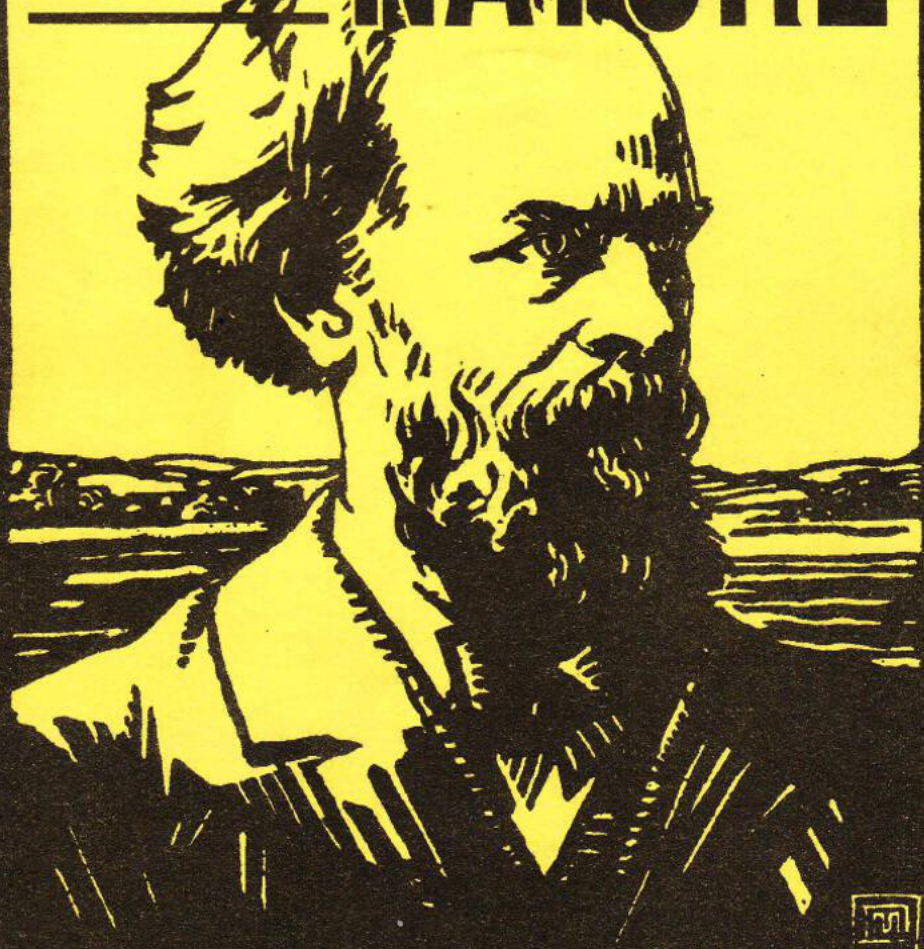


man & **NATURE**



Elisee Reclus

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the impact of human activity on physical geography

concerning the awareness of nature in modern society

Elisee Reclus



SYDNEY

MAN AND NATURE

Elisee Reclus

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PREFACE

Of all the great Nineteenth Century anarchists, Elisee Reclus is perhaps the least read and understood. This lack of knowledge is, unfortunately, not confined to the English speaking world but also to his native France. History has conspired to obscure for far too long this pre-eminent scientist, anarchist and social-environmental thinker. Although many geographers – Humboldt, Ritter and Marsh – had already laid the foundations for his geography, he intimately understood the fact that only social and cultural freedom will ensure the preservation and beautification of the Earth. He may justly be considered as the historical founder of what is now called Social Ecology (Social Geography being the term used in his day).

Reclus believed that communal and bio-regional autonomy, the destruction of centralised social and political hierarchies, combined with a re-awakening of humankind to the natural living world were the ways that humanity could halt the degradation of wilderness and prosper in harmony with the natural laws of Earth. Reclus was appalled by the degradation of nature he saw around him in the Nineteenth Century and sought not only to find the historical reasons but also but also the solutions to the impending environmental crisis which now confronts our species.

Imperialism, capitalism and authoritarian state structures destroy local autonomy and disrupt the ecology, even entire continents, for short term economic gain. Brutal and hierarchical society had brutalised humanity who in turn brutalised nature. It was only when humanity had learned to live co-operatively in the absence of coercion and external governance could the great restoration of nature truly commence. With the destruction of the capitalist state, humanity would come to live in harmony with the regional eco-systems. Each city and town becoming not only self-governing, but also responsible for the health and beauty of the environmental region in which it was located. Although Reclus emphasises cultural difference he hoped for global citizenship combined with a deep and scientifically informed relationship with the earth. In pursuit of this aim he argued for the formation of a 'universal brotherhood', not to exclude womankind, but because he believed that mankind could not make peace with womankind and nature until they had made peace amongst themselves.

I am a great admirer of Reclus and his numerous works. I consider it a duty and a privilege to have co-operated in this publication. All involved have communicated the fact that they had been inspired by Reclus' masterful use of language and evocation. All have felt the social and environmental message contained in these writings to be relevant to the needs and worries of the present day. Reclus' output was vast. Unfortunately only the smallest sample of his ample legacy is available to the public – and then only in the form of handful of penny pamphlets. We would very much like to publish a more substantial volume of Reclus writings. If you are interested in financially supporting such a project please contact Jura Books at 110 Crystal St., Petersham, NSW 2049, Australia.

Graham Purchase, July 1995

The Impact of Human Activity on Physical Geography

A Review of *Man and Nature* by G.P. Marsh

As old Adam was first moulded from clay, as the first Egyptians were born from silt, so are we all children of the Earth. It is from her that we extract our materials; it is she who supports us with her nourishing juices and provides the air for our lungs; from a material point of view she gives us "life, movement and being". Whatever our relative freedom, won by our intelligence and our own will, we remain, nonetheless, products of the planet: attached to her surface as imperceptible animalcules we are carried along in her movements and are subject to all her laws. Not only as isolated individuals do we belong to the earth but societies, in their origin as a whole, have to mould themselves around the soil that supports them; have to reflect in their innermost organisations the innumerable phenomena of the continental relief, of the seas and rivers and of the surrounding atmosphere. All historical facts are, to some extent, explicable by the layout of the geographical arena where they have taken place. It may also be said that the development of humanity has been written in advance, in bold type on the plateaux, valleys and shores of our continents. Even since the works of Humboldt, Ritter and Guyot have established the interdependence between the earth and man, these truths have become somewhat commonplace. The illustrious author of the *Erkunde* was inspired, when editing his great encyclopaedia, - one of the best geographical works for centuries - by the mother-idea: the idea that the earth is the body of humanity and that man, in turn, is the soul of the earth.

As people developed intelligence and freedom they learnt to react on this exterior nature to whose influence they had formerly submitted to passively: they became by force of circumstances real geological agents and, in a variety of manners, they transformed the surface of the continents, changed the course of flowing waters and modified the climate. It is true that, because of their magnitude, one can compare some of the activities carried out by the lowest animals - such as the island formed by madropores and corals - to the works of man: but these gigantic constructions have not added a new feature to the general physiognomy of the globe and proceed, so to speak, in a uniform and fatal manner as if they were products of the unconscious forces of Nature. Man's actions, on the contrary, have greatly changed the appearance of the surface of the earth. While on the one hand they destroy, on the other they improve, depending on the social order and progress of each people, sometimes they bring about the degradation of nature, sometimes its beautification. Camping as a passer by, the barbarian has plundered the earth and has violently exploited it without compensation, for the richness he has seized from her. He finished by devastating the country which served him as his home thus making it uninhabitable.

Through culture and intelligent treatment the truly civilised man, being aware that his own interests, the interests of all and that of nature blend, acts quite differently. He repairs the damages incurred by his predecessors, helps the earth and instead of being brutally

dead set against it, works in his estates for its beautification as well as its betterment. Not only as a qualified farmer and industrialist does he know how to utilise, more and more, the earth's forces and its products; but also as an artist he learns to give to the surrounding landscape more charm, grace and majesty. Having become the "consciousness of the earth" the man worthy of such a mission assumes, by virtue of that, a responsible role within the harmony and beauty of his natural environment.

It is this elevated point of view that M. Marsh considers in his important book dedicated to the study of the impact of human action on various modifications of the earth, having prepared for his work by persevering with scientific research and lengthy travelling in America, Europe and classical oriental countries. The author has, what's more, the merit to proceed with the most scrupulous conscientiousness and never ventures to draw conclusions unless his statement is supported by a great number of authentic testimonies and incontestable facts. M. Marsh's book, even if lacking methodology, is a kind of detailed inquiry into the way man has fulfilled his duties, in conservation and betterment, in relation to the earth he lives on. It emerges from this inquiry that on many points human activities have unfortunately fatal results in impoverishing the soil, degrading nature and spoiling the climate. Taken as a whole, in relation to the earth, humanity has not yet emerged from its primitive barbarism.

Earth's surface offers many cases of complete devastation. In many locations man has transformed his homeland into desert and "no grass grows where he treads". Big parts of Persia, Mesopotamia, Idumea and many other countries of Asia Minor and Arabia where "milk and honey" used to flow and which supported large populations are now quite unproductive and inhabited by destitute tribes living on pillage and rudimentary land cultivation. When the power of Rome yielded to the barbarians, Italy and neighbouring provinces, ruined by the crude cultivation of the land by slaves, was changed into a desert and even to these days, after nearly two thousand years of the land being fallow, vast tracts of land that the Etruscans and Sicules once cultivated are either unutilised or have turned into unhealthy marshes. Causes similar to those that led to the weakening and ruin of the Roman Empire are at work in the New World where large parts of its arable land have been lost; such plantations in Carolina and Alabama, built at the expense of virgin forests less than half a century ago, have ceased to be productive and are now the domain of wild cats.

As vast as the growing desolation of America and many other countries is where man, hardly a day on this planet, abuses his power to exhaust the soil which nourishes him, there is no other country in the world where devastations are accomplished with such rapidity than the French Alps. The rain and melting snow gradually wash out the tiny layers of fertile soil covering the slopes and carry it to the sea in the form of useless silt; the rocks are denuded and mounds of debris and layers of stones are replacing the cultivated lands of the valleys. Deep gullies slowly dig their way into the steep slopes thus carving the crest of the mountains into distinct peaks which break down and are reduced in height quickly. Not a single shrub is seen in a stretch of many leagues in certain localities, only

a greyish pasture appears here and there on the slopes and ruined houses merge with the crushed rocks that surround them. Every year the devastated zone extends and at the same time as the soil impoverishes, the population disappears; in fact in 10 square kilometres between the massif of Mount Tabor and the Alps of Nice one hardly can count a group of inhabitants that exceed more than two thousand individuals. And this desert that separates the tributary valleys of the Rhone from the very populous plains of Piedmont was created by the Montagnards themselves who, furthermore, were looking to extend it. In fact greedy owners have cleared nearly all the forest covering the mountain sides and consequently the water that had been trapped by the roots of the trees and thus slowly seeped into the soil, has stopped its fertilising work and has turned into a devastating force. If a new Atilla happens to cross the Alps and decides to devastate the valleys for good, he will not fail to encourage the natives in their senseless work of destruction.

