Chapter One
A New Human Species

"Life is merely one of the forms of the activity of matter that has attained the final phase of its evolution. It is matter that, in evolving, has given life to the Catharinian monkey,[1] and which has grafted on to that elder branch of the monkeys of the Old World, the branch that calls itself Man.

"These successive creations of the activity of matter are attested by scientists and by the monkeys, whose evolution continues before our eyes. For, if the more agile Catharinian monkeys arrived first, the orangs, chimpanzees and others followed them, in urgent pursuit of the same goal—and one would have to be blind not to see with what activity, laboring their matter, they are making progress toward human form.

"Their eyes fixed on man, they study his mores, attempt his gestures, imitate his physiognomy and adopt his stance. They pluck themselves in order to cease being hairy, shave themselves or only sport sideburns. They flatten the hair on their head, smoothing it or dressing it with wigs and forelocks, kneading their skulls to redress the facial angle, knowing that the head and the tail are their weak points and trying to refuse their examination. Some among them have attained our height, and almost our bearing. Their torso has the same number of nodes; among some of them, the tail has disappeared, or, if it remains, they ennoble that appendage by making it a fifth hand. Ardent and patient studies, which humans, whom they have posed as models, naively call monkey grimaces!

"If they continue thus, time will reward their efforts sooner or later, according to their aptitudes. Some, such as the African cynocephalus monkeys, which are negroes, and the oustitis, which are dwarfs, will never be distinguished men—on the other hand, however, the chimpanzees, orangs and gorillas are nearing that goal. In 400 or 500 years, these supernumeraries of humanity will receive their investiture; they will be humans detached from the branch of the orangs and the mandrills, which were still quadrumanes in the 19th century; and as matter, incessantly involving, always progresses, they will be more accomplished humans than we are. It is, therefore, not without reason that the professors of the Hindu University of Benares have set at the first rank of their hopes that of one day being elevated to the level of the monkey.

"Matter, by virtue of its potential activity, has created the monkey; that substance set out to create humans; humankind is, for the moment, the superior phase of these evolutions. Our scientists have understood that and, seizing the general direction of nature with a firm hand, have set about furthering evolution, playing with molecules as nimbly as astronomers play with stars.

"The chemist who, by mixing potassium carbonate and sulfuric acid, kills those two entities and creates two others, will soon have also created blood, muscles, cerebral fluid and cerebrine—which is to say, the soul, the intelligence of human matter. Yes, the chemist will one day combine from constituent parts humans similar to and superior to us; the human species obtained in his laboratories by science, and the method that nature cannot contrive, will be chemically purer and physically more beautiful, more refined of the Catharinian blood that still visibly affects present-day humankind.

"That will, for science, only be the first step; chemistry will go further. Separating the intermediate elements that obstruct its alembics, it will extract matter from its pure source; it will capture the ultimate atom whose vibration engenders the forms of objects: the irreducible atom glimpsed by Epicurus and contemplated by Graham;[2] the indivisible fraction beyond which nothingness commences. It will cause that atom to vibrate, anatomize that cosmic larva, pass that puerperal dust through a sieve; and the principle of entities, the embryo of geneses, the fetus of stars and unripe planets, put to the question, will confess its secrets!

"Magnificent summits! Sinaic peaks reddened with lightning, from the heights of which science will hand down the laws of nature!

"And yet, chemistry will go further still. In a supreme leap, it will jump over the ultimate and fall into nothingness. It will penetrate the void, grasp the impalpable, dissect the indivisible and grapple with the intangible. It will raise up its horns and will plant its banner on the mysterious terrain that no creation has stained, where uncreated matter does not exist, nameless and devoid of mass and volume, where the past-less present is still to come: that virginal but about-to-be-fecund terrain, where rivers are born without sources, children without fathers, generations without ancestors; where effects have no causes, consequences no premises; where the squaring of the circles resolves of its own accord, by virtue of the identity of the angle and the circumference; where perpetual motion flourishes in its free flight, without motive force, without mechanisms, without any of those organs that produce fiction and wastage.

---

[1] I have transcribed the author's *Catharinien* directly into English, although the term—used by early paleontologists to describe a branch of primate evolution—never caught on in England and soon became obsolete in France.

[2] The English chemist Thomas Graham (1805-1869), an early convert to John Dalton's revised atomic theory.

