

Thomas Carlyle: Signs of the Times (1829)

[...] Were we required to characterise this age of ours by any single epithet, we should be tempted to call it, not an Heroical, Devotional, Philosophical, or Moral Age, but, above all others, the Mechanical Age. It is the Age of Machinery, in every outward and inward sense of that word; the age which, with its whole undivided might, forwards, teaches and practises the great art of adapting means to ends. Nothing is now done directly, or by hand; all is by rule and calculated contrivance. For the simplest operation, some helps and accompaniments, some cunning abbreviating process is in readiness. Our old modes of exertion are all discredited, and thrown aside. On every hand, the living artisan is driven from his workshop, to make room for a speedier, inanimate one. The shuttle drops from the fingers of the weaver, and falls into iron fingers that ply it faster. The sailor furls his sail, and lays down his oar; and bids a strong, unwearied servant, on vaporous wings, bear him through the waters. Men have crossed oceans by steam; the Birmingham Fire-king has visited the fabulous East; and the genius of the Cape were there any Camoens now to sing it, has again been alarmed, and with far stranger thunders than Gama's. There is no end to machinery. Even the horse is stripped of his harness, and finds a fleet fire-horse invoked in his stead. Nay, we have an artist that hatches chickens by steam; the very brood-hen is to be superseded! For all earthly, and for some unearthly purposes, we have machines and mechanic furtherances; for mincing our cabbages; for casting us into magnetic sleep. We remove mountains, and make seas our smooth highways; nothing can resist us. We war with rude Nature; and, by our resistless engines, come off always victorious, and loaded with spoils.

What wonderful accessions have thus been made, and are still making, to the physical power of mankind; how much better fed, clothed, lodged and, in all outward respects, accommodated men now are, or might be, by a given quantity of labour, is a grateful reflection which forces itself on every one. What changes, too, this addition of power is introducing into the Social System; how wealth has more and more

increased, and at the same time gathered itself more and more into masses, strangely altering the old relations, and increasing the distance between the rich and the poor, will be a question for Political Economists, and a much more complex and important one than any they have yet engaged with.

But leaving these matters for the present, let us observe how the mechanical genius of our time has diffused itself into quite other provinces. Not the external and physical alone is now managed by machinery, but the internal and spiritual also. Here too nothing follows its spontaneous course, nothing is left to be accomplished by old natural methods. Everything has its cunningly devised implements, its pre-established apparatus; it is not done by hand, but by machinery. Thus we have machines for Education: Lancastrian machines; Hamiltonian machines; monitors, maps and emblems. Instruction, that mysterious communing of Wisdom with Ignorance, is no longer an indefinable tentative process, requiring a study of individual aptitudes, and a perpetual variation of means and methods, to attain the same end; but a secure, universal, straightforward business, to be conducted in the gross, by proper mechanism, with such intellect as comes to hand. Then, we have Religious machines, of all imaginable varieties; the Bible-Society, professing a far higher and heavenly structure, is found, on inquiry, to be altogether an earthly contrivance: supported by collection of moneys, by fomenting of vanities, by puffing, intrigue and chicane; a machine for converting the Heathen. It is the same in all other departments. Has any man, or any society of men, a truth to speak, a piece of spiritual work to do; they can nowise proceed at once and with the mere natural organs, but must first call a public meeting, appoint committees, issue prospectuses, eat a public dinner; in a word, construct or borrow machinery, wherewith to speak it and do it. Without machinery, they were hopeless, helpless; a colony of Hindoo weavers squatting in the heart of Lancashire. Mark, too, how every machine must have its moving power, in some of the great currents of society; every little sect among us, Unitarians, Utilitarians, Anabaptists, Phrenologists, must have its Periodical, its monthly or quarterly Magazine; – hanging out, like its windmill, into the *popularis aura*, to grind meal for the society.

