Eugène Mouton: ***The End of the World***

(1872)

And the world will end by fire.

Of all the questions that interest humankind, none is more worthy of research than that of the destiny of the planet we inhabit. Geology and history have taught us many things about the Earth's past; we know the age of our world, within a few hundred million years or so; we know the order of development in which life progressively manifest itself and propagated over its surface; we know in which epoch humans finally arrived to sit down at the banquet that life had prepared for them, and for which it had taken several thousand years to set the table.

We know all that, or at least think we know it, which comes down to exactly the same thing—but if we are sure of our past, we are not of our future.

Humankind scarcely knows and more about the probable duration of its existence than each one of us knows about the number of years that he has yet to live:

The table is laid,
The exquisite parade,
That gives us cheer!
A toast, my dear!

All well and good—but are we on the soup, or the dessert? Who can tell us, alas, that the coffee will not be served very soon?

We go on and on, heedless of the future of the world, without ever asking ourselves whether, by chance, this frail boat that is carrying us across the ocean of infinity is not at risk of capsizing suddenly, or whether its old hull, worn away by time and impaired by the agitations of the voyage, does not have some leak though which death is filtering into its carcass—which is, of course, the very carcass of humankind—one drop at a time.

The world—which is to say, our terrestrial globe—has not always existed. It had begun, so it will end. The question is, when?

First of all, let us ask ourselves whether the world might end by virtue of an accident, a perturbation of present laws.

We cannot admit that. Such a hypothesis would, in fact, be in absolute contradiction with the opinion that we intend to sustain in this work. It is obvious, therefore, that we cannot adopt it. Any discussion is impossible if one admits the opinion that one is setting out to combat.

Thus, one point is definitely established: the Earth will not be destroyed by accident; it will end as a consequence of the continued action of the laws of its present existence. It will die, as they say, its appropriate death.

But will it die of old age? Will it die of a disease?

I have no hesitation in replying: no, it will not die of old age; yes, it will die of a disease—in consequence of excess.

I have said that the world will end as a consequence of the continued action of the laws of its present existence. It is now a matter of figuring out which, of all the agents functioning for the maintenance of the life of the terraqueous globe, is the one that will have the responsibility of destroying it someday.

I say this without hesitation: that agent is the same one to which the Earth owed is existence in the first place: heat. Heat will drink the sea; heat will eat the Earth—and this is how it will happen.

One day, with regard to the functioning of locomotives, the illustrious Stephenson asked a great English chemist what the force was that moved such machines. The chemist replied: "It's the Sun."

And, indeed, all the heat that we liberate when we burn combustible vegetable matter-wood or coal—has been stored there by the Sun; a piece of wood or coal is therefore, fundamentally, nothing but a preserve of solar radiation. The more vegetable life develops, the greater the accumulation of these preserves becomes. If a great deal is burned and a great deal created—that is to say, if cultivation and industry evolve, the storage the solar radiation absorbed by the Earth on one the hand and its

liberation on the other will increase incessantly, and the Earth will become warmer in a continuous manner.

What would happen if the animal population, and the human population in its turn, followed the same progress? What would happen if considerable transformations, born of the very development of animal life on the surface of the globe, were to modify the structure of terrains, displace the basins of the seas, and reassemble humankind on continents that are both more fertile and more permeable to solar heat?

Now, that is exactly what will happen.

When one compares the world with what it once was, one is immediately struck by one fact that leaps to the eyes: the worldwide evolution of organic life. From the most elevated summits of mountains to the most profound gulfs of the sea, millions of billions of animalcules, animals, cryptogams and superior plants, have been working day and night for centuries, as have the foraminifera on which half our continents are built.

That work was going rapidly enough before the epoch when humans appeared on the Earth, but since the appearance of man it has developed with a rapidity that is accelerating every day. As long as humankind remained restricted to two or three parts of Asia, Europe and Africa, it was not noticeable, because, save for a few focal points of concentration, life in general still found it easy to pour into empty space the surplus accumulated at certain points of the civilized world; it was thus that colonization increasingly populated previously uninhabited countries innocent of all cultivation. Then commenced the first phase of the progress of life by human action: the agricultural phase.

Things moved in this direction for about six centuries, but large deposits of oil were developed, and, almost at the same time, chemistry and steam-power. The Earth then entered its industrial phase—which is only just beginning, since that was not much more than 60 years ago. But where this movement will lead us, and with what velocity we shall arrive, it is easy to presume, given that which has already happened before our eyes.

It is evident, for anyone with eyes to see, that for half a century, animals and people alike have tended to multiply, to proliferate, to pullulate in a truly disquieting proportion. More is eaten, more is drunk, silkworms are cultivated, poultry fed and cattle fattened. At the same time, planning is going on everywhere; ground has been cleared; fecund crop rotations and intensive cultures have been invented, which double the soil's yields; not content with what the earth produces, salmon at five francs a side have been sown in our rivers, and oysters at 24 *sous* a dozen in our gulfs.