"Perhaps chemistry will go further still—but I advise chemists to climb those slopes slowly, in order to avoid breathlessness and vertigo, and to accustom their brains to the overheating of their genius. Who can imagine the consequences of madness overtaking such powerful heads? I advise them to attempt creations more modest and intermediate, but useful and easily realizable, as soon as the central fire is conquered.

"Humans, having mastered that immense motive force, should construct machines according to its measure, bodies great enough for that soul; we should create a race of mechanical animals strong enough to serve us, and stupid enough to love us: a sort of automated humankind, endowed with a severely circumscribed initiative, activated by cerebral mechanisms analogous to those of Papuan negroes. Any servant that surpasses that limit has the ambition to be a master.

"The other organs of these creatures should receive all the improvements that the present state of science permits. I can imagine them, rather like divers clad in diving-suits: their large heads, with circumvolutions of platinum through which electricity runs, have the form of helmets, and project beams of light from their copper orbits that trace their path; their muscles are made of steel, their hearts of bronze; their enormous bellies are ballooned by the gas accumulated at high pressure in their entrails.

"Marvelous slaves, indefatigable and faithful, devoted servants, modest fellow citizens, Englishmen of the future, I baptize you: *Enginemen*, human-machines![3]

"This initial effort being accomplished, humankind will rest, freed of labor by his creatures, the proletariat being rendered extinct and social problems being resolved by universal wealth and happiness established on so large a scale that the whole of society will belong to the first echelon: wealth and happiness as inexhaustible as their source, the central fire: a submissive force serving us most humbly; the slave of our whims; the Hebe of our intoxications; the enchantress of life, safeguard against death—for death will be modified or postponed by absolute well-being, ideal hygiene, the suppression of labor and pain, sweat and tears; by the good maintenance of the roads of life, without the jolts that break springs, without the friction that wears away strength and which, in biology as in mechanics, is the only obstacle to perpetuity.

"Yes, one day, in this marvelous civilization that my mind envisages, but whose glare my eyes cannot sustain, every country and every people, having dug their wells and made alliance with the central fire, will receive their wealth, their happiness and the government therefrom. Kings and scepters, parliaments and constitutions, will be succeeded by a steam-tap and a manometer; these simple items of apparatus will suffice the humankind to come, distributing force, heat and light thereto, maintaining the life of its slave-machines, regulating seasons and climates—for the Earth, liberated from its servitude, lighting and warming itself, will march before the face of the Sun to the light of its own rays…"

These pages, so admirable and so prophetic, so passionate with terrestrial chauvinism and planetary patriotism, could only have been written by the very inventor of the central fire, His Honor Lord Hotairwell. They are extracted from his fine book *Man Before the Earth* (volume X, p.307ff.), which has already been mentioned.[4]

In the era that we have now reached, the founders of the Central Fire Company have perfected their work. For some years, the city whose first stones thy laid at the same time as they made the first pick-axe blows of the excavation—the city that was confidently mapped out around the rim of the geothermal well, Industria—has flourished in a prosperity exceeding all hopes.

Not only has the Central Fire kept its word and delivered to its shareholders their daily million horse-power, but the force and the heat have unexpectedly exceeded that quota—a circumstance doubtless brought about by some internal lesion opening up a more direct access to the heat, augmenting the heating surface, which initially made the engineers anxious but without anything justifying their fears. The functioning of the well,

---

[3] The author inserts a long footnote here, attributed to the fictitious text from which he is quoting: "The name *Enginemen* seems much better suited to the new human race that England will engender because *Englishmen* and *Enginemen* are two linguistically-identical words. Any philologist can demonstrate this. *Eng-land* signifying England, *Eng-men* signifies Englishmen, primitive strong-men. The two syllables (*Eng-men*) being dry, however, the articulation has been lubricated by a euphonic syllable, which has produced *Eng(lish)men*. Furthermore, although physical strength was the primordial quality of the race, its aptitude for the mechanical arts has become the distinctive characteristic of the British nation. To substitute *Enginemen* for *Englishmen* is, therefore, no linguistic deviation; it is a blossoming of the idiom, parallel to the progress of the original vocation of the English, who are excellent technologists. Not only does their genius reveal itself, from this viewpoint, in their work, but also—I say this with pride—in their physical and intellectual bearing, in their attitude, their gait, as chronometric as a pendulum, and even in their gestures, which have the forcefulness and stiffness of a connecting-rod fitted to a piston." (Lord Hotairwell, *Treatise on the Generation of Words*, 10 quarto vols. London: Watbled & Sons.)