Such are the changes taking place in the physical geography and in the appearance of mountainous countries following the deforestation of slopes. When the plains are stripped of their woods the consequences are less disastrous and it takes more time to become aware of them but, nonetheless, they are inevitable. The surface of the earth, without the trees that beautify her, is not only degraded but is also necessarily impoverished. According to the nearly unanimous testimony of all geographers it appears most probable that annual rainfalls are diminishing in countries devastated by wood cutters while, on the other hand, they are increasing in territories newly afforested. However, since our meteorological records are of a few years it is rather difficult to establish this fact with certainty. What is certain is that deforestation disturbs the harmony of nature by altering the distribution of water unevenly. The intermingling branches of the trees would let the rain fall, drop by drop, so it would seep slowly through dead leaves and hairy roots, now the rain rushes over the soil forming temporary streams. Instead of forming subterranean waters that go down to the lower lands and emerge as fertilising springs, the rain now washes over the surface and is lost in rivers large and small. As the highlands dry out, the volume of water downstream increases with the rising waters turning into floods and devastating riverside fields, immense disasters occur similar to those caused by the Loire and the Rhone in 1856. The direct responsibility of man in these catastrophies is large and it may be argued that it would have been prevented, or to a great extent lessened, by the maintenance of the existing forests and by forestation. Other causes, for which man bears responsibilities because of his activities, is his contribution to the immense expansion of annual flooding. Thus the dams built by engineers in order to protect riverside fields are more often than not arranged in such a way that they impede the movement of waters and in the majority of cases do not allow sufficient space for rising floods. In some locations the Loire, which is overflowing so terribly, has no more than a tenth of its old width between these dams. The drainage system, excellent in preserving the fertility of the soil, has unfortunate consequences in increasing the level of annual floods. Undertaken on a large scale these works have effects comparable to those of deforestation, because the soil is quickly drained and thus in a few minutes after showers the river swells. In England and Scotland

a great number of watercourses that have never overflowed have become redoubtable through their flooding once the fields in the tributary basins have been systematically drained.

Man, whose activities interfere with the course of rivers, can equally disturb the climate. Without mentioning local effects that towns create by raising the temperature and polluting the air, it is certain that destruction of forests and cultivation of large stretches of land have, as consequences, significant modification of the seasons. The fact that a pioneer clears virgin soil changes the network of temperature in the lines of isotherm, as well as changes in the atmospheric chemistry and thermal currents which cross the region. Recently in many districts of Sweden, due to the clearing of trees, the actual spring time began after Absjomsen, that is, fifteen days later than that of last century. In the United States clearing of the Alleghian slopes has resulted in making the temperature less consistent and has led to Autumn encroaching on Winter and latter onto the Spring. In general terms it can be stated that forests in this respect, are comparable to the sea in that they lessen natural differences in the temperature of the different seasons, whereas deforestation increases the difference between cold and warm and thus gives greater intensity to the atmospheric currents. If certain authors are to be believed the mistral itself, this terrible wind that descends from the Cevenne to desolate Provence, is a scourge of human creation and began to blow only after the trees of neighbouring mountains had vanished. Also malaria fever and other "enuemique" diseases have often erupted in a district where woods, or a simple stand of trees, have fallen under the axe. These are the facts that Marsh discusses lengthily and with great erudition.

Again, it is by breaking the first harmony that the actions of man is felt by the flora of our planet. The giants of our forests are becoming more and more rare and when they fall they are not replaced. In the United States and Canada the huge trees that astonished the first settlers are mostly gone and, even recently, the Californian pioneers have knocked down those gigantic sequoias, which reached to 120, 130 or 140 metres in height to make boards. This is, perhaps, an irreparable loss because nature needs hundreds and thousands of years to supply the necessary sap for these enormous plants, and, humanity - overly impatient to enjoy and too indifferent to the fate of future generations - has not yet sufficient awareness of its duration to dream of preserving the beauty of the earth. The extension of the agricultural sector, the needs of navigation and of industry have resulted in reducing the number of trees of middle height. At present, they diminish by millions each year. On the other hand, herbaceous plants multiply and occupy more and more space in all countries of the world. It can be said that man, jealous of nature, tries to belittle the products of the soil and does not allow them to surpass his level. The history of humanity in relation to fauna offers similar facts. It is probable that the disappearance of the Siberian mammoth, the German schelk, the large stag of Ireland and many other large animals is due to relentless hunting. In the present day buffaloes, lions, rhinoceroses and elephants faced with man are continually declining in number and sooner or later will disappear in their turn. The enormous marine oxen of Steller which were abundant a century ago are

now exterminated. The wild whales, which temporarily are enjoying a little respite thanks to the American War and the exploitation of petrol resources, will soon again be hunted with such fury that they will not find refuge in any sea; thousands of seals are massacred each year, sharks, together with the fish they pursue, are diminishing in number being prey for fishermen. Among the species of birds for whose extinction man is undoubtedly to blame are the impennes of the Faroe Islands, the aepyornis of Madagascar and the moas of New Zealand. Moreover, we know the deplorable results that the annual killing of birds has produced in the hunting countries. Hordes of insects, ants, termites and grasshoppers freed from the birds who prey on them, thanks to the insane intervention of man, are increasing in number to become, themselves, true geographical agents. Similarly, the cetaceans and fish that have disappeared are replaced with jellyfish and infusoria.

On this subject Marsh expresses an opinion that may be surprising at first but, from my point of view, is to be taken seriously. According to him the remarkable phenomena of the phosphorescence of sea water is presently more frequent and beautiful than it was in Greek and Roman times. Otherwise surely it would be incomprehensible that the ancients thought it not worthwhile to mention these luminous yellow and greenish layers which, at night, shimmer on the sea; these flares which gush out on the crests of waves; these swirls of sparks that ships raise as they cut and plunge through the sea; these blazing waves that slide along both sides of the ship to come together in a backwash behind the rudder and thus transform the trail into a river of fire. Certainly this is one of the most beautiful spectacles of the great sea and yet the Greeks never mentioned gazing at it on the waves of their magnificent archipelago. Homer, who often talks of the "thousand voices" of the Aegean Sea, has never indicated the thousand glimmers. Similarly, the poets, who have Venus born from the sea foam and who populated the "watery realms" with so many nymphs and divinities, have never described the sheets of flowing gold in which the goddesses let themselves be cradled at night. The love the Greek poets have for broad daylight and sunlight might be able, in part, to explain their amazing silence; but why have the scholars themselves never described that extraordinary phenomenon - the phosphoric flashes of the seas? In all works bequeathed to the modern world by the ancients only two sentences are found that relate indirectly to these marvellous facts. Ellen, the compiler, refers to light being emitted from seaweed on beaches and Pliny, the encyclopaedist, tells us that the body of some kind of jellyfish throws certain lights when rubbed against a piece of wood. This was the state of science before the observation of Amerigo Vespucci on the phosphorescence of tropical seas. Since then, probably, there has not been a single traveller who has not seen the sprays of lights jumping around the ships at night and not only in the Caribbean Sea but also in the Mediterranean Sea, the Atlantic coast of Europe and near the ice fields of the Polar Ocean. As the research of Boyle, Forster, Tilesius and Ehrenburg has established, this light comes from innumerable animalcules, some living, some decomposing. Now the destruction of cetaceans, big fishes and other seas giants necessarily leads to a rapid growth of microscopic bodies. This implies that the phosphorescence of sea water increases

proportionally to the increase in the number of infusoria. If Marsh's ingenious hypothesis is correct, those among us who walk along beaches or sail the seas on nights when the waves are on fire are enjoying a spectacle that has never been given to our fathers to contemplate. This, however, will be small compensation for the ravages carried out by fishermen.

Whatever one may think about this presumed growth in the splendour of the sea, man has nothing to boast about because if he is, thanks to the fish, the indirect cause of this phenomenon it is not because he was aware of what he was doing. On the sea as on the continents he has acted, in the past, with a view to his immediate interests and left long-term results to chance. Among his undertakings some have had good consequences and contributed to the general well-being while others, on the contrary, such as deforestation of the mountains, have led to fatal outcomes; but not worrying about the future he went on working from day to day. At present humanity, represented by its scientific innovators, is starting to pay attention to those works. Learning from past experiences, they are undertaking the struggle against those forces which nature itself has unleashed and, in many cases, they have made up for the disasters that have occurred because of our ancestors. Moreover, those not satisfied with re-establishing the old equilibrium on the earth's surface, whether individual groups or people as a whole, are working successfully to transform into useful and beautiful land those vast spaces that once appeared to be worthless.

During the last century the successful changes brought about in the physical geography of many countries are testimony of what persevering humans can do. First we must mention the immense works the Dutch have carried out to secure their territory from the invasion of seas and rivers. Each year in the Middle Ages coastal inhabitants, faced with the waves of the North Sea and chains of dunes, had to retreat; but, as if to hasten their ruin, they cut the forestry which used to serve as ramparts against the sand and by an imprudent exploitation they transformed peat-bogs into seas and ponds. Also, at the time of big storms, in one day only, miles of hectares of land would disappear under water along with its villages and cultivated land. Finally the Dutch, feeling the soil under their feet gradually caving-in, and shivering with fear at the idea of seeing the waves overwhelm them in a deluge, took defence measures to resist the sea's invasion. During the last century the agricultural history of the Netherlands is a narrative of an unremitting struggle between man and ocean and in this struggle the winner is man. Keeping a constant watch on the impact of the waves they reinforced the coast by means of levees, high walls and plantations; then they seized the rest of the sea by a series of jetties and dykes and progressively ended up reclaiming a considerable part of the land that had formerly been taken from their ancestors. The latest big conquest has been to pump out to sea the whole of Lake Harlem which contains not less than 724 million cubic metres of water and now they intend to dry out Zuyderzee a bay of 500,000 hectares, which the North Sea storms took ten centuries to dig.

