

## RESOURCES

**M**EN are made up of potencies. We are magnets in an iron globe. We have keys to all doors. We are all inventors, each sailing out on a voyage of discovery, guided each by a private chart, of which there is no duplicate. The world is all gates, all opportunities, strings of tension waiting to be struck; the earth sensitive as iodine to light; the most plastic and impressionable medium, alive to every touch, and, whether searched by the plough of Adam, the sword of Cæsar, the boat of Columbus, the telescope of Galileo, or the surveyor's chain of Picard, or the submarine telegraph, — to every one of these experiments it makes a gracious response. I am benefited by every observation of a victory of man over Nature; by seeing that wisdom is better than strength; by seeing that every healthy and resolute man is an organizer, a method coming into a confusion and drawing order out of it. We are touched and cheered by every such example. We like to see the inexhaustible riches of Nature, and the access of every soul to her magazines. These examples wake an infinite hope, and call every man to

emulation. A low, hopeless spirit puts out the eyes; skepticism is slow suicide. A philosophy which sees only the worst; believes neither in virtue nor in genius; which says 't is all of no use, life is eating us up, 't is only question who shall be last devoured, — dispirits us; the sky shuts down before us. A Schopenhauer, with logic and learning and wit, teaching pessimism, — teaching that this is the worst of all possible worlds, and inferring that sleep is better than waking, and death than sleep, — all the talent in the world cannot save him from being odious. But if instead of these negatives you give me affirmatives;<sup>1</sup> if you tell me that there is always life for the living; that what man has done man can do; that this world belongs to the energetic; that there is always a way to everything desirable; that every man is provided, in the new bias of his faculty, with a key to Nature, and that man only rightly knows himself as far as he has experimented on things, — I am invigorated, put into genial and working temper; the horizon opens, and we are full of good will and gratitude to the Cause of Causes.<sup>2</sup> I like the sentiment of the poor woman who, coming from a wretched garret in an inland manufacturing town for the first time to the seashore, gazing at the ocean,

said she was "glad for once in her life to see something which there was enough of."

Our Copernican globe is a great factory or shop of power, with its rotating constellations, times and tides. The machine is of colossal size; the diameter of the water-wheel, the arms of the levers and the volley of the battery out of all mechanic measure; and it takes long to understand its parts and its workings. This pump never sucks; these screws are never loose; this machine is never out of gear. The vat, the piston, the wheels and tires, never wear out, but are self-repairing. Is there any load which water cannot lift? If there be, try steam; or if not that, try electricity. Is there any exhausting of these means? Measure by barrels the spending of the brook that runs through your field. Nothing is great but the inexhaustible wealth of Nature. She shows us only surfaces, but she is million fathoms deep.<sup>1</sup> What spaces! what durations! dealing with races as merely preparations of somewhat to follow; or, in humanity, millions of lives of men to collect the first observations on which our astronomy is built; millions of lives to add only sentiments and guesses, which at last, gathered in by an ear of sensibility, make the furniture of the poet.

See how children build up a language; how every traveller, every laborer, every impatient boss who sharply shortens the phrase or the word to give his order quicker, reducing it to the lowest possible terms, and there it must stay, — improves the national tongue. What power does Nature not owe to her duration, of amassing infinitesimals into cosmical forces!

The marked events in history, as the emigration of a colony to a new and more delightful coast; the building of a large ship; the discovery of the mariner's compass, which perhaps the Phœnicians made; the arrival among an old stationary nation of a more instructed race, with new arts: — each of these events electrifies the tribe to which it befalls; supple the tough barbarous sinew, and brings it into that state of sensibility which makes the transition to civilization possible and sure. By his machines man can dive and remain under water like a shark; can fly like a hawk in the air; can see atoms like a gnat; can see the system of the universe like Uriel, the angel of the sun; can carry whatever loads a ton of coal can lift; can knock down cities with his fist of gunpowder; can recover the history of his race by the medals which the deluge, and every creature, civil or savage or brute,

has involuntarily dropped of its existence ; and divine the future possibility of the planet and its inhabitants by his perception of laws of Nature. Ah ! what a plastic little creature he is ! so shifty, so adaptive ! his body a chest of tools, and he making himself comfortable in every climate, in every condition.<sup>1</sup>

