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PART V.

## Back to Methuselah

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## BACK TO METHUSELAH

A Metabiological Pentateuch

by

BERNARD SHAW

1921

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### PREFACE

The Infidel Half Century

#### THE DAWN OF DARWINISM

One day early in the eighteen hundred and sixties, I, being then a small boy, was with my nurse, buying something in the shop of a petty newsagent, bookseller, and stationer in Camden Street, Dublin, when there entered an elderly man, weighty and solemn, who advanced to the counter, and said pompously, 'Have you the works of the celebrated Buffon?'

My own works were at that time unwritten, or it is possible that the shop assistant might have misunderstood me so far as to produce a copy of *Man and Superman*. As it was, she knew quite well what he wanted; for this was before the Education Act of 1870 had produced shop assistants who know how to read and know nothing else. The celebrated Buffon was not a humorist, but the famous naturalist Buffon. Every literate child at that time knew Buffon's *Natural History* as well as Esop's *Fables*. And no living child had heard the name that has since obliterated Buffon's in the popular consciousness: the name of Darwin.

Ten years elapsed. The celebrated Buffoon was forgotten; I had doubled my years and my length; and I had discarded the religion of my forefathers. One day the richest and consequently most dogmatic of my uncles came into a restaurant where I was dining, and found himself, much against his will, in conversation with the most questionable of his nephews. By way of making myself agreeable, I spoke of modern thought and Darwin. He said, 'Oh, that's the fellow who wants to make out that we all have tails like monkeys.' I tried to explain that what Darwin had insisted on in this connection was that some monkeys have no tails. But my uncle was as impervious to what Darwin really said as any Neo-Darwinian nowadays. He died impenitent, and did not mention me in his will.

Twenty years elapsed. If my uncle had been alive, he would have known all about Darwin, and known it all wrong. In spite of the efforts of Grant Allen to set him right, he would have accepted Darwin as the discoverer of Evolution, of Heredity, and of modification of species by Selection. For the pre-Darwinian age had come to be regarded as a Dark Age in which men still believed that the book of Genesis was a standard scientific treatise, and that the only additions to it were Galileo's demonstration of Leonardo da Vinci's simple remark that the earth is a moon of the sun, Newton's theory of gravitation, Sir Humphry Davy's invention of the safety-lamp, the discovery of electricity, the application of steam to industrial purposes, and the penny post. It was just the same in other subjects. Thus Nietzsche, by the two or three who had come across his writings, was supposed to have been the first man to whom it occurred that mere morality and legality and urbanity lead nowhere, as if Bunyan had never written *Badman*. Schopenhauer was credited with inventing the distinction between the Covenant of Grace and the Covenant of Works which troubled Cromwell on his deathbed. People talked as if there had been no dramatic or descriptive music before Wagner; no impressionist painting before Whistler; whilst as to myself, I was finding that the surest way to produce an effect of daring innovation and originality was to revive the ancient attraction of long rhetorical speeches; to stick closely to the methods of Molière; and to lift characters bodily out of the pages of Charles Dickens.

#### THE ADVENT OF THE NEO-DARWINIANS

This particular sort of ignorance does not always or often matter. But in Darwin's case it did matter. If Darwin had really led the world at one bound from the book of Genesis to Heredity, to Modification of Species by Selection, and to Evolution, he would have been a philosopher and a prophet as well as an eminent professional naturalist, with geology as a hobby. The delusion that he had actually achieved this feat did no harm at first, because if people's views are sound, about evolution or anything else, it does not make two straws difference whether they call the revealer of their views Tom or Dick. But later on such apparently negligible errors have awkward consequences. Darwin was given an imposing reputation as not only an Evolutionist, but as *the* Evolutionist, with the immense majority who never read his books. The few who never read any others were led by them to concentrate exclusively on Circumstantial Selection as the explanation of all the transformations and adaptations which were the evidence for Evolution. And they presently found themselves so cut off by this specialization from the majority who knew Darwin only by his spurious reputation, that they were obliged to distinguish themselves, not as Darwinians, but as Neo-Darwinians.