With individuals, in like manner, natural strength avails little. No individual now hopes to accomplish the poorest enterprise single-handed and without mechanical aids; he must make interest with some existing corporation, and till his field with their oxen. In these days, more emphatically than ever, 'to live, signifies to unite with a party, or to make one.' Philosophy, Science, Art, Literature, all depend on machinery. No Newton, by silent meditation, now discovers the system of the world from the falling of an apple; but some quite other than Newton stands in his Museum, his Scientific Institution, and behind whole batteries of retorts, digesters, and galvanic piles imperatively 'interrogates Nature,' – who however, shows no haste to answer. In defect of Raphaels, and Angelos, and Mozarts, we have Royal Academies of Painting, Sculpture, Music; whereby the languishing spirits of Art may be strengthened, as by the more generous diet of a Public Kitchen. Literature, too, has its Paternoster-row mechanism, its Trade-dinners, its Editorial conclaves, and huge subterranean, puffing bellows; so that books are not only printed, but, in a great measure, written and sold, by machinery.

National culture, spiritual benefit of all sorts, is under the same management. No Queen Christina, in these times, needs to send for her Descartes; no King Frederick for his Voltaire, and painfully nourish him with pensions and flattery: any sovereign of taste, who wishes to enlighten his people, has only to impose a new tax, and with the proceeds establish Philosophic Institutes. Hence the Royal and Imperial Societies, the Bibliothèques, Glyptothèques, Technothèques, which front us in all capital cities; like so many well-finished hives, to which it is expected the stray agencies of Wisdom will swarm of their own accord, and hive and make honey. In like manner, among ourselves, when it is thought that religion is declining, we have only to vote half-a-million's worth of bricks and mortar, and build new churches. In Ireland it seems they have gone still farther, having actually established a 'Penny-a-week Purgatory-Society'! Thus does the Genius of Mechanism stand by to help us in all difficulties and emergencies, and with his iron back bears all our burdens.

These things, which we state lightly enough here, are yet of deep import, and indicate a mighty change in our whole manner of existence. For the same habit regulates not our modes of action alone, but

our modes of thought and feeling. Men are grown mechanical in head and in heart, as well as in hand. They have lost faith in individual endeavour, and in natural force, of any kind. Not for internal perfection, but for external combinations and arrangements, for institutions, constitutions, – for Mechanism of one sort or other, do they hope and struggle. Their whole efforts, attachments, opinions, turn on mechanism, and are of a mechanical character.

We may trace this tendency in all the great manifestations of our time; in its intellectual aspect, the studies it most favours and its manner of conducting them; in its practical aspects, its politics, arts, religion, morals; in the whole sources, and throughout the whole currents, of its spiritual, no less than its material activity.

Consider, for example, the state of Science generally, in Europe, at this period. It is admitted, on all sides, that the Metaphysical and Moral Sciences are falling into decay, while the Physical are engrossing, every day, more respect and attention. In most of the European nations there is now no such thing as a Science of Mind; only more or less advancement in the general science, or the special sciences, of matter. The French were the first to desert Metaphysics; and though they have lately affected to revive their school, it has yet no signs of vitality. The land of Malebranche, Pascal, Descartes and Fénelon, has now only its Cousins and Villemains; while, in the department of Physics, it reckons far other names. Among ourselves, the Philosophy of Mind, after a rickety infancy, which never reached the vigour of manhood, fell suddenly into decay, languished and finally died out, with its last amiable cultivator, Professor Stewart. In no nation but Germany has any decisive effort been made in psychological science; not to speak of any decisive result. The science of the age, in short, is physical, chemical, physiological; in all shapes mechanical. Our favourite Mathematics, the highly prized exponent of all these other sciences, has also become more and more mechanical. Excellence in what is called its higher departments depends less on natural genius than on acquired expertness in wielding its machinery. Without undervaluing the wonderful results which a Lagrange or Laplace educes by means of it, we may remark, that their calculus, differential and integral, is little else than a more cunningly-constructed arithmetical mill; where the factors, being put in, are, as it were, ground into the true product,

under cover, and without other effort on our part than steady turning of the handle. We have more Mathematics than ever; but less Mathesis. Archimedes and Plato could not have read the *Mécanique Céleste*; but neither would the whole French Institute see aught in that saying, 'God geometrises!' but a sentimental rodomontade.