Here in America are all the wealth of soil, of timber, of mines and of the sea, put into the possession of a people who wield all these wonderful machines, have the secret of steam, of electricity ; and have the power and habit of invention in their brain.<sup>2</sup> We Americans have got suppld into the state of melioration.<sup>3</sup> Life is always rapid here, but what acceleration to its pulse in ten years, — what in the four years of the war ! We have seen the railroad and telegraph subdue our enormous geography ; we have seen the snowy deserts on the northwest, seats of Esquimaux, become lands of promise. When our population, swarming west, had reached the boundary of arable land, — as if to stimulate our energy, on the face of the sterile waste beyond, the land was suddenly in parts found covered with gold and silver, floored with coal. It was thought a fable, what Guthrie, a traveller in Persia, told us, that “in Taurida, in any piece

of ground where springs of naphtha (or petroleum) obtain, by merely sticking an iron tube in the earth and applying a light to the upper end, the mineral oil will burn till the tube is decomposed, or for a vast number of years." But we have found the Taurida in Pennsylvania and Ohio. If they have not the lamp of Aladdin, they have the Aladdin oil. Resources of America! why, one thinks of Saint-Simon's saying, "The Golden Age is not behind, but before you." Here is man in the Garden of Eden; here the Genesis and the Exodus. We have seen slavery disappear like a painted scene in a theatre; we have seen the most healthful revolution in the politics of the nation,—the Constitution not only amended, but construed in a new spirit. We have seen China opened to European and American ambassadors and commerce; the like in Japan: our arts and productions begin to penetrate both. As the walls of a modern house are perforated with water-pipes, sound-pipes, gas-pipes, heat-pipes,—so geography and geology are yielding to man's convenience, and we begin to perforate and mould the old ball, as a carpenter does with wood. All is ductile and plastic. We are working the new Atlantic telegraph. American energy is over-

riding every venerable maxim of political science. America is such a garden of plenty, such a magazine of power, that at her shores all the common rules of political economy utterly fail.<sup>1</sup> Here is bread, and wealth, and power, and education for every man who has the heart to use his opportunity. The creation of power had never any parallel. It was thought that the immense production of gold would make gold cheap as pewter. But the immense expansion of trade has wanted every ounce of gold, and it has not lost its value.

See how nations of customers are formed. The disgust of California has not been able to drive nor kick the Chinaman back to his home; and now it turns out that he has sent home to China American food and tools and luxuries, until he has taught his people to use them, and a new market has grown up for our commerce. The emancipation has brought a whole nation of negroes as customers to buy all the articles which once their few masters bought, and every manufacturer and producer in the North has an interest in protecting the negro as the consumer of his wares.

The whole history of our civil war is rich in a thousand anecdotes attesting the fertility of

resource, the presence of mind, the skilled labor of our people. At Annapolis a regiment, hastening to join the army, found the locomotives broken, the railroad destroyed, and no rails. The commander called for men in the ranks who could rebuild the road. Many men stepped forward, searched in the water, found the hidden rails, laid the track, put the disabled engine together and continued their journey.<sup>1</sup> The world belongs to the energetic man. His will gives him new eyes. He sees expedients and means where we saw none. The invalid sits shivering in lamb's-wool and furs; the woodsman knows how to make warm garments out of cold and wet themselves. The Indian, the sailor, the hunter, only these know the power of the hands, feet, teeth, eyes and ears. It is out of the obstacles to be encountered that they make the means of destroying them. The sailor by his boat and sail makes a ford out of deepest waters. The hunter, the soldier, rolls himself in his blanket, and the falling snow, which he did not have to bring in his knapsack, is his eider-down, in which he sleeps warm till the morning. Nature herself gives the hint and the example, if we have wit to take it. See how Nature keeps the lakes warm by tucking them up under a blanket of ice, and the ground under a cloak of



snow. The old forester is never far from shelter; no matter how remote from camp or city, he carries Bangor with him. A sudden shower cannot wet him, if he cares to be dry; he draws his boat ashore, turns it over in a twinkling against a clump of alders with cat-briers, which keep up the lee-side, crawls under it with his comrade, and lies there till the shower is over, happy in his stout roof. The boat is full of water, and resists all your strength to drag it ashore and empty it. The fisherman looks about him, puts a round stick of wood underneath, and it rolls as on wheels at once.<sup>1</sup> Napoleon says, the Corsicans at the battle of Golo, not having had time to cut down the bridge, which was of stone, made use of the bodies of their dead to form an intrenchment. Malus, known for his discoveries in the polarization of light, was captain of a corps of engineers in Bonaparte's Egyptian campaign, which was heinously unprovided and exposed. "Wanting a picket to which to attach my horse," he says, "I tied him to my leg. I slept, and dreamed peaceably of the pleasures of Europe." M. Tissenet had learned among the Indians to understand their language, and, coming among a wild party of Illinois, he overheard them say that they would scalp him. He said to them,