Before ten more years had elapsed, the Neo-Darwinians were practically running current Science. It was 1906; I was fifty; I published my own view of evolution in a play called *Man and Superman*; and I found that most people were unable to understand how I could be an Evolutionist and not a Neo-Darwinian, or why I habitually derided Neo-Darwinism as a ghastly idiocy, and would fall on its professors slaughterously in public discussions. It was in the hope of making me clear the matter up that the Fabian Society, which was then organizing a series of lectures on Prophets of the Nineteenth Century, asked me to deliver a lecture on the prophet Darwin. I did so; and scraps of that lecture, which was never published, variegated these pages.

#### POLITICAL INADEQUACY OF THE HUMAN ANIMAL

Ten more years elapsed. Neo-Darwinism in politics had produced a European catastrophe of a magnitude so

appalling, and a scope so unpredictable, that as I write these lines in 1920, it is still far from certain whether our civilization will survive it. The circumstances of this catastrophe, the boyish cinema-fed romanticism which made it possible to impose it on the people as a crusade, and especially the ignorance and errors of the victors of Western Europe when its violent phase had passed and the time for reconstruction arrived, confirmed a doubt which had grown steadily in my mind during my forty years public work as a Socialist: namely, whether the human animal, as he exists at present, is capable of solving the social problems raised by his own aggregation, or, as he calls it, his civilization.

### COWARDICE OF THE IRRELIGIOUS

Another observation I had made was that goodnatured unambitious men are cowards when they have no religion. They are dominated and exploited not only by greedy and often half-witted and half-alive weaklings who will do anything for cigars, champagne, motor cars, and the more childish and selfish uses of money, but by able and sound administrators who can do nothing else with them than dominate and exploit them. Government and exploitation become synonymous under such circumstances; and the world is finally ruled by the childish, the brigands, and the blackguards. Those who refuse to stand in with them are persecuted and occasionally executed when they give any trouble to the exploiters. They fall into poverty when they lack lucrative specific talents. At the present moment one half of Europe, having knocked the other half down, is trying to kick it to death, and may succeed: a procedure which is, logically, sound Neo-Darwinism. And the goodnatured majority are looking on in helpless horror, or allowing themselves to be persuaded by the newspapers of their exploiters that the kicking is not only a sound commercial investment, but an act of divine justice of which they are the ardent instruments.

But if Man is really incapable of organizing a big civilization, and cannot organize even a village or a tribe any too well, what is the use of giving him a religion? A religion may make him hunger and thirst for righteousness; but will it endow him with the practical capacity to satisfy that appetite? Good intentions do not carry with them a grain of political science, which is a very complicated one. The most devoted and indefatigable, the most able and disinterested students of this science in England, as far as I know, are my friends Sidney and Beatrice Webb. It has taken them forty years of preliminary work, in the course of which they have published several treatises comparable to Adam Smith's *Wealth of Nations*, to formulate a political constitution adequate to existing needs. If this is the measure of what can be done in a lifetime by extraordinary ability, keen natural aptitude, exceptional opportunities, and freedom from the preoccupations of bread-winning, what are we to expect from the parliament man to whom political science is as remote and distasteful as the differential calculus, and to whom such an elementary but vital point as the law of economic rent is a *pons asinorum* never to be approached, much less crossed? Or from the common voter who is mostly so hard at work all day earning a living that he cannot keep awake for five minutes over a book?