Nay, our whole Metaphysics itself, from Locke's time downward, has been physical; not a spiritual philosophy, but a material one. The singular estimation in which his Essay was so long held as a scientific work (an estimation grounded, indeed, on the estimable character of the man) will one day be thought a curious indication of the spirit of these times. His whole doctrine is mechanical, in its aim and origin, in its method and its results. It is not a philosophy of the mind: it is a mere discussion concerning the origin of our consciousness, or ideas, or whatever else they are called; a genetic history of what we see in the mind. The grand secrets of Necessity and Freewill, of the Mind's vital or non-vital dependence on Matter, of our mysterious relations to Time and Space, to God, to the Universe, are not, in the faintest degree touched on in these inquiries; and seem not to have the smallest connexion with them.

The last class of our Scotch Metaphysicians had a dim notion that much of this was wrong; but they knew not how to right it. The school of Reid had also from the first taken a mechanical course, not seeing any other. The singular conclusions at which Hume, setting out from their admitted premises, was arriving, brought this school into being; they let loose Instinct, as an indiscriminating ban-dog, to guard them against these conclusions; – they tugged lustily at the logical chain by which Hume was so coldly towing them and the world into bottomless abysses of Atheism and Fatalism. But the chain somehow snapped between them; and the issue has been that nobody now cares about either, – any more than about Hartley's, Darwin's, or Priestley's contemporaneous doings in England. Hartley's vibrations and vibratiuncles, one would think, were material and mechanical enough; but our Continental neighbours have gone still farther. One of their philosophers has lately discovered, that 'as the liver secretes bile, so does the brain secrete thought'; which astonishing discovery Dr. Cabanis, more lately still, in his *Rapports du Physique et du Morale de l'Homme*, has pushed into its minutest developments.

The metaphysical philosophy of this last inquirer is certainly no shadowy or unsubstantial one. He fairly lays open our moral structure with his dissecting-knives and real metal probes; and exhibits it to the inspection of mankind, by Leuwenhoek microscopes, and inflation with the anatomical blowpipe. Thought, he is inclined to hold, is still secreted by the brain; but then Poetry and Religion (and it is really worth knowing) are 'a product of the smaller intestines!' We have the greatest admiration for this learned doctor: with what scientific stoicism he walks through the land of wonders, unwondering; like a wise man through some huge, gaudy, imposing Vauxhall, whose fire-works, cascades and symphonies, the vulgar may enjoy and believe in, – but where he finds nothing real but the saltpetre, pasteboard and catgut. His book may be regarded as the ultimatum of mechanical metaphysics in our time; a remarkable realisation of what in Martinus Scriblerus was still only an idea, that 'as the jack had a meat-roasting quality, so had the body a thinking quality,' – upon the strength of which the Nurembergers were to build a wood-and-leather man, 'who should reason as well as most country parsons.' Vaucanson did indeed make a wooden duck, that seemed to eat and digest; but that bold scheme of the Nurembergers remained for a more modern virtuoso.

This condition of the two great departments of knowledge – the outward, cultivated exclusively on mechanical principles; the inward, finally abandoned, because, cultivated on such principles, it is found to yield no result, – sufficiently indicates the intellectual bias of our time, its all-pervading disposition towards that line of inquiry. In fact, an inward persuasion has long been diffusing itself, and now and then even comes to utterance, That, except the external, there are no true sciences; that to the inward world (if there be any) our only conceivable road is through the outward; that, in short, what cannot be investigated and understood mechanically, cannot be investigated and understood at all. We advert the more particularly to these intellectual propensities, as to prominent symptoms of our age, because Opinion is at all times doubly related to Action, first as cause, then as effect; and the speculative tendency of any age will therefore give us, on the whole, the best indications of its practical tendency.