[4] The author here gives a reference to "Lord Hotairwell, *Man Before the Earth and the Earth Before Genesis*, 40 fine quarto volumes, with plates. London: Watbled & Sons, Publishers." The title may be an ironic echo of Louis Figuier's *La Terre avant le deluge* (1863), about which I shall have something to say in the afterword.

having become more intense, became regular and merely provided a surfeit of riches that permitted the distribution of the shareholders of a greater dividend of well-being.

For the traveler arriving from the east across the cold fields and desolate vegetation of that part of Ulster, it was a marvelous spectacle when the panorama of Industria City unfurled before his gaze: an immense plain adorned with all sorts of flowers, limited by a circle of hills planted with woods and vineyards, which enveloped the territory with a mantle of green foliage and vines.

At the center is an Oriental city deposited in Ireland along with its sky, its climate, its palaces in lacy stone: a city of scattered villas, white and shady, mounted like daisies in a lawn, open to all the breezes of the air and all the perfumes of the fields. On the far side of the plain, beyond the city, the girdle of hills opens to give access to the sea, where a life-sized image of this prosperity is reflected, on a sea with gently blue waves, which come, shaking their foamy manes to present their mirror to the Venus of the shore.

The approaches to Industria's port are defended by electric eels, motionless living torpedoes hidden in the sand, which reveal two gleams, two semi-extinct eyes like dull lanterns; guardians chained to the shore by the wires transmitting their signals. The power of these fish—already great enough to kill horses, as Humboldt has observed—has been further developed by means of Ruhmkorff coils wrapped around them. They cannot sink ships, but their discharges into iron hulls reach the crews, paralyzing them or killing them.

Ships swarm in the harbor; carriage-boats, improved chariots of Amphitrite, whose disks skim the water, and, like halcyons, only dip the tips of their wings into the sea; which cross the Atlantic in 24 minutes, without paying any more heed to storms than a cart pays to potholes—for, properly speaking, there are no more ships and what people call navigation no longer differs from journeys overland. From Ireland to India, from one antipode to the other, journeys are made without changing carriages, without the voyager noticing whether he is moving over land or sea. The wagons descend to the shore by means of a ramp, their wheels boxed in drums which float like barges and turn like wheels; a locomotive, carried by these paddle-wheels, is detached from the shore and harnessed to a train that takes to the open sea and draws away, whistling. If the weather is good, the voyagers go up on to the imperial and savor the marvelous skating with their gaze; if it is bad, they close the windows and the express train, sweeping aside the little waves and hollowing tunnels through the big ones, pursues its course more rapidly than the wind and more furiously that the tempest.[5]

For the transport of goods, at low speed, a few bad habits of the old systems have been preserved; even so, the boats no longer go over the water but under it, 15 or 30 meters deep in the tranquil zone that begins beneath the pellicle of the waves. One can get an idea of ships of this type by imagining large swans with two necks, only allowing these necks to emerge, like the piers of a bridge, sustaining a gangway above the water where passengers stand. Giant ferries, these steamboats! Enormous Saint Christophers marching on the sea-bed, bearing their passengers in their extended arms! Marine monsters as large as islands, frightening to see emerging within view of a port. When they dive to depart, one might thing that a portion of the coast is sinking.

The Protean manifestations of the great source of fire and force can be seen spreading out into the distance and beyond the sea as easily as they do in the plain of Industria City, where hot air and steam, channeled as in a drainage system, warm the soil, excite its vitality, activate organic decompositions and impregnate the atmosphere with a fecundating mist. Thus organized, the countryside is a veritable hothouse! A hothouse in the open air, without any other shelter than the ring of hills, provided that that the thermosiphons are powerful enough to vanquish the Irish weather and to create a tropical climate.

Following the admiration caused by the aspect of the landscape and its flora, a new astonishment takes hold of the visitor, at the sight of the creatures that cultivate these fields, of those country-folk of an unknown species,

---

[5] The author inserts a long footnote here: "A few items of practical information will be useful to readers who might be called upon to take one of these express trains. On terrestrial railways, the longest journeys extend for a few 100 leagues; stops are frequent, bends numerous and inclines considerable. This combination of causes restricts speeds to puerile proportions of 80 to 100 kilometers per hour. It is only on the sea that serious speeds can be obtained. Straight lines are almost infinite there: no bends, no slopes, the spherical surface of the globe being level everywhere; no obligatory stops between one continent and another. From the port of Industria to New York is 4000 kilometers in a straight, flat line. What a magnificent racecourse! What a prey for those hungry for space!"