In all the countries of the civilised world there already exist, as in Holland, magnificent

works by those who knew how to modify some geographical features of the earth for their own advantage. In France the "watteringues" of Flandre and the bays of the Marquenterre have been a victory over the ocean and man has learnt to retain, via plantations, the chain of encroaching dunes that, over a stretch of more than 200 kilometres, were assaulting the lands of Gascony. In England a great part of the of the Gulf of Wash has been transformed into cultivated land and the bay of Portland has been turned into a port of calm waters. Even in the desert mankind has recently attempted with success to compensate, through digging artesian wells and creating new oases, for the numerous devastations he is responsible for in many other parts of the world. These useful works that are truly geographical revolutions which change the face of the earth on a big scale have, besides, the most considerable advantage of modifying local climates. Today man is not satisfied to exercise only an indirect influence on the salubrity of his estate but in many countries he has put forward, as an immediate task, the improvement of territorial sanitation. Thus in Tuscany the valley of Chiana, formerly almost uninhabitable where even swallows dared not venture, is now free of swamp fever due to the correction of a slope covered in stagnant pools and lagoons. Also the ancient Etruscan maremmas are less dangerous to the health of the inhabitants since the engineers of Tuscany filled in the coastal marshes and have taken measures to prevent the mixing of fresh and salt water which occurs at the mouth of rivers. Able to improve by these natural means the quality of air that he breathes man perhaps may also have the power to increase the humidity of the atmosphere and the abundance of rain. During the past century, 1764 - 1863, the annual rainfall increased, according to the observatory at Milan, from 90 to 106 millimetres. Probably the gradual increase in rainfall is due to the irrigation that is practised on a large scale in Lombardy and the very active evaporation that follows from it.

In addition to all these great works, that have as their aim the modification of the surface of the earth for human benefit, there is one which may appear a bit fanciful to many but which is not the less important. It is to preserve, as well as to increase, the exterior beauty of nature and to give back to nature what has been taken from her by brutal exploitation. In many countries in Europe, and especially in France, one may travel for hours through various plateaux without finding a site where the gaze of a painter may rest in satisfaction. Entire populations are seemingly intent on disfiguring the land they inhabit; they mutilate and torture the isolated trees that are still left and they transform the country into a labyrinth of alleys lined with high walls and tasteless, haphazardly erected buildings. And yet it is so easy to cultivate the soil whilst leaving the landscape with all its natural beauty! In England, a country where farmers know how to produce abundant crops and where people have always had more respect for trees than in Latin countries, there are few sites that do not have a certain grace and even a certain beauty; this thanks to the huge, solitary oaks that display their branches above the meadows and thanks to the various clusters of trees scattered artistically around villages and castles. The reafforestation of the highlands of Ireland and Scotland is being done by planting hundreds of millions of trees and these, already quite picturesque countries, have become

particularly beautiful because of the greenery that covers them today. A district of the county of Mayo in which, according to tradition, internal wars and the invasion of the English conquerors had not left a single tree standing, now offers, thanks to various plantations, much better sights than those before the deforestation. It is the art of man, whatever some morose spirit may think, that has the power to beautify untrammelled nature by giving her the charm of perspective and diversity and, above all, harmonising her with the inner feelings of those who inhabit her. In Switzerland, on the shores of some of the great lakes and in front of azure mountains and sparkling glaciers, many chalets and towns with their lawns, clusters of flowers and shady footpaths make nature even more beautiful and they charm, like a sweet dream of happiness, the traveller who passes by!

Nonetheless, it has to be said, that the people who are today the avant-garde of humanity have, in general, very little preoccupation with beautifying nature. More industrialists than artists, they prefer power to beauty. What man wants today is to adapt the earth to his own needs, to own it completely in order to exploit its vast richness. He covers her with a net of roads, railways and telegraph lines; he attempts to fertilise deserts and prevent rivers from flooding; he proposes to change the hills in order to spread alluvial deposits over the plains; to tunnel into the Alps and the Andes; to connect the Red Sea with the Mediterranean and is now preparing to mix the waters of the Pacific with those of the Caribbean Sea. It is evident that people, both actors and witnesses of all these great undertakings, have allowed themselves to be carried away by the intoxication of work and dream only of moulding the earth according to their own image. And industry, which has already accomplished such marvels, what can it do if science furnishes it with no other means to act on the earth! It is that which M. Marsh brings to our attention in a few eloquent words: "Many physicists", says he, "suggested the idea that it would be possible to collect and store up for human usage some of the great natural forces which the elements display with such surprising energy." If we can catch and bind the contained power that is continuously emitted by hurricanes in the Antilles and make it work for our own benefit; if we can get control over the impetus of the forces developed by waves during winter storms when they break against the dykes of Cherbourg or, even better, the waves which each month regain the beaches of Fundy Bay; if we knew how to utilise the pressure of one square mile of sea water to the depth of five thousand fathoms; if we knew how to utilise earthquakes and volcanic movements - what colossal works could be undertaken in our century of industry and audacity now that the virtue of faith is no longer sufficient to transport mountains and throw them into the sea?

Concerning the Awareness of Nature in Modern Society

For some years now there appears to be a veritable exuberance in the feelings of love that binds men, both of science and arts, to nature. Travellers swarm in all countries that are of easy access, and are remarkable for the beauty of their sites, or the charm of their climates. Many painters, designers and cameramen traverse the world from the shore of Yang-Tse-Kiang to the rivers of the Amazon. They study the most diverse aspects of the earth, sea and forest and reveal to us all the magnificence of the planet upon which we live. Thanks to their increasingly close association with nature and to the artistic works inspired by these innumerable voyages, all cultured men can now be aware of the different features and physiognomy of the various countries of the world. The scholars, less numerous than the artists, but more useful in their work of exploration, have also turned into nomads and the entire world has become their study. It was whilst travelling from the Andes to Altai that Humboldt composed his admirable Tables of Nature, dedicated, as he himself said: "to those who for the love of liberty have been able to toss themselves on the tempestuous waves of life". The majority of artists, scholars and many others who, without pretensions either to arts or science, simply want to refresh themselves in unspoilt nature, head for the mountainous regions. Each year, if the weather allows travellers to visit the high valleys and venture to the peaks, thousands of plain dwellers rush towards those parts of the Pyrenees and the Alps most renowned for their beauty. It is true that the majority come to follow the fashion, either for want of something to do or out of vanity, but the initiators of the movement are those who are drawn to it by love of the mountains themselves and for whom rock-climbing is a truly sensual pleasure. The sight of high peaks exerts some kind of fascination on many people. The mountains - with their majestic forms and bold profile outlined in the clear sky, with garlands of clouds that coil around their slopes, with the continuous variations of shade and light that occur in gullies and foothills - are turned, so to speak, into beings endowed with life and it is in order to discover the secret of their existence that people try to conquer them. Besides one feels attracted to them because of the contrast between the virginal beauty of their unspoiled slopes and the monotony of the plains, cultivated and often made ugly by the work of man. And, in fact, do not the mountains contain, within a small space, a summary of earthly splendours? Climates and zones of vegetation rise in tiers on their peripheries; at a glance one can embrace cultivated land, forests, meadows, rocks, ice, snow, and each evening the dying light of the sun bestows on the summits a marvellous look of transparency as if the enormous mass is but a light rosy drapery floating in the sky.

Formerly people worshipped the mountains or at least revered them as abodes of their divinities. To the west and to the north of Mount Merou, that stately throne of Indian Gods, each stage of civilisation can be measured by other sacred mountains where the masters of the sky gathered, where the great mythological events in the life of nations took place. More than fifty mountains, from Ararat to Athos, were named as summits where the Ark containing the dawning of humanity and the seeds of all that lived on earth was going to

descend. In semitic countries every summit was an altar dedicated either to Jehovah or Molock or other deities. It was at Sinai that the Jewish tables of law appeared amidst the lightning; it was Mount Nebo that supported the temple of Jerusalem. It was to Garizim that the High Priest went to bless his people, and similarly Carmel and Mount Tabor and Mount Liban wreathed with cedars. To the "high places", on which were situated their altars, the Jews and Canaanites returned in masses to slit the throats of their victims and burn their holocausts. Likewise for the Greeks each mountain was a citadel of the Titans or a courtyard of a god; a Caucasian peak served as a pillory for Prometheus, father and model of humanity; the triple dome of Olympus was the magnificent resort of Jupiter and when a poet invoked Apollo his eyes would look at Mount Parnassus.

Nowadays we do not worship mountains anymore but those who have often traversed them love them with a profound affection. The peak that you have climbed seems to look at you. From a distance it smiles at you; it is for you that its snow shines and the evening is brightened by a last ray. With what pleasure one remembers even the smallest incident of the climb: the rocks, that dislocating themselves from the slopes, go plunging into the torrent with a deafening noise; the root to which one is hanging in order to climb up a wall of rocks; the trickle of snow-water with which one's thirst is quenched, the first crevasse of a glacier you lean over and dare to cross, a long slope which has been arduously claimed, almost sinking knee deep into the snow and, finally, the last crest from where can be seen the vast unfolding panorama of mountains, valleys and plains as far as the mist of the horizon. When one sees, from a distance, the peak conquered at the cost of so much effort it is with true joy that one discerns, or guesses at a glance, the path formerly taken from the depths of the small valleys to the white snows of the summit. In this grand scene presented by the mountains' slopes one finds again all the memories of a happy day.

From where does this deeply felt joy in climbing up high mountain summits come? At first it is a great physical delight to breathe fresh and crisp air not polluted by the impure emanations of the plains. One is revived by enjoying this atmosphere of life; as one ascends the air becomes lighter, one breathes in longer intervals to fill up one's lungs, the chest expands, the muscles stretch and cheerfulness enters the soul. More than that one becomes in control of and responsible for one's own life. The walker who climbs up a mountain does not give himself up to the whim of the elements like the adventurous navigator at sea, less so is he a simple human parcel, labelled, controlled and then dispatched at a given hour under the supervision of an employee in uniform as is the traveller by train. By touching the soil he revives the usage of his faculties and his freedom. His eye serves to evade rocks on his path, to measure the depth of precipices and to discover projections and crags that help him scale rock faces. The force and elasticity of his muscles enable him to get over abysses, to cling to steep slopes and climb up mountain gorges step by step. On thousands of occasions during the ascent of a steep mountain one realises that one will have to face real danger - if one loses one's balance, if one's vision is suddenly blurred by vertigo or if one's limbs refuse to function. It is precisely this awareness of danger, added to the joy of knowing one is agile and fit, that

doubles in the spirit of the mountaineer the feeling of security.