“Will you scalp me? Here is my scalp,” and confounded them by lifting a little periwig he wore. He then explained to them that he was a great medicine-man, and that they did great wrong in wishing to harm him, who carried them all in his heart. So he opened his shirt a little and showed to each of the savages in turn the reflection of his own eyeball in a small pocket-mirror which he had hung next to his skin. He assured them that if they should provoke him he would burn up their rivers and their forests; and taking from his portmanteau a small phial of white brandy, he poured it into a cup, and lighting a straw at the fire in the wigwam, he kindled the brandy (which they believed to be water), and burned it up before their eyes. Then taking up a chip of dry pine, he drew a burning-glass from his pocket and set the chip on fire.<sup>1</sup>

What a new face courage puts on everything! A determined man, by his very attitude and the tone of his voice, puts a stop to defeat, and begins to conquer. “For they can conquer who believe they can.” Every one hears gladly that cheerful voice. He reveals to us the enormous power of one man over masses of men; that one man whose eye commands the end in view and the means by which it can be attained, is not only better than

ten men or a hundred men, but victor over all mankind who do not see the issue and the means. "When a man is once possessed with fear," said the old French Marshal Montluc, "and loses his judgment, as all men in a fright do, he knows not what he does. And it is the principal thing you are to beg at the hands of Almighty God, to preserve your understanding entire; for what danger soever there may be, there is still one way or other to get off, and perhaps to your honor. But when fear has once possessed you, God ye good even! You think you are flying towards the poop when you are running towards the prow, and for one enemy think you have ten before your eyes, as drunkards who see a thousand candles at once."<sup>1</sup>

Against the terrors of the mob, which, intoxicated with passion, and once suffered to gain the ascendant, is diabolic and chaos come again, good sense has many arts of prevention and of relief. Disorganization it confronts with organization, with police, with military force. But in earlier stages of the disorder it applies milder and nobler remedies. The natural offset of terror is ridicule. And we have noted examples among our orators, who have on conspicuous occasions handled and controlled, and, best of all, converted a malignant mob, by superior manhood, and by a wit

which disconcerted and at last delighted the ring-leaders. What can a poor truckman, who is hired to groan and to hiss, do, when the orator shakes him into convulsions of laughter so that he cannot throw his egg? If a good story will not answer, still milder remedies sometimes serve to disperse a mob. Try sending round the contribution-box. Mr. Marshall, the eminent manufacturer at Leeds, was to preside at a Free Trade festival in that city; it was threatened that the operatives, who were in bad humor, would break up the meeting by a mob, Mr. Marshall was a man of peace; he had the pipes laid from the water-works of his mill, with a stop-cock by his chair from which he could discharge a stream that would knock down an ox, and sat down very peacefully to his dinner, which was not disturbed.

See the dexterity of the good aunt in keeping the young people all the weary holiday busy and diverted without knowing it: the story, the pictures, the ballad, the game, the cuckoo-clock, the stereoscope, the rabbits, the mino bird, the pop-corn, and Christmas hemlock spurting in the fire. The children never suspect how much design goes to it, and that this unfailling fertility has been rehearsed a hundred times, when the

necessity came of finding for the little Asmodeus a rope of sand to twist.<sup>1</sup> She relies on the same principle that makes the strength of Newton,— alternation of employment. See how he refreshed himself, resting from the profound researches of the calculus by astronomy; from astronomy by optics; from optics by chronology. It is a law of chemistry that every gas is a vacuum to every other gas; and when the mind has exhausted its energies for one employment, it is still fresh and capable of a different task. We have not a toy or trinket for idle amusement but somewhere it is the one thing needful, for solid instruction or to save the ship or army. In the Mammoth Cave in Kentucky, the torches which each traveller carries make a dismal funeral procession, and serve no purpose but to see the ground. When now and then the vaulted roof rises high overhead and hides all its possibilities in lofty depths, 't is but gloom on gloom. But the guide kindled a Roman candle, and held it here and there shooting its fireballs successively into each crypt of the groined roof, disclosing its starry splendor, and showing for the first time what that plaything was good for.