In the meantime, enormous quantities of wine, beer and cider have been fermented; veritable rivers of eau-de-vie have been distilled, and millions of tons of oil burned—not to mention that heating equipment is improving incessantly, that more and more houses are being rendered draught-proof, and that the linen and cotton fabrics that humans employ to keep themselves warm are being fabricated more cheaply with every passing day.

To this already-sufficiently-somber picture it is necessary to add the insane developments of public education, which one can consider as a source of light and heat, for, if it does not emit them itself, it multiplies their production by giving humans the means of improving and extending their impact on nature.

This is where we are now; this is where a mere half-century of industrialism has brought us; obviously, there are, in all of this, manifest symptoms of an imminent exuberance, and one can conclude that within 100 years from now, the Earth will have developed a paunch.

Then will commence the redoubtable period in which the excess of production will lead to an excess of consumption, the excess of consumption to an excess of heat, *and the excess of heat to the spontaneous combustion of the Earth and all its inhabitants*.

It is not difficult to anticipate the series of phenomena that will lead the globe, by degrees, to that final catastrophe. Distressing as the depiction of these phenomena might be, I shall not hesitate to map them out, because the prevision of these facts, by enlightening future generations as to the dangers of the excesses of civilization, might perhaps serve to moderate the abuse of life and postpone the fatal final accounting by a few thousand years, or at least a few months.

This, therefore, is what will happen.

For ten centuries, everything will go progressively faster. Industry, above all, will make giant strides. To begin with, all the oil deposits will be exhausted, then all the sources of kerosene; then all the forests will be cut down; then the oxygen in the air and the hydrogen in the water will be burned

directly. By that time, there will be something like a million steam-engines on the surface of the globe, averaging 1000 horse-power—the equivalent of a billion horse-power—functioning night and day.

All physical work is done by machines or animals; humans no longer do any, except for skillful gymnastics practiced solely for hygienic reasons. But while their machines incessantly vomit out torrents of manufactured products, an ever-denser host of sheep, chickens, turkeys, pigs, ducks, cows and geese emerges from their agricultural factories, all oozing fat, bleating, lowing, gobbling, quacking, bellowing, whistling and demanding consumers with loud cries!

Now, under the influence of ever more abundant and ever more succulent nutrition, the fecundity of the human and animal species is increasing from day to day. Houses rise up one floor at a time; first gardens are done away with, then courtyards. Cities, then villages, gradually begin to project lines of suburbs in every direction; soon, transversal lines connect these radii.

Movement progresses; neighboring cities begin to connect with one another. Paris annexes Saint-Germain, Versailles and then Bauvais, then Châlons, then Orléans, then Tours; Marseilles annexes Toulon, Draguignan, Nice, Carpentras, Nîmes and Montpellier; Bordeaux, Lyon and Lille share out the rest, and Paris ends up annexing Marseilles, Lyon, Lille and Bordeaux. And the same thing is happening throughout Europe, and the other four continents of the world.

But at the same time, the animal population is increasing. All useless species have disappeared; all that now remain are cattle sheep, horses and poultry. Now, to nourish all that, empty space is required for cultivation, and room is getting short.

A few terrains are then reserved for cultivation, fertilizer is piled herein, and there, lying amid grass six feet high, unprecedented species of sheep and cattle, devoid of hair, tails, feet and bones are seen rolling around, reduced by the art of husbandry to be nothing more than monstrous steaks alimented by four insatiable stomachs.

In the meantime, in the southern hemisphere, a formidable revolution is about to take place. What am I saying? Scarcely 50,000 years have gone by, and here it is, complete!

The polypers have joined all the continents together, and all the islands of the Pacific Ocean and the southern seas. America, Europe and Africa have disappeared beneath the waters of the ocean; nothing remains of them but a few islands formed by the last summits of the Alps, the Pyrenees, the buttes Montmartre, the Carpathians, the Atlas Mountains and the Cordilleras.

The human race, retreating gradually from the sea, has expanded over the incommensurable plains that the sea has abandoned, bringing its overwhelming civilization with it; already space is beginning to run out on the former continents. Here it is the final entrenchments: it is here that it will battle against the invasion of animal life. Here is where it will perish!

It is on a calcareous terrain; an enormous mass of animalized materials is incessantly converted into a chalky state; this mass, exposed to the rays of a torrid Sun, incessantly stores up new concentrations of heat, while the functioning of machines, the combustion of hearths and the development of animal heat cause the ambient temperature to rise incessantly.

And in the meantime, animal production continues to increase; there comes a time when the equilibrium breaks down; it becomes manifest that production will outstrip consumption.

Then, in the Earth's crust, a sort kind of rind begins to form at first, and subsequently, an appreciable layer of irreducible detritus; the Earth is saturated with life.