As to the intellectual pleasure an ascent offers, besides being intimately related to the physical pleasure of the climb, it is enhanced when the mind is more open and the diverse phenomena of nature are better studied. One catches in action the erosion caused by water and snow, witnesses the movement of glaciers, sees the shifting rocks moving from summits to plains, and follows the vista of the enormous horizontal or vertical tiers and catches sight of masses of granite lifting up strata; then finally when one is on a high peak one can contemplate, in its entirety, the edifice of the mountain with its ravines and foothills, its snows, its forests and meadows. Dales and valleys, which ice, water and bad weather have sculptured on the vast relief, reveal themselves clearly. One sees the work accomplished by all these geological agents during thousands of centuries. Going back as far as the origins of the mountains themselves, one passes a better judgement on the various scholars' hypothesis about the breaking of the earth's crust, about the folds of strata and about the eruptions of granite or porphyry.

Furthermore it has to be admitted that vanity often mingles with the noble passion that leads a traveller to climb the high summits. Not only is man elated by that natural pride created by the joy of being able, despite his pettiness, to triumph by his intelligence and will over the obstacles that hindered him; not only does he rejoice in overcoming the mountain itself and proclaiming himself the conqueror of that formidable peak, whose first sight, nonetheless, had filled him with a sort of religious terror; but also, in advance, he hears the talk around his name which will not fail to be made if he succeeds in putting his foot on the coveted peak and, perhaps even in advance, he is flattered by the feeling of envy which less lucky explorers will bear. It is a great and at the same time a puerile pleasure to reach first the target which, at one and the same time, many others are trying to be the first to hoist the flag upon conquered ramparts, first to leap forward on a desired shore. One famous mountaineer, recognising that it would be in vain to try to climb the highest peak of the Mount Cervin, at least wanted to reach the nearest peak to the summit, then deemed inaccessible. "Why?" said the guide to him, "This rock has neither name nor glory". And the mountaineer, turning his back on Cervin took the road to another inaccessible peak. It is moreover true that this infantile vanity which consists of wishing to make a pedestal out of a mountain that is difficult to climb is the main, if not unique cause of these terrible accidents that happen each year. If a climber is not absolutely sure of his clearness of vision and the strength of his limbs then he ought to retreat, without any shame, in the face of any tracks that are too difficult for him and there will be no need to deplore the horrifying happenings whose simple narration makes us shiver.

The number of important ascents has increased considerably since the devotees of rocks and glaciers have applied the powerful principle of the association of climbing with the intimate understanding of the great summits. Societies made up of scholars, highly skilled walkers and men of leisure who want to have an aim in life, have been established in many countries in Europe and, under the name of Alpine clubs, they have entered an agreement not to leave a single rock-point, a single gully of avalanches free from human

footsteps. They have drawn up a list of all peaks as yet unconquered, discussed the means of reaching them, prompted many ascents and by their maps, memoirs and numerous meetings have greatly contributed to knowledge about the structure of the Alps. The collections that contain the travel journals of the members of the various Alpine Clubs are undoubtedly the texts where one finds the most valuable information about the rocks and glaciers of the high mountains of Europe as well as the best accounts of ascents. In future, when the Alps and other accessible ranges of the world will be fully known, the memoirs of the Alpine Clubs will be the Illiad of mountain rovers and people will tell about the exploits of Tyndall, Tucket, Goas, Theobald and others, heroes of this great epic of the conquering of the Alps as in the past they told about the exploits of men of war.

Indisputably the honour of giving the impetus to this great movement of the exploration of high summits goes to the English. A hundred and twenty five years ago, Poccocke and Wyndham had, so to speak, discovered Mount Blanc. After that memorable era it was also the English who, exceeding in zeal and intrepidity the inhabitants of the Swiss Alps themselves and more so the Savoyard, Italian and French mountaineers, most frequently climbed Mount Blanc and other giants of the Alps; it is they who, with great fervour, have studied the Glacial sea and various glaciers of the Western massifs and who have explained to us the true topography of the less known groups of Pelvoux, Grand-Paradis and of Viso; and it is they, finally, who by the establishment of the first Alpine Club have led to the subsequent surge of a large number of societies of the same type in various countries in Europe.

What is the reason for this remarkable Anglo-Saxon pre-eminence in the exploration of mountains? No doubt one has to seek it largely in the blood of the race itself. English travellers, sailors and climbers are descendent from audacious Vikings who referred to themselves as "kings of the wild waves" and who, with joy, would venture in their narrow boats over the choppy and dangerous waves of the Northern Sea. The Danes and Normans, children of the Vikings, established themselves in England, mixed with aborigines and former conquerors of the land and to the Briton's tenacity thus added their audacity and their love for adventure. The native milieu did the rest. The slopes of the fields gently slanted towards the sea, the deep indentations of the coast line, the large estuaries of the rivers, the facility of sea communications, the fortunate position of its ports opposite Germany and France, all those natural advantages drove the English towards commerce and travelling. Great Britain has become the main trade centre of the entire world and as a result it is there, more than anywhere else, that with the progress of civilisation the desire to know countries whose aspects differ from those of England has developed. Further, the setting up of English property laws has resulted in a great number of energetic people being driven out of the country and thus increasing the taste for and experience of all types of journeys. Whereas workers and farmers without inheritance leave voluntarily in search of well being and independence in the other hemispheres, a number of well-off people deprived, by the institution of primogeniture, of landed property and thus having, so to speak, no ties with the native soil are always ready to change countries. Not having any

fields that properly belong to them, they take the whole earth as their domain and, as new Mamertines, leave en masse the native country which no longer has any need for them.

In order to account for the overwhelming attraction which leads so many English tourists towards the crevasses of glaciers, gullies of avalanches and cornices of rocks one must not forget that the Anglo-Saxon has always made a veritable cult out of physical strength. A great eater of almost raw meat he takes pleasure in all violent exercises in which muscles are flexed, in which, in a massive effort, the body is rendered like a machine, in which the blood rushes to the skin and intensifies its circulation. Whilst this admiration for the exercise of brutal strength is well-founded somehow it is not balanced in the English by any more delicate sentiments and inevitably degenerates into cruelty - not that cruelty that inspires fanaticism or that gives that touch of heedlessness to Latin people, but a cold, thoughtful, systematic cruelty - the love of blood for the sake of blood. Unfortunately, one has to admit this depravity of the moral sense when one sees Parliament in session, adjourn its sitting to allow the statesmen the satisfaction of seeing a fight between two boxers who, with face and body nude, batter, mutilate and blind each other with blows and turn each other into two masses of bleeding flesh. From the time of the war with the Sepoys, when in most churches the pastors were heard to evoke the God of arms to ask him to exterminate the rebels, to the most recent times, when the coarsest applauding by various strata of English society has accompanied the horrible butchery in Jamaica, we have been forced to recognise, with sadness, that a great component of native barbarism still prevails in the English nature. Brutality, taken in isolation as a kind of religious ideal, is even found recently among English writers, philosophers and theologians, and they are such fervent apostles that their doctrine is ironically referred to by the public as Muscular Christianity. Despite this grotesque description the new sect represents an important section of English society; mostly its supporters are from strong and courageous youth whose aim in life is to hunt, box, run and build up the muscles of their bodies and arms. In their love of strength, the new kind of Christians frequently come to detest the weak: and thus the majority of them, because of hatred of the blacks, took the side of the plantationists in the American Civil War. To have an idea of the morality of the Muscular-Christians one has only to read the novel *The Sword and the Gown* written by one of the prima donnas of the sect. All its heroes are a mish-mash of muscle and pride. Among the French characters that the author portrays he abhors, above all, the peasant made land-owner by the Revolution, and only admires one old gentleman, riddled with vices, but who knows how to lose at cards without raising his eyebrows.

However if the admirers of physical strength forget that man is more than a set of muscles served by an impassive will, it is also true that the moral progress of English people, in general, has remarkably accelerated by the care taken by young and old to develop vigour, dexterity and courage. It is an excellent spectacle to see a game of cricket or a race between two rowing boats. These slender handsome men with muscled arms and flexible and comfortable clothing who put so much passion into winning an honorary victory and who attend to the glances, wishes and encouragement of thousands of

spectators - do they not look like the Greek heroes of the Olympic games whose glory posterity still celebrates? In order to equal the poetical charm of the Hellenic athletes they only lack a milieu similar to that of Ancient Greece; the beauty of the landscape, the clearness of the blue sky, the splendour of marble temples and statues in divine forms to throw light upon them and, above all, they lack the powerful charm that a mirage of a bygone past of two thousand years provides. And yet the young English athletes in no way yield in the courage, endurance, will-power and passion they put into their bodily education, to those of Greece. Under the direction of professional instructors, who train them like racing horses, they submit voluntarily to a long regime of abstinence and endurance calculated to achieve a calmer outlook, stronger muscles and more energetic will. Thanks to such an education these people learn to rely on themselves on any occasion; they defy sickness, weariness and danger; they are afraid neither of open air, cold or heat nor of being left alone in a desert or on the ocean. They look at their inflexible will as a compass and so long as their task is not fulfilled they miss neither parents nor friends nor big cities where life is so easy. These are the right people for climbing the once inaccessible summits of the Alps, the Andes and the Himalayas and for conquering unknown wildernesses for geography. One should only reproach them with the cold-blooded, brutal calm with which they discard anything foreign to them. While in the colonies the squatters pursue the natives like wild beasts and end up grabbing their land; the English explorers, as soon as they have discovered a new country, hasten to suppress the poetical names given by the inhabitants and substitute them with most vulgar names - thanks to that "the cataract of thunderous smoke" turns to "Victoria Falls" and the "Piercer of the Sky" to "Mount Cook".

Amongst the representatives of the admirable Anglo-Saxon's audacity one could not name anyone more remarkable than Tyndall, one of those rare persons wherein intelligence, sagacity and scholarly perceptions have not blunted artistic emotions. After having lost, through some small climbs, the excess weight he had put on during the winter in his London laboratory, the intrepid climber has had no fear in climbing, alone, in his shirt sleeves, to the top of Mount Rose. "One does not know how much strength there is in four ounces of food" he said, on departure, when realising that a piece of bread was his only provision. Another time he and several of his companions, tied together by a cord, slid headfirst on a snowy slope underneath which suddenly opened a precipice. During this tremendous descent, in complete presence of mind, he calculated all chances of life and death and, in unison with a guide he felt instinctively worked with him, he used his stick, his hands and his legs with the result that the bunch of men finally came to rest at the edge of the abyss. However, it is when M. Tyndall is defying tiredness and danger in order to solve a scientific problem, that his audacity and his perseverance are most admirable. It is wonderful to see him, in the height of winter, open a path in the snow as high as his shoulders and venture above hidden crevasses, where he takes the risk of being swallowed up, in order to be able to measure rigorously, from the height of a vantage point lost in the mist or in a snow storm, the slow movement of the marking rods placed at

intervals on the Montanvert glacier.