Whether larger or less, these strokes and all exploits rest at last on the wonderful structure

of the mind. And we learn that our doctrine of resources must be carried into higher application, namely, to the intellectual sphere. But every power in energy speedily arrives at its limits, and requires to be husbanded : the law of light, which Newton said 'proceeded by "fits of easy reflection and transmission ;" the come-and-go of the pendulum, is the law of mind ; alternation of labors is its rest.'

I should like to have the statistics of bold experimenting on the husbandry of mental power. In England men of letters drink wine ; in Scotland, whiskey ; in France, light wines ; in Germany, beer. In England everybody rides in the saddle ; in France the theatre and the ball occupy the night. In this country we have not learned how to repair the exhaustions of our climate. Is not the seaside necessary in summer ? Games, fishing, bowling, hunting, gymnastics, dancing, — are not these needful to you ? The chapter of pastimes is very long. There are better games than billiards and whist. It was a pleasing trait in Goethe's romance, that Makaria retires from society "to astronomy and her correspondence."

I do not know that the treatise of Brillat-Savarin on the Physiology of Taste deserves its fame.

I know its repute, and I have heard it called the France of France. But the subject is so large and exigent that a few particulars, and those the pleasures of the epicure, cannot satisfy. I know many men of taste whose single opinions and practice would interest much more. It should be extended to gardens and grounds, and mainly one thing should be illustrated: that life in the country wants all things on a low tone, — wants coarse clothes, old shoes, no fleet horse that a man cannot hold, but an old horse that will stand tied in a pasture half a day without risk, so allowing the picnic-party the full freedom of the woods. Natural history is, in the country, most attractive; at once elegant, immortal, always opening new resorts. The first care of a man settling in the country should be to open the face of the earth to himself by a little knowledge of Nature, or a great deal, if he can; of birds, plants, rocks, astronomy; in short, the art of taking a walk. This will draw the sting out of frost, dreariness out of November and March, and the drowsiness out of August.<sup>1</sup> To know the trees is, as Spenser says of the ash, “for nothing ill.” Shells, too; how hungry I found myself, the other day, at Agassiz’s Museum, for their names! But the uses of the woods are many, and some of them

for the scholar high and peremptory. When his task requires the wiping out from memory

“ all trivial fond records

That youth and observation copied there,”<sup>1</sup>

he must leave the house, the streets and the club, and go to wooded uplands, to the clearing and the brook. Well for him if he can say with the old minstrel, “ I know where to find a new song.”<sup>2</sup>

If I go into the woods in winter, and am shown the thirteen or fourteen species of willow that grow in Massachusetts, I learn that they quietly expand in the warmer days, or when nobody is looking at them, and, though insignificant enough in the general bareness of the forest, yet a great change takes place in them between fall and spring; in the first relentings of March they hasten, and long before anything else is ready, these osiers hang out their joyful flowers in contrast to all the woods. You cannot tell when they do bud and blossom, these vivacious trees, so ancient, for they are almost the oldest of all. Among fossil remains, the willow and the pine appear with the ferns. They bend all day to every wind; the cart-wheel in the road may crush them; every passenger may strike off a twig with his cane; every boy cuts them for a



whistle ; the cow, the rabbit, the insect, bite the sweet and tender bark ; yet, in spite of accident and enemy, their gentle persistency lives when the oak is shattered by storm, and grows in the night and snow and cold. When I see in these brave plants this vigor and immortality in weakness, I find a sudden relief and pleasure in observing the mighty law of vegetation, and I think it more grateful and health-giving than any news I am likely to find of man in the journals, and better than Washington politics.

It is easy to see that there is no limit to the chapter of Resources. I have not, in all these rambling sketches, gone beyond the beginning of my list. Resources of Man, — it is the inventory of the world, the roll of arts and sciences ; it is the whole of memory, the whole of invention ; it is all the power of passion, the majesty of virtue and the omnipotence of will.

But the one fact that shines through all this plenitude of powers is, that as is the receiver, so is the gift ; that all these acquisitions are victories of the good brain and brave heart ; that the world belongs to the energetic, belongs to the wise. It is in vain to make a paradise but for good men. The tropics are one vast garden ; yet

man is more miserably fed and conditioned there than in the cold and stingy zones. The healthy, the civil, the industrious, the learned, the moral race, — Nature herself only yields her secret to these. And the resources of America and its future will be immense only to wise and virtuous men.<sup>1</sup>