Nowhere, for example, is the deep, almost exclusive faith we have in Mechanism more visible than in the Politics of this time. Civil gov-

ernment does by its nature include much that is mechanical, and must be treated accordingly. We term it indeed, in ordinary language, the Machine of Society, and talk of it as the grand working wheel from which all private machines must derive, or to which they must adapt, their movements. Considered merely as a metaphor, all this is well enough; but here, as in so many other cases, the 'foam hardens itself into a shell,' and the shadow we have wantonly evoked stands terrible before us and will not depart at our bidding. Government includes much also that is not mechanical, and cannot be treated mechanically; of which latter truth, as appears to us, the political speculations and exertions of our time are taking less and less cognisance.

Nay, in the very outset, we might note the mighty interest taken in *mere political arrangements*, as itself the sign of a mechanical age. The whole discontent of Europe takes this direction. The deep, strong cry of all civilised nations, – a cry which, every one now sees, must and will be answered, is: Give us a reform of Government! A good structure of legislation, a proper check upon the executive, a wise arrangement of the judiciary, is all that is wanting for human happiness. The Philosopher of this age is not a Socrates, a Plato, a Hooker, or Taylor, who inculcates on men the necessity and infinite worth of moral goodness, the great truth that our happiness depends on the mind which is within us, and not on the circumstances which are without us; but a Smith, a De Lolme, a Bentham, who chiefly inculcates the reverse of this, – that our happiness depends entirely on external circumstances; nay, that the strength and dignity of the mind within us is itself the creature and consequence of these. Were the laws, the government, in good order, all were well with us; the rest would care for itself! Dissenters from this opinion, expressed or implied, are now rarely to be met with; widely and angrily as men differ in its application, the principle is admitted by all.

Equally mechanical, and of equal simplicity, are the methods proposed by both parties for completing or securing this all-sufficient perfection of arrangement. It is no longer the moral, religious, spiritual condition of the people that is our concern, but their physical, practical, economical condition, as regulated by public laws. Thus is the Body-politic more than ever worshipped and tendered; but the Soul-politic less than ever. Love of country, in any high or generous sense,

in any other than an almost animal sense, or mere habit, has little importance attached to it in such reforms, or in the opposition shown them. Men are to be guided only by their self-interests. Good government is a good balancing of these; and, except a keen eye and appetite for self-interest, requires no virtue in any quarter. To both parties it is emphatically a machine: to the discontented, a 'taxing-machine'; to the contented, a 'machine for securing property.' Its duties and its faults are not those of a father, but of an active parish-constable.

Thus it is by the mere condition of the machine, by preserving it untouched, or else by reconstructing it, and oiling it anew, that man's salvation as a social being is to be ensured and indefinitely promoted. Contrive the fabric of law aright, and without farther effort on your part, that divine spirit of Freedom, which all hearts venerate and long for, will of herself come to inhabit it; and under her healing wings every noxious influence will wither, every good and salutary one more and more expand. Nay, so devoted are we to this principle, and at the same time so curiously mechanical, that a new trade, specially grounded on it, has arisen among us, under the name of 'Codification,' or codemaking in the abstract; whereby any people, for a reasonable consideration, may be accommodated with a patent code; – more easily than curious individuals with patent breeches, for the people does not need to be measured first.

To us who live in the midst of all this, and see continually the faith, hope and, practice of every one founded on Mechanism of one kind or other, it is apt to seem quite natural, and as if it could never have been otherwise. Nevertheless, if we recollect or reflect a little, we shall find both that it has been, and might again be otherwise. The domain of Mechanism, – meaning thereby political, ecclesiastical or other outward establishments, – was once considered as embracing, and we are persuaded can at any time embrace, but a limited portion of man's interests, and by no means the highest portion.

To speak a little pedantically, there is a science of *Dynamics* in man's fortunes and nature, as well as of *Mechanics*. There is a science which treats of, and practically addresses, the primary, unmodified forces and energies of man, the mysterious springs of Love, and Fear, and Wonder, of Enthusiasm, Poetry, Religion, all which have a truly

vital and *infinite* character; as well as a science which practically addresses the finite, modified developments of these, when they take the shape of immediate 'motives,' as hope of reward, or as fear of punishment.