Thanks to his great love of nature, that inspired him to undertake all those audacious acts and difficult explorations, the famous professor, who no doubt cherishes his rightful renown, has reached the point where he places his spiritual and physical equilibrium well above his scientific fame. He holds closer to his heart his over all well-being, that *joie de vivre*, so to say, acquired through the exertion of muscles and mind, than the opinions of his contemporaries and of austerity on the value of his work. "You know" he writes to a friend of his "what little importance I attach to my scientific researches on the Alps. The glaciers and the mountains are much more important to me than science itself. In them I find a source of life and joy; they have furnished me with images and memories which will never be effaced from my thought; they have made my very being aware of the virility of my consciousness and now, mind, soul and body work in me, in unison, with a strength so joyful that neither weakness nor boredom can ever alter. My experiences in the mountains have raised my awareness of delight and led me to become your rival in the love of nature. See what the Alps have given me!" Owing to the sensitive growth in feelings that the intimate knowledge of earthly phenomena has given to Prof. Tyndall, the most minute details astonish and delight him with joy. Are there among the physicists many who, like him, wait for the beauty of a snow flake without fearing the sugary sarcasm of a friendly colleague? Is there any one who, after having described the ramification of frosty flowers on the windows of an inn, will dare to add, "these exquisite productions don't talk to the intelligence only but also delight the heart and make tears appear in the eyes?" And this man, whose words we quote, is not a melancholic poet but the scholar who, since the first research by Agassiz, has contributed most to the progress of scientific knowledge about neve and glaciers.

M. Tyndall's passion for hard to access mountains was shared by his friends of the Alpine Club and many other Englishmen who, like him, continue each year to add by their climbs, to the knowledge of European geography. Moreover, it is not only in the exploration of glaciers and high peaks that many Anglo-Saxon scholars, among the scholars of other nations, have distinguished themselves; but also in the study of all physical phenomena of the world. The astronomer Piazz-Smith, his wife and the crew of a yacht spent several months at 3000-3500 metres on the slopes of the Peak of Tenerife to set up experiments on the purity of the atmosphere in order to study the upper layer of clouds as others have studied those of the land and to witness the conflict between the trade winds and the counter current coming from the Equator. Even more daringly M. Glaisher, in his balloon, has gone up well above the altitude corresponding to the highest peak of Himalaya. The meteorological scholar and his companions decided to keep going up so long as they remained fully conscious. The air, having become too rare for their lungs, forced them to pant with difficulty and to suffer from palpitation, it set their ears buzzing, it distended the arteries in their temples and chilled their fingers into immobility; nonetheless, their will sustains them and they jettison more sand out from the basket and thus make a new surge into the atmosphere. One of the crew faints but the others do

nothing to stop the ascent and with eyes fixed on their instruments, they glancingly note the gradual falling of the mercury in the barometer and thermometer as if they were still at their observation point at Kew. The second of the three heroic travellers, completely numb because of the lack of air and warmth, also collapses and yet the balloon still rises. By now M. Glaisher, gradually overcome by drowsiness, has lost the use of his hands; but he holds the cord of the valve between his teeth and it is only when he feels that a second, only a second, separates him and his companions from death that he lets the gas escape and the deflated balloon stops at last and gradually starts to descend towards the fields 11,000 metres beneath them. What noble courage on the part of these people who, with such a simplicity of soul, risked death simply to be better able to study the temperature of the atmosphere where neither bird nor man can live! Indeed, it would be better to belittle the strength of spirit and self-control of these scholars than to compare them with the brutal courage of the soldier who furiously throws himself into battle intoxicated with gunpowder, uproar and blood.

While, through twofold love of nature and science, people like M. Tyndall and Glaisher climb difficult summits or hurl themselves into space in balloons, many thousands of other Englishmen whose careers are more modest, since only a few of them can hope to conquer fame, run risks in other elements such as snatching shipwreck victims from death. No doubt feelings play a large part in the dedication of these tireless life-boat rowers who venture on seething waves in the middle of terrible storms, during those frightening and awful nights when the skipper can hardly distinguish his own crew or hear his own voice through the howling of the air, but in that admirable sacrifice of their lives aren't the rescuers also tempted by the great attraction which the beauty of the furious sea exercises on them? There is no greater delight to tempt brave hearts than to battle against the waves, winds, storms and darkness and to defeat all those enemies by strength of courage, presence of mind, voluntary discipline and heroic perseverance! Certainly the tough sailors who during nights of ship-wrecks dash to aid ships in distress are, in fact, the descendants of the ancient kings of the sea and love the wild sea just as their ancestors did and like them they laugh at death; but their ambition is higher. Instead of searching fame in murder and rape their mission is to rescue victims from death or even simply to find their corpses. Were not those expeditions dedicated, with such perseverance, to the search for John Franklin and his companions none other than rescue attempts made on a grand scale? Love of struggle and danger runs in the blood of men but real heroes begin to understand that to satisfy their passion for fighting, it is nobler to grapple with the forces of nature than to cut the throats of their brothers.

If in the great undertaking of nature's exploration that has been carried out to date, the English are especially distinguished for their audacity, their lively perseverance and contempt for danger, then the Germans, perhaps, show an appreciation of nature which is, at one and the same time, more general and more intimate. In their poetical and philosophical works they have not simply extolled nature in all its aspects, they have also studied it with devotion. Kant, the great exponent of modern philosophy, also concerned

himself with the solution of problems relating to the land and, with the same pen that he used for the *Critique of Pure Reason*, wrote many works on physical geography. Goethe, the calm admirer of the forces hidden in rocks and plants, had as contemporaries Alexander Humboldt, a tireless traveller who, in two continents, studied on site the flux of the life of the world and Karl Ritter, the heroic scholar who did not flinch at the thought of starting, by himself, an encyclopaedia of human knowledge about the countries and the people of the Earth. After these two men, who were real pioneers, have come a great number of travellers and scholars, whose mission is to travel around the planet and to study and describe it. The Germans, not having colonies and not sending legions of employees to all parts of the earth as the British have done, are therefore motivated neither by narrow patriotism nor by the demands of imposed missions but rather, it is truly the love of the land that drives so many German explorers to rarely visited or completely unknown regions. Already the list is long of those among them who have died in Africa, in Australia, in Asia and America but, nonetheless, new travellers keep coming forward to continue the discoveries of their precursors.

It is true, generally speaking, that the Germans are superior to their English rivals as interpreters of nature but they are not equal to them in the ardour and lively fearlessness of their mountain explorations; on the other hand, the Germans are less prone to be carried away by the intoxication of climbing and to commit foolishly daring acts that each year cost many precious lives. They do not climb peaks simply for the sheer physical pleasure but also in order to learn and then to teach later on and, having become prudent by reflection, they do not venture, other than with good reason, on dangerous escarpments. Without filling the world with the clamour of their exploits, as do many English climbers whose sole merit is knowing how to master the most fearsome peaks, some geologists and naturalists, such as Theobald and Vogt, have definitely contributed more to the progress of the science of the Alps than any one else. Moreover, in Germany as well as in England, the importance of physical exercise for the well-being of the human species is beginning to be understood and gymnastic clubs are being founded everywhere. These excellent institutions, that already have more than 150,000 members in all parts of the confederation, not only contribute to the development of the strength, grace and beauty of the race but also bring together, on a daily and equal basis, people of all classes; scholars, doctors, engineers, merchants and workers. Slowly they facilitate the penetration of republican principles through giving each person, with superior physical strength, a more extended education, a greater comprehension of his rights and duties and a greater familiarity with voting and debate. The gymnastic associations which have successively been organised in each town have ended by covering the country with a multitude of federated groups whose national competitions are, at one and the same time, Olympic games and parliaments. In this way gymnastics can be considered one of the greatest components of the material, political and social regeneration of the people. It will not be long before its beneficial influence on the physical and moral equilibrium of the citizen will correct what is vague, false and mystical in the love that Germans have for nature.

That this love of nature, despite the aberrations it has been subjected to since the dawn of history, has always been one of the distinctive traits of the German people is proven by the legends and great number of songs collected in various German provinces. The descendants of those Teutons who used to inhabit the heartland of the forests have never ignored the beauty of their woods of oak, beech and fir trees, of their springs, modestly spouting in the meadow grasses or under the dead leaves, of their mountains smoothed over by layers of snow in winter time. One of the best witnesses as to the proven strength of feeling that Germans have always had for nature is to be found in their patronymics. In France, vile or at least vulgar appellations are, unfortunately, numerous. The family names derived from the land such as: *Dumont, Dubois, Lafont, Duplan, Durrieu*, simply refer to a location or old property rights and make no allusion to the beauty of the country. As to the Germans, millions of them are given gracious and superb names which is a proof of a lively, poetical sentiment within the masses themselves. Over the other side of the Rhine it is common to call yourself: *Branche-de-Rosier, Ruisseau-de-Frenes, Plage-Fleurie, Chant-des-Oiseaux, Roche-de-Lumiere*.

It has to be said that the French, on the whole, do not always appreciate, as their northern and eastern neighbours do, great Nature's splendours. More sociable than the Germans and the English they are less able to endure loneliness and even the temporary interruption of their usual relationships. They need, at work and in pleasure, the daily routine; the same comrades and the same friends. They dread wild nature where man has no other companions than trees, rocks and torrents. The aspect of nature which the French appreciate more and which they prefer to look at, consists of gently undulating land in which varied types of cultivation alternate gracefully right up to the distant horizon of the plains. Here a row of green hills mark out the landscape, there a small river winds beneath alder and aspen branches and here and there, clusters of trees appear amongst the meadows and wheat fields and over there, white houses whose red tiles shine in the middle of the greenery. The beauty of the site appears complete when a ruin covered in wild vines and a mill, constructed on uneven arches across the river, add their picturesque profile to the whole scene. Everywhere, the person who contemplates such scenery sees signs of the industry of his fellow beings; nature altered by work is, so to speak, humanised and the spectator loves to identify himself with this common pursuit. Nonetheless, far away from those regions transformed by cultivation one finds sites where the primitive beauty of the land remains immaculate.