### IS THERE ANY HOPE IN EDUCATION?

The usual answer is that we must educate our masters: that is, ourselves. We must teach citizenship and political science at school. But must we? There is no must about it, the hard fact being that we must *not* teach political science or citizenship at school. The schoolmaster who attempted it would soon find himself penniless in the streets without pupils, if not in the dock pleading to a pompously worded indictment for sedition against the exploiters. Our schools teach the morality of feudalism corrupted by commercialism, and hold up the military conqueror, the robber baron, and the profiteer, as models of the illustrious and the successful. In vain do the prophets who see through this imposture preach and teach a better gospel: the individuals whom they convert are doomed to pass away in a few years; and the new generations are dragged back in the schools to the morality of the fifteenth century, and think themselves Liberal when they are defending the ideas of Henry VII, and gentlemanly when they are opposing to them the ideas of Richard III. Thus the educated man is a greater nuisance than the uneducated one: indeed it is the inefficiency and sham of the educational side of our schools (to which, except under compulsion, children would not be sent by their parents at all if they did not act as prisons in which the immature are kept from worrying the mature) that save

us from being dashed on the rocks of false doctrine instead of drifting down the midstream of mere ignorance. There is no way out through the schoolmaster.

### HOMEOPATHIC EDUCATION

In truth, mankind cannot be saved from without, by schoolmasters or any other sort of masters: it can only be lamed and enslaved by them. It is said that if you wash a cat it will never again wash itself. This may or may not be true: what is certain is that if you teach a man anything he will never learn it; and if you cure him of a disease he will be unable to cure himself the next time it attacks him. Therefore, if you want to see a cat clean, you throw a bucket of mud over it, when it will immediately take extraordinary pains to lick the mud off, and finally be cleaner than it was before. In the same way doctors who are up-to-date (BURGE-LUBIN per cent of all the registered practitioners, and 20 per cent of the unregistered ones), when they want to rid you of a disease or a symptom, inoculate you with that disease or give you a drug that produces that symptom, in order to provoke you to resist it as the mud provokes the cat to wash itself.

Now an acute person will ask me why, if this be so, our false education does not provoke our scholars to find out the truth. My answer is that it sometimes does. Voltaire was a pupil of the Jesuits; Samuel Butler was the pupil of a hopelessly conventional and erroneous country parson. But then Voltaire was Voltaire, and Butler was Butler: that is, their minds were so abnormally strong that they could throw off the doses of poison that paralyse ordinary minds. When the doctors inoculate you and the homeopaths dose you, they give you an infinitesimally attenuated dose. If they gave you the virus at full strength it would overcome your resistance and produce its direct effect. The doses of false doctrine given at public schools and universities are so big that they overwhelm the resistance that a tiny dose would provoke. The normal student is corrupted beyond redemption, and will drive the genius who resists out of the country if he can. Byron and Shelley had to fly to Italy, whilst Castlereagh and Eldon ruled the roost at home. Rousseau was hunted from frontier to frontier; Karl Marx starved in exile in a Soho lodging; Ruskin's articles were refused by the magazines (he was too rich to be otherwise persecuted); whilst mindless forgotten nonentities governed the land; sent men to the prison or the gallows for blasphemy and sedition (meaning the truth about Church and State); and sedulously stored up the social disease and corruption which explode from time to time in gigantic boils that have to be lanced by a million bayonets. This is the result of allopathic education. Homeopathic education has not yet been officially tried, and would obviously be a delicate matter if it were. A body of schoolmasters inciting their pupils to infinitesimal peccadilloes with the object of provoking them to exclaim, 'Get thee behind me, Satan,' or telling them white lies about history for the sake of being contradicted, insulted, and refuted, would certainly do less harm than our present educational allopaths do; but then nobody will advocate homeopathic education. Allopathy has produced the poisonous illusion that it enlightens instead of darkening. The suggestion may, however, explain why, whilst most people's minds succumb to inculcation and environment, a few react vigorously: honest and decent people coming from thievish slums, and sceptics and realists from country parsonages.