Now it is certain, that in former times the wise men, the enlightened lovers of their kind, who appeared generally as Moralists, Poets or Priests, did, without neglecting the Mechanical province, deal chiefly with the Dynamical; applying themselves chiefly to regulate, increase and purify the inward primary powers of man; and fancying that herein lay the main difficulty, and the best service they could undertake. But a wide difference is manifest in our age. For the wise men, who now appear as Political Philosophers, deal exclusively with the Mechanical province; and occupying themselves in counting-up and estimating men's motives, strive by curious checking and balancing, and other adjustments of Profit and Loss, to guide them to their true advantage: while, unfortunately, those same 'motives' are so innumerable, and so variable in every individual, that no really useful conclusion can ever be drawn from their enumeration. But though Mechanism, wisely contrived, has done much for man in a social and moral point of view, we cannot be persuaded that it has ever been the chief source of his worth or happiness. Consider the great elements of human enjoyment, the attainments and possessions that exalt man's life to its present height, and see what part of these he owes to institutions, to Mechanism of any kind; and what to the instinctive, unbounded force, which Nature herself lent him, and still continues to him. Shall we say, for example, that Science and Art are indebted principally to the founders of Schools and Universities? Did not Science originate rather, and gain advancement, in the obscure closets of the Roger Bacons, Keplers, Newtons; in the workshops of the Faustus and the Watts; wherever, and in what guise soever Nature, from the first times downwards, had sent a gifted spirit upon the earth? Again, were Homer and Shakspeare members of any benefited guild, or made Poets by means of it? Were Painting and Sculpture created by forethought, brought into the world by institutions for that end? No; Science and Art have, from first to last, been the free gift of Nature; an unsolicited, unexpected gift; often even a fatal one. These things rose up, as it were, by spontaneous growth, in the free soil and sunshine of

Nature. They were not planted or grafted, nor even greatly multiplied or improved by the culture or manuring of institutions. Generally speaking, they have derived only partial help from these; often enough have suffered damage. They made constitutions for themselves. They originated in the Dynamical nature of man, not in his Mechanical nature.

Or, to take an infinitely higher instance, that of the Christian Religion, which, under every theory of it, in the believing or unbelieving mind, must ever be regarded as the crowning glory, or rather the life and soul, of our whole modern culture: How did Christianity arise and spread abroad among men? Was it by institutions, and establishments and well-arranged systems of mechanism? Not so; on the contrary, in all past and existing institutions for those ends, its divine spirit has invariably been found to languish and decay. It arose in the mystic deeps of man's soul; and was spread abroad by the 'preaching of the word,' by simple, altogether natural and individual efforts; and flew, like hallowed fire, from heart to heart, till all were purified and illuminated by it; and its heavenly light shone, as it still shines, and (as sun or star) will ever shine, through the whole dark destinies of man. Here again was no Mechanism; man's highest attainment was accomplished Dynamically, not Mechanically.

Nay, we will venture to say, that no high attainment, not even any far-extending movement among men, was ever accomplished otherwise. Strange as it may seem, if we read History with any degree of thoughtfulness, we shall find that the checks and balances of Profit and Loss have never been the grand agents with men. that they have never been roused into deep, thorough, all-pervading efforts by any computable prospect of Profit and Loss, for any visible, finite object; but always for some invisible and infinite one. The Crusades took their rise in Religion; their visible object was, commercially speaking, worth nothing. It was the boundless Invisible world that was laid bare in the imaginations of those men; and in its burning light, the visible shrunk as a scroll. Not mechanical, nor produced by mechanical means, was this vast movement. No dining at Freemasons' Tavern, with the other long train of modern machinery; no cunning reconciliation of 'vested interests,' was required here: only the passionate voice of one man, the rapt soul looking through the eyes of one man; and rugged, steel-clad

Europe trembled beneath his words, and followed him whither he listed. In later ages it was still the same. The Reformation had an invisible, mystic and ideal aim; the result was indeed to be embodied in external things; but its spirit, its worth, was internal, invisible, infinite. Our English Revolution too originated in Religion. Men did battle, in those old days, not for Purse-sake, but for Conscience-sake. Nay, in our own days, it is no way different. The French Revolution itself had something higher in it than cheap bread and a Habeas-corpus act. Here too was an Idea; a Dynamic, not a Mechanic force. It was a struggle, though a blind and at last an insane one, for the infinite, divine nature of Right, of Freedom, of Country.