The ideal of our ancestors, regarding landscape, is revealed by the sites that princes and lords chose for building their castles of pleasure. Only a very small number of these places occupy a position where one can gaze at a grandiose horizon of mountains and rocks; it is to be noted, also, that in many localities, especially on the shores of Lake Geneva, the country houses built by the rich riparian owners have their backs to what now appear the most spectacular views. Instead of gladly gazing at nature in all its powerful savagery they preferred confined spaces where the imagination is kept within known bounds – a curtain of hills blending softly, avenues of thick trees, lawns and ponds decorated with statues.

They put grace, often affected grace, well above the simple grandeur of immense horizons.

Nonetheless, if one were not aware of the reasons the barons and squires built their towers on steep slopes, the sight of the picturesque fortified castle on jagged rocks might tempt some to believe that the feudal lords in the French territories appreciated the beauty of wild nature. If they inhabited the summits of these isolated rocks surely it was not to enjoy the view of the rising sun or to follow the sight of meandering rivers but rather to observe enemies or victims in the surrounding valleys. No doubt they came to like the solitary retreat in which they had taken refuge; having seen for the first time the light of the day through the narrow loop-holes of the castle; as children, running on the battlement and leaning over the crenels in the walls, they had learned the names of the flowers that bloomed in the cracks and of the trees that grew, far away, on the hilly slopes; afterwards, becoming hunters, they would know the animals of the forest and become accustomed to winds, storms and bad weather and, through long habit, would end in appreciating part of that nature in the midst of which they lived. However, as the Germanic element in this class of conquerors became Frenchified, due to cross-breeding and customs, the love of solitude and wild nature was lost among the knights; they moved closer to the plains; they established themselves in towns and became, gradually, princes or courtiers. It was in Germany, more precisely on the banks of the Rhine, Neckar and Moselle rivers and in the mountainous regions of Palatinate, Swabia and Frankonia, that this awful chivalry of ferocious plunderers persisted the longest, since their appreciation of nature was like that of wild beasts; a place to find their dens and bring their prey. One of the most fearsome of these brigand-knights, the infamous Eberhard, or Heart of Wild Boar, of whom we find a fictional portrait in Uhland's ballads, had as a motto: 'Friend of God, enemy of all men.' And in order to justify these words, he never missed an opportunity to assail hundreds of his fellow beings. The fortified castle was an eyrie and the lord took as his emblem the eagle and the vulture as is proven by the fact that these strange birds of prey, despite all the progress accomplished in the modern world, have remained the coat of arms of families and states. The American republic itself, in oddly feudal manner, took the eagle as the symbol of its power.

Whatever the feelings of the conquerors of the land may have been towards nature, it is certain that the masses of slaves can hardly have appreciated the beauty of the earth on which they passed their miserable lives and the feelings they had towards the surrounding landscape would necessarily be debased. The bitterness of existence was then far too acute for them to be able to indulge in the pleasure of admiring clouds, rocks and trees. Everywhere there was strife, hatred, abject fear, wars and famines. The master's whim and cruelty were law for the enslaved; each unknown person was feared as a murderer; the words foreigner and enemy had become synonyms. In such a society the only thing a brave man could do to fight against his destiny and preserve his self-respect was to be merry and ironic, to make fun of the strong and above all of his master, but he did not pay any attention to nature. Besides, nature was also harsh to him; she often refused to yield

the wheat he cast into the furrows; brought cold and storms to him even though he had insufficient clothes to cover himself; sometimes she blew gusts of pestilence over the land and entire populations disappeared in a few weeks. The magnificent character of the surrounding nature had to remain unknown to men who, under the spell of obscure fears carefully sustained by wizards of all kinds, continued to see – in grottos, sunken roads, mountain gorges, in woods full of shadows and silence – shapeless ghosts and horrible monsters, part beast and part demon. What strange ideas about the earth and its beauty have had the monks in the Middle Ages who, in their world maps, never fail to draw, beside the names of distant countries, animals belching fire, men with hooves of horses or tails of fish, gryphons with heads of rams or oxen, flying mandrakes and decapitated bodies with huge wild eyes in their chests!

To get an approximate idea of what society was like in the Middle Ages and of the feelings that nature inspired in it, it would be necessary to penetrate into remote countries where old traditions are preserved and where the night of ignorance retains its density. In fact, in France there is not a single region where modern ideas, albeit in a confused form, have not arrived; but even if one cannot find here any real remnants of the Middle Ages, it is, nonetheless, easy to recognise its vestiges. Twenty years ago the belief in magic, sorcery and miracles of all sorts still prevailed absolutely in the minds of millions of villagers in the centre of France and Brittany. To understand the fear that nature engendered in our ancestors it is not necessary to go back to the century of Etienne Marcel and Charles the Mauvais; many of us only have to remember our childhood and the naive gullibility with which we accepted all assertions that would nourish our penchant for fear.

There are many of us who in our youth, poor little things trembling near the hearth, heard the old women whisper terrible stories of monsters and demons. Towards dusk we have seen hideous phantoms, formed from river mists, walking noiselessly across the meadows stretching their long transparent arms towards us. During a clear moonlit night we have quivered like leaves when werewolves howled at the cross roads. If among the various fantasies that surged in our hallucination, there were some gracious ones they, like the rest, were completely divorced from reality. Recently I had the pleasure to see again an old country woman who had taught me once that to go to Rome, to Saint James of Compostella and Jerusalem I would have to go to walk on the stars and follow the Milky Way. The good woman was most surprised when I, in my turn, wanted to tell her that the stages of the pilgrims are not to be found on the arcs of the sky. She did not refute me but she shook her head silently and without any doubt has kept her faith in the depths of her heart.

Considering that there have always been exceptions to such concepts of the subject of nature, it is easy to understand how ignorance, superstition, misery, fear or the love of profit must have darkened minds and given them, at least partially, a warped view of the beauty of the earth. Neither the peasant nor the bourgeois exploiters of the land could perceive the beauty of the countryside other than from a utilitarian point of view, and the literature, the natural expression of the people's thoughts, could not, on its part, do other

than to convey in an idealised form that way of seeing things. For centuries French writers have completely refrained from celebrating any thing other than man and society or, more precisely, when they have talked about nature it was to sing of "the cool shades, the flowery meadow, the golden harvest". Again, in general, this has followed classical traditions and no doubt they would not have dared to sing of nature if Virgil had not extolled it before them. Very often, in their numerous wars in Spain and Italy, French armies have crossed the Pyrenees and the Alps and, nonetheless, they appear to have seen nothing of the singular beauty of these regions where now visitors from the four corners of the world are rushing in; they were impressed only by the steepness of the slopes and the difficulty of the tracks. After having crossed the charming pastures of the pass of Argentiere, after having seen the superb peaks of Chameyron, of Grand Rubren and Mount Viso, Francois the First could find no other word to characterise the Alps than "strange land" and reserved all his admiration for the coveted beautiful plains of Piedmont and Milan. Likewise the majority of Spanish and Portuguese conquistadors, those men so great in their audacity, so atrocious in their cruelty, appear not to have seen the wonderful nature of the New World in the midst of which they found themselves. The tall mountains, the virgin forests and the clear, blue sea were all insubstantial; their eager eyes were searching only for veins of gold in the thick layers of rock and soil.

In modern times Rousseau, born at the foot of the Alps, has been the first person to reveal the joy one feels at being in the midst of untamed nature, on seeing great lakes, open forests and the magnificent perspective of the mountains' horizons. Yet despite his deep and sincere love of solitude, despite his misanthropy which made him averse even to traces of mankind, Rousseau never ventured into the high valleys, snowy gullies or the icy fields; he was content to stroll about and admire the landscape at the foot of the mountains where residences and cultivation testify to the work and presence of labourers. As to Chateaubriand, this great artist, even though he knew how to boldly depict some aspects of the sea and mighty rivers of the New Worlds, he found the Alps too high for him and failed to see the beauty of "these heavy masses" which appeared to him to be "not in harmony with the faculty of man and the weakness of his organs." He affirms that "this greatness of the mountains of which so much fuss is made is nothing but the result of the tiredness of the traveller"; whenever a mass of peaks encroaches on the view of fields and do not form a mere scene on the horizon he finds the mountains "hideous".

No doubt, nowadays, there are hardly any people bold enough to hold propositions similar to those of Chateaubriand and to as clearly confess their inability to appreciate nature in one of its greatest manifestations. The collective education that all civilised people enjoy, due to constant contact among one another and the exchange that happens in arts, science and customs, does not allow anyone to ignore the beauty of harsh gorges, jagged rocks and slopes of ice and snow; but it is true that despite the successive progress achieved in understanding nature, the French have contributed less than their neighbours in the study of their own mountain massifs or even in the more general work of world exploration. This inferiority is not an absolute and need not be taken as a rule. The number

of those who liberate themselves from daily routines in order to contemplate unspoilt nature, either in distant countries or within their own, is growing quickly and will grow larger thanks to the greater facilities that are offered to travellers. No doubt, if school children did not have to submit to that harsh discipline which, more than anything else, leads to the blunting of individuality and if it was not followed by military service with its even more horrendous discipline which reduces hundreds of thousands of the strongest and most adventurous youth to passive obedience, the French population would have fulfilled, in the history of travelling and discovery, the great role which their enviable position - situated at the extreme west of Europe, between the Mediterranean and the Ocean, between the Alps and the Pyrenees - has marked out for them.

The awareness of nature, like the appreciation of art, develops through education. The peasant who lives in the middle of the countryside and freely enjoys the view of green expanses no doubt loves, instinctively, the soil he cultivates but he has no awareness of that love and only sees in the soil a dormant richness to be brought forth by cultivation. The mountain dweller, himself, more often ignores the beauty of the valley he lives in and the escarpments that surround him; he reserves all his admiration for the terrain adjoining the plains where the iron plough sinks deeply into the fertile soil and where he can walk the iron plough without fatigue or danger; it is only after he has moved away from his mountains and has travelled in foreign countries that the love of his country is revealed in his soul and he begins to understand, in his nostalgia, the splendid greatness of the horizons he misses. However, if education can induce an appreciation of nature in those who have not yet understood its deepest charm it can also, when false, deprave the taste and make monstrous or ridiculous concepts appear beautiful. Thus the Chinese, an ancient people which rejuvenated itself many times at the cost of bloody revolution, have arrived, in their paltry love for the baroque and for symmetry, to repress the sap in the trunks of trees in order to create dwarf varieties and to give them geometric forms or the bizarre appearance of monsters and demons. Similarly, many German principalities, corrupted by a deplorable mania for affectation, have changed for the worse the most charming landscapes by engraving pedantic inscriptions on rocks, decorating lawns with whimsical monuments and putting guards on duty in front of the sights they want to show to their visitors. The lover of nature must have a feeling of delicate consideration if he is to be able to touch the earth without destroying its grace or, likewise, to be able to give it a greater harmony of contours and colours. And, moreover, that is the way mankind must behave if societies are to advance in civilisation naturally and in such a way that their progress is not acquired at the expense of the land that is their home. Henceforth, thanks to travelling, it is the planet itself that will ennoble the tastes of its inhabitants and give them an understanding of what is truly beautiful. Those who traverse the Pyrenees, the Alps, the Himalayas or only the high cliffs along the oceans; those who visit virgin forest or gaze at volcanic craters; all learn from these magnificent scenes to grasp the true meaning of the beauty of less striking landscapes and learn not to touch them, when they have the power to modify them, other than with respect.