Fermentation begins.

The thermometer rises, the barometer falls, the hygrometer marches toward zero. Flowers wither, leaves turn yellow, parchments curl up; everything dries out and becomes brittle.

Animals shrink by virtue of the effects of heat and evaporation. Humans, in their turn, grow thin and desiccated; all temperaments melt into one—the bilious—and the last of the lymphatics[1] offers his daughter and 100 millions in dowry to the last of the scrofulous, who has not a *sou* to his name, and who refuses out of pride.

The heat increases and the wells dry up. Water-carriers are elevated to the rank of capitalists, then millionaires, to the extent that the prince's Great Water-Carrier becomes one of the principal dignitaries of state. All the crimes and infamies that one sees committed today for a gold piece are

[1] The lymphatic temperament, associated with one of the four humors of ancient medicine, is better known as the sanguine; it is associated with sociability and compassion, among other traits.

committed for a glass of water, and Cupid himself, abandoning his quiver and arrows, replaces them with a carafe of ice-water.

In this torrid atmosphere, a lump of ice is worth 20 times its weight in diamonds. The Emperor of Australia, in a fit of mental aberration, orders a *tutti frutti* that cost an entire year's civil list. A scientist makes a colossal fortune by obtaining a hectoliter of fresh water at 45 degrees.

Streams dry up; crayfish, jostling one another tumultuously to run after the trickles of warm water that are abandoning them, change color as they go along, turning scarlet. Fish, their hearts weakening and their swim-bladders distended, let themselves drift on the currents, bellies up and fins inert.

And the human species begins to go visibly mad. Strange passions, unexpected angers, overwhelming infatuations and insane pleasures make life into a series of furious detonations—or, rather, one continuous explosion, which begins at birth and concludes with death. In a world cooked by an implacable combustion, everything is scorched, crackled, grilled and roasted, and after the water, which has evaporated, one senses the air diminishing as it becomes more rarefied.

A terrible calamity! The rivers, great and small, have disappeared; the seas re beginning to warm up, then to heat up; now they are already simmering as if over a gentle fire.

First the little fish, asphyxiated, show their bellies at the surface; then come the algae, detached from the sea-bed by the heat; finally, cooked in red wine and rendering up their fat in large stains, the sharks, whales and giant squid rise up, along with the fabulous kraken and the much-contested sea serpent; and with all this fat, vegetation and fish cooked together, the steaming ocean becomes an incommensurable bouillabaisse.

A nauseating odor of cooking expands over the entire inhabited earth; it reigns there for barely a century; the ocean evaporates and leaves no other trace of its existence than fish-bones scattered over desert plains…

It is the beginning of the end.

Under the triple influence of heat, asphyxia and desiccation, the human species is gradually annihilated; humans crumble and peel, falling into pieces at the slightest shock. Nothing any longer remains, to replace vegetables, but a few metallic plants that have been made to grow by irrigating them in vitriol. To slake devouring thirst, to reanimate calcined nervous systems, and to liquefy coagulating albumin, there are no liquids left but sulphuric and nitric acids.

Vain efforts.

With every breath of wind that agitates the anhydrous atmosphere, thousands of human creatures are instantaneously desiccated; the rider of his horse, the advocate at the bar, the judge on his bench, the acrobat on his rope, the seamstress at her window and the king on his throne all come to a stop, mummified.

Then comes the final day.

They are no more than 37, wandering like tinder specters in the midst of a frightful population of mummies, which gaze at them with eyes reminiscent of Corinthian grapes.

And they take one another by the hand, and commence a furious round-dance, and with each rotation one of the dancers stumbles and falls down dead, with a dry sound. And when the 26th cycle is over, the survivor remains alone in front of the miserable heap in which the last debris of the human race is assembled.

He darts one last glance at the Earth; he says goodbye to it on behalf of all of us, and a tear falls from his poor scorched eyes—humankind's last tear. He catches it in his hand, drinks it, and dies, gazing at the Heavens.

Pouff!

A little blue flame rises up tremulously, then two, then three, then 1000. The entire globe catches fire, burns momentarily, and goes out.

It is all over; the Earth is dead.

Bleak and icy. It rolls sadly through the silent deserts of space; and of so much beauty, so much glory, so much joy, so much love, nothing any longer remains but a little charred stone, wandering miserably through the luminous spheres of new worlds.

Goodbye, Earth! Goodbye, touching memories of our history, of our genius, of our pains and our loves! Goodbye, Nature, whose gentle and serene majesty consoled us so effectively in our suffering! Goodbye, cool and somber woods, where, during the beautiful nights of summer, by the silvery light of the Moon, the song of the nightingale was heard. Goodbye, terrible and charming creatures that

guided the world with a tear or a smile, whom we called by such sweet names! Ah, since nothing more remains of you, all is truly finished: THE EARTH IS DEAD.