Thus does man, in every age, vindicate, consciously or unconsciously, his celestial birthright. Thus does Nature hold on her wondrous, unquestionable course; and all our systems and theories are but so many froth-eddies or sandbanks, which from time to time she casts up, and washes away. When we can drain the Ocean into mill-ponds, and bottle-up the Force of Gravity, to be sold by retail, in gas jars; then may we hope to comprehend the infinitudes of man's soul under formulas of Profit and Loss; and rule over this too, as over a patent engine, by checks, and valves, and balances.

Nay, even with regard to Government itself, can it be necessary to remind any one that Freedom, without which indeed all spiritual life is impossible, depends on infinitely more complex influences than either the extension or the curtailment of the 'democratic interest'? Who is there that, 'taking the high priori road,' shall point out what these influences are; what deep, subtle, inextricably entangled influences they have been and may be? For man is not the creature and product of Mechanism; but, in a far truer sense, its creator and producer: it is the noble People that makes the noble Government; rather than conversely. On the whole, Institutions are much; but they are not all. The freest and highest spirits of the world have often been found under strange outward circumstances: Saint Paul and his brother Apostles were politically slaves; Epictetus was personally one. Again, forget the influences of Chivalry and Religion, and ask: What countries produced Columbus and Las Casas? Or, descending from virtue and heroism to mere energy and spiritual talent: Cortes, Pizarro, Alba, Ximenes? The Spaniards of the sixteenth century were indisputably the noblest nation

of Europe: yet they had the Inquisition and Philip II. They have the same government at this day; and are the lowest nation. The Dutch too have retained their old constitution; but no Siege of Leyden, no William the Silent, not even an Egmont or De Witt any longer appears among them. With ourselves also, where much has changed, effect has nowise followed cause as it should have done: two centuries ago, the Commons Speaker addressed Queen Elizabeth on bended knees, happy that the virago's foot did not even smite him; yet the people were then governed, not by a Castlereagh, but by a Burghley; they had their Shakspeare and Philip Sidney, where we have our Sheridan Knowles and Beau Brummel.

These and the like facts are so familiar, the truths which they preach so obvious, and have in all past times been so universally believed and acted on, that we should almost feel ashamed for repeating them; were it not that, on every hand, the memory of them seems to have passed away, or at best died into a faint tradition, of no value as a practical principle. To judge by the loud clamour of our Constitution-builders, Statists, Economists, directors, creators, reformers of Public Societies; in a word, all manner of Mechanists, from the Cartwright up to the Code-maker; and by the nearly total silence of all Preachers and Teachers who should give a voice to Poetry, Religion and Morality, we might fancy either that man's Dynamical nature was, to all spiritual intents, extinct, or else so perfected that nothing more was to be made of it by the old means; and henceforth only in his Mechanical contrivances did any hope exist for him.

To define the limits of these two departments of man's activity, which work into one another, and by means of one another, so intricately and inseparably, were by its nature an impossible attempt. Their relative importance, even to the wisest mind, will vary in different times, according to the special wants and dispositions of those times. Meanwhile, it seems clear enough that only in the right coordination of the two, and the vigorous forwarding of *both*, does our true line of action lie. Undue cultivation of the inward or Dynamical province leads to idle, visionary, impracticable courses, and, especially in rude eras, to Superstition and Fanaticism, with their long train of baleful and well-known evils. Undue cultivation of the outward, again, though less immediately prejudicial, and even for the time productive of many

palpable benefits, must, in the long-run, by destroying Moral Force, which is the parent of all other Force, prove not less certainly, and perhaps still more hopelessly, pernicious. This, we take it, is the grand characteristic of our age. By our skill in Mechanism, it has come to pass, that in the management of external things we excel all other ages; while in whatever respects the pure moral nature, in true dignity of soul and character, we are perhaps inferior to most civilised ages. [...]