It is increasingly important that awareness of nature develops and is refined since, by force of circumstances, the number of people exiled from the countryside increases daily. For a long time the pessimists have been scared of the constant growth of the big cities, however, they never fully realised the rapid progression with which, in the future, the movement of people towards the privileged centres would take place.

It is true that the monstrous Babylons of the past gathered within their walls hundreds of thousands, if not millions, of inhabitants; commercial interests, despotic centralisation of powers, the great scramble for favours and the love of pleasure enticed to these powerful cities the populations of entire provinces but communications then, unlike today, were much slower – the rising of a river, bad weather, delays of caravans, the raid of an enemy army or tribal uprising were sufficient to delay or stop the supplies to the big cities. Thus, amongst all their splendours, they found themselves continuously exposed to starvation. Moreover, during these periods of pitiless wars these capitals always ended in becoming a theatre of some immense massacre and sometimes the destruction was so complete that the ruin of a town was at the same time the end of a people. Even recently one could see, for example, in some cities of China, what was in store for the big metropolises of the ancient civilisations. The powerful city of Nanking has become a heap of rubble, whilst Ouchang, which fifteen years ago appears to have been the most populated city in the world, has lost more than three quarters of its inhabitants.

To the causes which once made people move to the big cities and which are still applicable one must add others, not less powerful, which are linked to the whole of modern progress; communication routes, canals, roads and railways all lead, in a great number, to the important centres and enmesh them in an ever increasing network. The movement of people nowadays is so easy that from morning to evening ferries can disgorge onto the pavements of Paris or London 500,000 people and, in anticipation of a simple fete, a marriage, a funeral procession or the visit of any personality, millions of people have sometimes inflated the floating population of a capital. As to the transportation of goods it can take place with the same ease as that of commuters. From all the neighbouring fields, from all parts of the country and from all the world the commodities pour in, by land and by sea, into these enormous stomachs which never cease to absorb and absorb yet again. If need be, if the appetite of London demands it, in less than a year it can fetch itself more than a half of the world's production.

This, of course, is a great advantage that the cities of antiquity did not have and, moreover, the revolution which railways and other means of communication have introduced into the life style has just begun. Is it true that two or three journeys a year for each inhabitant of France is the average, especially as a simple excursion for a quarter of an hour to the suburbs of Paris or any other city is considered statistically a journey? What is certain is that each year the movement of vast numbers of people increases enormously and probably all the predictions on this matter will be exceeded, as they have been since the beginning of the century. As in the case of the city of London only, where the movement of people is actually as large in one week as it was, in the 1830's, for the whole

of Great Britain in one year. Thanks to the railways, the country continually shrinks and one can even establish statistically the degree to which this reduction in territory takes place since, to do that, it suffices to compare the speed of trains with that of the stagecoaches and ramshackle conveyances which they have replaced. On his part, man separates himself from his native land more and more easily; he becomes a nomad not in the way of the ancient shepherds who always followed regular tracks and never failed to return periodically to the same pastures with their flocks, but in a much more thorough way because he moves indiscriminantly, from one point of the horizon to another whenever curiosity or pleasure impels him; only a few of these voluntary expatriots return to die in their native land. This ceaseless growth in migration now takes place in millions and millions and it is precisely towards the most populous human ant hills that the great majority of emigrants head. The terrible invasion of the Frankish warriors into Roman Gaul probably did not have, from an ethnological point of view, as much importance as these silent immigrations of the road sweepers of Luxemburg and Palatin who each year inflate the population of Paris.

To have an idea of what the big commercial cities of the world will become one day, if other causes acting in an inverse sense do not balance the causes of growth, it suffices to see the enormous importance that towns have in modern colonies compared to that of villages and isolated homesteads. In these countries the population, free from the ties of habit and free to get together as they please without any other motive than their own will, is almost entirely crammed into the towns, even in specific agricultural colonies such as in the young American states of the Farthest regions of La Plata, Queensland in Australia or the North Island on New Zealand, the number of city dwellers has an upper hand over those of the country: on average it is at least three times more and continues to grow as commerce and industry develop. In colonies, such as Victoria and California, where special reason, such as gold mines and great commercial advantages attract many speculators, the pile up of people in the cities is even more significant. If Paris were to France what San Francisco is to California, what Melbourne is to Happy-Australia then the "great town" truly worthy of its name, would not have less than 9 to 10 millions. Obviously it is in all these new countries, where civilised man has only just put foot, that one must seek an ideal other than that of the 19th century society because no obstacle prevents new comers from forming small groups all over the country and yet they prefer to conglomerate in vast cities. The example of Hungary and Russia, as opposed to that of California and such other modern colonies, may serve to illustrate what a span of centuries separates countries whose populations are still distributed as in the Middle Ages from those where the phenomenon of social affinity developed by modern civilisation has a free hand. In the Russian plains and in the Hungarian "Puzzta" there are hardly any cities in the real sense, only larger or smaller villagers; the capitals are centres of administration, artificial creations whose inhabitants entertain themselves and who would straight away loose a major part of their importance if the government did not maintain an artificial life at the expense of the rest of the nation. In these countries the working population consists

of agricultural workers while towns are for employees and men of leisure. On the contrary, in Australia and California the countryside is just a suburb and the peasants themselves, shepherds and farmers, have their minds turned towards the city; they are speculators who, in their self interest, have temporarily left the large commercial centres but who will not fail to return to them. No doubt, sooner or later, the Russian peasants, who today are well rooted in their native soil, will detach themselves from the globe to which they have been subservient and, like the English and the Australians, become nomads and move towards the large cities where commerce and industry call them or where their own ambition to see, to experience, to ameliorate their conditions pushes them.

The groans of those who bemoan the depopulation of the country cannot, therefore, stop this movement; nothing can be done, all clamours are useless. Having become, thanks to a greater freedom of movement and to cheaper travel costs, the owner of that primordial liberty that of "to go and to come" from which, eventually all other freedoms may follow, the farmer without property responds to a natural impulse when he takes the road to the densely populated city of which many marvels have been told. At the same time sad and happy, he says good bye to the native tumble-down cottage, to go and contemplate the miracles of industry and architecture; he give up the regular wages that the work of his hand has provided but, perhaps, like many other lads of his village he will come to affluence or a fortune and if one day he returns to his country it will be to build a castle at the place of the squalid residence where he was born. Few are the migrants who have been able to realise their dreams of fortune. Most of them find poverty, sickness and premature death in the cities; but, at least, those who survive have been able to enlarge the circle of their ideas, they have seen countries different one from another, have made contacts with other people, have become more intelligent, more educated and all this individual progress constitutes, for the whole of society, an inestimable advantage.

We know the rapidity with which, in France, is accomplished the phenomena of emigration from the country to Paris, Lyon, Toulouse and the big sea ports. All the population growth is to the benefit of the centres of attraction and most of the small towns and villages remain stationary, if not declining, in numbers of inhabitants. More than half of the departments are less and less populated and one can name one, the Lower Alps, which since the Middle Ages has certainly lost a good third of its population. If one also takes into account journeys and temporary migrations, that must necessarily result in the growth of the floating population of the cities, the results would be even more striking. In the Pyrenees of the Ariège there are certain villages where all the inhabitants, men and women, depart entirely in the winter in order to descend to the towns of the plains. In a word, most French people who are involved in commerce or who live off their incomes, without counting the multitude of peasants and workers, never fail to visit Paris or the principal cities of France and it is a long time since, in the remote provinces, a traveller was designated by the name of the city that he had lived in. In England and in Germany the same phenomena take place. Even if in these countries births exceed deaths more so than in France, nonetheless, there too agricultural areas, such as those of the Duchy of

Hess-Cassel and the County of Cambridge, lost their population for the benefit of the large cities. Even in North America, where the population grows with an astonishing speed, a great number of agricultural districts of New England have lost a large proportion of their inhabitants as a result of double emigration: on one side towards the region of the Far West; on the other towards the commercial towns of the shores: Portland, Boston and New York.

However, it is a well known fact that the air of the city is loaded with the elements of death. Though official statistics in this respect do not always offer the desirable sincerity it is, nonetheless, certain that in all European and American countries the average age of the country folk exceeds by many years that of the city dwellers and the migrants, in leaving the native fields for the narrow and foul streets of a large city, may calculate approximately, in advance, how much their lives are shortened, following the rules of probability. Not only do the new-comers suffer personally and expose themselves to an early death but they also equally condemn their own offspring. One cannot ignore that in the great cities, such as London or Paris, the vital force is quickly exhausted and that no bourgeois family has continued to the third, let alone the fourth generation. If the individual can resist the deadly influences of the surrounding environment, the family, at least, finishes by succumbing to it, and without the continuous emigration of the people from the provinces and of the foreigners who happily march to death, the capitals would not be able to recruit their enormous populations. The features of the citizens become refined but the body weakens and the springs of life dry up. Likewise, from an intellectual point of view, all the brilliant faculties which social life develops are, at first, overexcited but thought gradually loses its strength: it grows weary and at last declines in the face of time. Admittedly the gamin of Paris, in comparison to the young boor of the country, is full of life and spirit; but is not the brother of this "pale lout" physically and morally comparable to those sick plants that grow in caves in the midst of darkness? Finally, it is in the towns, above all those which are the most renowned for their opulence and civilisation, that one is certain to find the most degraded human beings - poor beings with no hope other than dirtiness, hunger, brutal ignorance and hatred of all - who rank well below the happy savage running freely in the forests and the mountains. It is beside the greatest splendours that one looks for the most lowly abjection; not far away from those museums where the beauty of the human body is shown in all its glory the children, suffering from rickets, warm themselves on the impure air exhaled from the mouths of the sewers.