"Now, it is a scientific notoriety that speed suppresses weight; that a wheel—a disk as well as a planet, animated by a rapid velocity, is freed from gravity to the extent of losing a large part, if not the whole, of its weight. It is for that reason that a locomotive in motion weighs on the rails less than a locomotive at rest; in going faster, it weighs even less, and at the extreme limit of speed no longer weighs anything at all. As speed increases, weight diminishes; as weight diminishes, speed increases, without one being able to determine any other limit than the insufficiency of space. Long distances are indispensable, and the 4000 kilometers that separate Ireland and America are scarcely sufficient for maritime trains to be able to launch themselves to the limit and stop time. They would arrive sooner if they had further to go."

triple crosses of humans, animals and machines—a fauna unclassified and unclassifiable, as strange as the most peculiar animals of antediluvian nature.

Here, in a field that is being prepared for sowing, is a biped whose enormous breast roars and shakes like a pressure-cooker. Like the angel of the Apocalypse, the legs supporting the trunk are two columns that march stiffly and heavily. It is dragging a ploughshare attached to its waist, which is so heavy that the beast's entire body sweats an oily and rancid mist. No human being guides this laborer, which, from time to time, unhitches itself and goes to a spring, from which it drinks long draughts. Thus refreshed, it resumes its work.

Another worker follows, in the same furrow. Long and flat, it resembles a crocodile whose jaw has been made into a rake; its teeth rake and harrow the soil, completing the work of the plough, and when it has passed, the earth is ready for seeding. Then the sewer advances, launching cascades of grain from its open mouth, like the nymph of a fountain, which spread out all around: Ceres, thin and bronzed, a farmer's daughter rather than his wife; a Ceres of iron, forged by Vulcan. A second crocodile follows in the footsteps of the sewer and buries the seeds with its rake.

In the neighboring fields, where the harvest is under way, there is no less activity. Snakes with steel teeth hiss as they undulate through the fallows and bite the bases of the ears of corn, which lean over and fall into the ties extended to them by others in charge of the gathering. Reapers are shaving one field, and there are haymakers that one might take for lunatics, so agitated are their long thin arms, hurling the hay to ridiculous heights, which falls back and settles over them.

These creatures, or people, fill the countryside with their activities, as diverse as their forms, enveloped like phantoms in the clouds of steam they exude. One might imagine that one was seeing a swarm of insects: scarabs with bronze wing-cases and prothoraxes dleaming like suits of armor—but insects promoted to the size of pachyderms.

You will already have recognized the pseudo-human race conceived by Lord Hotairwell and brought into the world by his skillful engineers: the *Enginemen*, or, rather, the *Atmophytes*, for the latter appellation has prevailed; the rural Atmophytes, bloated peasants, as inferior to their colleagues in the city as a farmhand who grooms horses is to a valet who grooms human beings. Only the latter merit the name of Atomphytes—steam-men[6]—for one cannot call facsimiles of humans so closely resembling their creators "animals" or "machines". They are men of iron and copper, similar to diving-suits or knights in armor; bodies in which steam has been substituted for blood, in which electricity animates mechanisms so refined, so subtle and so steeped in human genius that they immaterialize themselves by the virtuosity of their matter, and their gestures are less reminiscent of products of force than manifestations of life.

They are creatures perfect enough to disquiet their creators with the possibility that these strange beings should one day cross, by means of their acquired speed, the narrow frontier within which intelligence confines instinct, trying in their turn to scale the heavens, to stifle their bewildered masters against breasts of bronze, and to render into their native dust the human clay that they once took for gods!

[6] The logic of this decoding is dubious. The Greek *atmos* means "vapor," and as the French word for steam is *vapeur*, the first part of the synthesized term can easily be held to signify "steam," but the Greek *phyton*, which gives rise to the English and French suffix –phyte, means "plant," and not, by any stretch of the etymological imagination, "man." I shall endeavor to explain this odd terminology, at least conjecturally, in the afterword.