrical discharge tube producing “cathode rays” in the early 1870s, and many physicists had been experimenting with them ever since, but in 1891 it had not yet been discovered that cathode rays were streams of electrons, or that accelerated cathode rays could interact with matter to produce the kind of radiation that, when found in 1895, would be called X-rays.

perfume displaces, parts or transpierces the constituent parts of the air, which constitutes an effort... Don't look at me like that...listen...and don't think about anything else."

Bah! It was all very well for her to say that he mustn't think of anything but the bombardment of molecules! The truth was that Sabirat heard nothing but a buzz, entirely covered by words that resounded in his brain with the rapidity of cerebral radiation: "She's adorable...I love her, I love her!"

Perhaps, in any case, she was taking a malicious joy in continuing in her professorial tone: "Now, the entire science of force consists of the two operations of compression and channeling. Compress by *ad hoc* means the billion-fold myriad of molecules that irradiate from a grain of musk or any other matter disengaging perfume, channel that formidable flow...and you have in the smallest volume the most colossal force ever imagined."

As she spoke, allowing herself to get carried away by the scientific passion with which she had been impregnated in her contact with her brother, she leaned inside the mysterious vehicle.

"Come," she said. "Do you see that sort of sand-glass, the inferior part of which is made of a metallic amalgam that can resist pressures of thousands of atmospheres? In its interior, under the action of magneto-electric power, the molecular bombardment of odorant atoms is compressed; it is sufficient to place a hand on this lever for such a force to be instantaneously developed that, acting on the system of helices fitted into the case, it raises it up to a prodigious height...and that, by courtesy of that tiller situated behind you, one can steer in the air with a rapidity that challenges the flight of birds...ah!"

She uttered a terrible scream.

This is what had happened.

Sabirat had come into the vehicle behind her and, still hypnotized by the gentility that was inflaming him, still prey to the timidity that made him suddenly mute, seeing the admirable little hand almost at the height of his eyes, he had been seized by a kind of folly...and on that hand his own had posed, as he said: "Oh, Mademoiselle..."

But the hand he had touched had thus been pushed down on to the lever—and the latent force, suddenly set free, had launched the vehicle into the air with such rapidity that it had passed through the roof without any shock being perceptible...

And it was lost in the blue sky, just at the moment when Guy de Norès came back in, exclaiming: "Truncated telegrams...it's a revolt of the whole of China against the Europ..."

He did not finish. The aerial vehicle had just disappeared before his eyes, carrying away his sister and his friend.

And the unfortunate scientist, conscious of the danger involved, and at the same time as his last hope was escaping, let himself fall to the floor, sobbing, half-mad with grief and fear.