If, on the one hand, illusions bring ever increasing crowds to the town then, on the other hand, foul airs drive away to the country and ever growing number of people who want to inhale, for a while, clean air and to refresh their thoughts in the full view of flowers and greenery. The rich, able to take their leisure as they please, can escape from the occupations or jaded pleasures of the city for months at a time. Some of them even reside in the country and only appear fleetingly in their houses in the great cities. As to all those workers who cannot go away for long, due to the exigencies of daily labour, the majority

of them snatch necessary respite from work to visit the country. The luckiest ones take holiday weeks, that they spend away from the capital, in the mountains or at the sea side. The most enslaved by work are content to escape, from time to time for a few hours, the narrow horizon of the customary streets and they happily make the most of feast days when the temperature is mild and the sky is clear: then each tree of the woods nearest the cities shelters a merry family. A significant proportion of merchants and employees, above all in England and America, boldly send their wives and children to the country and condemn themselves to making, twice a day, the journeys that separate the shop counter from the home. Thanks to quick communications millions of people can thus be concurrently city as well as country people and each year the number of people who thus have two sides to their lives is growing. Around London hundreds of thousands can be counted who plunge each morning into the turbulent affairs of the city and who return each evening to their peaceful home in the green suburbs. The city, the actual centre of the commercial world, is depopulated of residents: during the day it is the most active human hive; at night it is a desert.

Unfortunately this movement from the towns to the suburbs has not taken place without disfigurement of the countryside: not only does rubbish of all sorts clutter up the intermediate space between the towns and the country but, an even more serious thing is happening: speculators are taking hold of all the charming sites in the vicinity, they divide them into rectangular blocks, enclose them in homogeneous walls and there hundreds of thousands of pretentious houses are built. For the stroller wandering along the muddy roads of this so-called countryside, nature is only represented by pruned shrubs and clusters of flowers which one can glimpse of through the railings. On the sea shore the most picturesque cliffs and the most charming beaches are also in many places monopolised by jealous owners or by speculators who appreciate natural beauty as much as money-changers evaluate an ingot of gold. In frequently visited mountainous places the same mania to appropriate seizes the inhabitants the landscape is cut into squares and sold to the highest bidder, each natural curiosity - a crag, grotto, cascade, fissure of a glacier, even the sound of an echo, everything - can become private property. Entrepreneurs lease water falls, surround them by wooden fences to prevent non paying travellers from enjoying the tumult of the waters, then, by dint of advertising, transform into solid ecus the light which dances in the shattered droplets and breeze that swirls through the wreaths of the spray.

Since nature is profaned by so many speculators precisely because of its beauty, it is not surprising that farmers and industrialists never ask themselves if, in fact, they do not contribute to the disfigurement of the earth. It is true that the hard worker does not care less about the charm of the countryside and the harmony of the landscape, provided that the soil produces abundant crops; swinging his axe at random in the thicket, he cuts down trees that are in his way, shamefully mutilates others and gives them the appearance of stakes or brooms. Vast tracts of land which once were lovely to look at and which one loved to cross are debased completely and one feels a real aversion to look at them.

Besides, it often happens that a farmer, as lacking in science as in love of nature, is mistaken in his calculations causing his own ruin by introducing modifications without taking into consideration the climate. Also the industrialist does not care less if, by exploiting his mine or his factory in the open country, the atmosphere is blackened by coal-smoke and polluted by foul fumes. Without mentioning England, in Western Europe there are a great many factory laden valleys where the thick air is almost unbreathable for outsiders: there the houses are smoke filled, the leaves of the trees are covered in soot and when one looks at the sun it is almost always through a dense haze that its yellow face appears. As to the engineer, his bridges and viaducts are always the same, whether in the most even plains or the steepest mountain gorges he is preoccupied, not with the landscape, but simply in balancing the pressure and resistance of materials.

Though it is necessary for man to possess land and to know how to utilise its potentialities, nonetheless the brutality with which this seizure has been accomplished is regrettable. Thus, when the geologist Marcou informs us that the falls of the American Niagara have noticeably decreased in abundance and lost their beauty after having been bled dry to set in motion the factories on its banks, we think with sadness of the time, not so long ago, when "the thunder of the waters" unknown to civilised man, rushed freely from the high cliffs between rock faces crowned by huge trees. Likewise, we ask ourselves if vast prairies and wild forests where, in imagination we can still see the noble figures of Chingashook and Bas-de-Cuir could not have been replaced with something other than with fields all of the same appearance, all oriented towards the four cardinal points conforming to the land register and surrounded by fences of the same height.

Wild nature is so beautiful! Is it then necessary that man, in his seizure of it, has to proceed systematically to exploit each newly conquered domain and to mark his ownership with vulgar constructions and property boundaries as straight as a die? If that were so, then the harmonious contrasts which are one of the beauties of the earth could soon be replaced by desolate uniformity since society, which increases each year by at least ten million or so, and has at its disposal, through science and industry, a force growing in prodigious proportions, is marching quickly towards the conquest of the entire surface of the planet. The day fast approaches when there will not be a single region of the continent that has not been visited by a civilised pioneer and, sooner or later, human intervention will be exerted on all points of the globe. Fortunately, beauty and utility can be completely fused and this is happening in the countries where the agricultural industry is most advanced such as England, Lombardy and certain parts of Switzerland, where the users of the land know how to make it yield the greatest amount of produce whilst respecting the charms of the countryside or even adding to its beauty with a touch of art. The marshes and moors of Flanders transformed by drainage into fields of exuberant fertility; the stony Crau changing into a magnificent meadow thanks to irrigation; the rocky flanks of the Appennines and the maritime Alps, from top to bottom, hidden in the foliage of olive trees; the reddish peat-bogs of Ireland replaced by forests of larches, cedars and white firs: are these not admirable examples of what can be done by the farmer who can exploit the

land for his own profit whilst also making it more beautiful?

The matter of knowing which aspects of human labour serve to beautify or to degrade outer nature may appear futile to the so-called positivist spirits but it is, nonetheless, an issue of prime importance. Human developments are linked in the most intimate manner to the natural environment. An implicit harmony exists between the earth and the people it nourishes, and when imprudent societies strike a blow against what beautifies their environment they have always ended in regretting it. There where land becomes ugly, where all poetry disappears from the landscape, imaginations are extinguished, spirits are impoverished, routine and servility overtake the soul and set it on the path to torpor and death. Among the causes in human history which have already contributed to the disappearance of many successive civilisations, one must mention the brutal violence with which the majority of nations have treated the nourishing earth. They cut down forests, dried up springs, flooded rivers, damaged climates, surrounded the cities with swampy and pestilential zones; then, when nature desecrated by them has become hostile, they grasped her with hatred and not being able to re-immense themselves like savages into the life of the forests, they let themselves become more and more stupefied by the despotism of priests and kings. "The great estates have ruined Italy" said Pliny, but it could be added that these great estates, cultivated by slaves, had disfigured the land almost to the state of leprosy. Historians shocked by the surprising decadence of Spain after Charles the fifth advance various explanations. According to some the main cause of the ruin of the nation was to be found in the discovery of the American gold; to others, it was the religious terror organised by the "sacred fraternity" of the Inquisition, the expulsion of the Jews and the Moors and the bloody *auto-da-fé* of heretics. People have likewise blamed the fall of Spain on the iniquitous tax *alcabala* and the despotic centralisation à la French; but surely has not the kind of rage with which the Spaniards cut down the trees for fear of the birds, *por miedo de los pajaritos*, something to do with repulsive and fearsome aspects, soil is impoverished and the population, diminishing within two centuries, has relapsed into barbarism. The little birds have avenged themselves.

Therefore, it is with joy that we now welcome this generous passion which brings so many a man and may we add, the best, to cross virgin forests, beaches and mountain gorges and to visit many regions of the world where nature has kept its primordial beauty. For fear of ethical and intellectual impoverishment, one feels that the vulgarity of many disfigured and mediocre things which narrow minded spirits see as evidence of modern civilisation, needs, at all costs, to be counterbalanced by the great scenes of the earth. The direct study of nature and contemplation of its phenomena has to become for all mature men an essential part of their education. Also it is necessary to develop in each individual the skill and the physical strength to enable him to climb the summits with joy, to look at the abysses without fear and to keep up in all his being that natural equilibrium of forces without which he will never be able to perceive the most beautiful sights other than through a veil of sadness and melancholy. Modern man has to combine in his person all the virtues of those who have preceded him on the earth and never give up the immense

privileges, which civilisation has conferred upon him; he should never loose his ancient force and let himself be surpassed by any savage in vigour, skill and understanding of natural phenomena. In the heydays of the Greek republics the Hellenes aimed at making heroes of children through grace, strength and courage; equally modern society, by fostering vigorous traits in its youth, by leading them back to nature and putting them in touch with it, can ensure itself against all decadence, through the regeneration of the race itself.

Long ago Rumford said: "One always finds more in nature that one looks for." Whether a scholar examines clouds, stones, plants and insects, or whether he studies the general laws of the globe, he everywhere and always discovers unforeseen wonders; the artist, in pursuit of beautiful landscapes, is visually and mentally in perpetual celebration; the industrialist, looking to utilise the produce of the earth, continues to see around him riches that are not yet utilised. As to the simple person who is satisfied to love nature for its own sake, there he finds his joy and when he is unhappy, at least, his pains are sweetened by the view of the open country. Surely the proscribed or those declasse who live on the soil of their homeland as exiles feel, even at the most charming sites, a sense of being isolated, unknown and without friends, and the wound of despair always gnaws them. Nonetheless, they also end by responding to the sweet influence of the milieu which surrounds them; their most vivid bitterness changes, little by little, into a kind of melancholy which allows them to understand, with a sense refined by grief, everything gracious and beautiful offered by the earth; more than many of the happy do they know how to appreciate the rustling of leaves, the singing of birds and the murmur of springs. And if nature has such power to console or to strengthen individuals what is her influence, over the course of centuries, on humanity itself. Without any doubt the view of the vast horizons to a great part contributed to the quality of the mountain people and it is not a vain linguistic formula when one refers to the Alps as the boulevard of freedom.

Whatever the feelings of the conquerors of the land may have been towards nature, it is certain that the masses of slaves can hardly have appreciated the beauty of the earth on which they passed their miserable lives and the feelings they had towards the surrounding landscape would necessarily be debased. The bitterness of existence was then far too acute for them to be able to indulge in the pleasure of admiring clouds, rocks and trees. Everywhere there was strife, hatred, abject fear, wars and famines. The master's whim and cruelty were law for the enslaved; each unknown person was feared as a murderer; the words foreigner and enemy had become synonyms. In such a society the only thing a brave man could do to fight against his destiny and preserve his self-respect was to be merry and ironic, to make fun of the strong and above all of his master.

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