### THE DIABOLICAL EFFICIENCY OF TECHNICAL EDUCATION

But meanwhile--and here comes the horror of it--our technical instruction is honest and efficient. The public schoolboy who is carefully blinded, duped, and corrupted as to the nature of a society based on profiteering, and is taught to honor parasitic idleness and luxury, learns to shoot and ride and keep fit with all the assistance and guidance that can be procured for him by the most anxiously sincere desire that he may do these things well, and if possible superlatively well. In the army he learns to fly; to drop bombs; to use machine-guns to the utmost of his capacity. The discovery of high explosives is rewarded and dignified: instruction in the manufacture of the weapons, battleships, submarines, and land batteries by which they are applied destructively, is quite genuine: the instructors know their business, and really mean the learners to succeed. The result is that powers of destruction that could hardly without uneasiness be entrusted to infinite wisdom and infinite benevolence are placed in the hands of romantic schoolboy patriots who, however generous by nature, are by education ignoramuses, dupes, snobs, and sportsmen to whom fighting is a religion and killing

an accomplishment; whilst political power, useless under such circumstances except to militarist imperialists in chronic terror of invasion and subjugation, pompous tuft-hunting fools, commercial adventurers to whom the organization by the nation of its own industrial services would mean checkmate, financial parasites on the money market, and stupid people who cling to the status quo merely because they are used to it, is obtained by heredity, by simple purchase, by keeping newspapers and pretending that they are organs of public opinion, by the wiles of seductive women, and by prostituting ambitious talent to the service of the profiteers, who call the tune because, having secured all the spare plunder, they alone can afford to pay the piper. Neither the rulers nor the ruled understand high politics. They do not even know that there is such a branch of knowledge as political science; but between them they can coerce and enslave with the deadliest efficiency, even to the wiping out of civilization, because their education as slayers has been honestly and thoroughly carried out. Essentially the rulers are all defectives; and there is nothing worse than government by defectives who wield irresistible powers of physical coercion. The commonplace sound people submit, and compel the rest to submit, because they have been taught to do so as an article of religion and a point of honor. Those in whom natural enlightenment has reacted against artificial education submit because they are compelled; but they would resist, and finally resist effectively, if they were not cowards. And they are cowards because they have neither an officially accredited and established religion nor a generally recognized point of honor, and are all at sixes and sevens with their various private speculations, sending their children perforce to the schools where they will be corrupted for want of any other schools. The rulers are equally intimidated by the immense extension and cheapening of the means of slaughter and destruction. The British Government is more afraid of Ireland now that submarines, bombs, and poison gas are cheap and easily made than it was of the German Empire before the war; consequently the old British custom which maintained a balance of power through command of the sea is intensified into a terror that sees security in nothing short of absolute military mastery of the entire globe: that is, in an impossibility that will yet seem possible in detail to soldiers and to parochial and insular patriotic civilians.

#### FLIMSINESS OF CIVILIZATION

This situation has occurred so often before, always with the same result of a collapse of civilization (Professor Flinders Petrie has let out the secret of previous collapses), that the rich are instinctively crying 'Let us eat and drink; for tomorrow we die,' and the poor, 'How long, O Lord, how long?' But the pitiless reply still is that God helps those who help themselves. This does not mean that if Man cannot find the remedy no remedy will be found. The power that produced Man when the monkey was not up to the mark, can produce a higher creature than Man if Man does not come up to the mark. What it means is that if Man is to be saved, Man must save himself. There seems no compelling reason why he should be saved. He is by no means an ideal creature. At his present best many of his ways are so unpleasant that they are unmentionable in polite society, and so painful that he is compelled to pretend that pain is often a good. Nature holds no brief for the human experiment: it must stand or fall by its results. If Man will not serve, Nature will try another experiment.

What hope is there then of human improvement? According to the Neo-Darwinists, to the Mechanists, no hope whatever, because improvement can come only through some senseless accident which must, on the statistical average of accidents, be presently wiped out by some other equally senseless accident.

#### CREATIVE EVOLUTION

But this dismal creed does not discourage those who believe that the impulse that produces evolution is creative. They have observed the simple fact that the will to do anything can and does, at a certain pitch of intensity set up by conviction of its necessity, create and organize new tissue to do it with. To them therefore mankind is by no means played out yet. If the weight lifter, under the trivial stimulus of an athletic competition, can 'put up a muscle,' it seems reasonable to believe that an equally earnest and convinced philosopher could 'put up a brain.' Both are directions of vitality to a certain end. Evolution shews us this direction of vitality doing all sorts of things: providing the centipede with a hundred legs, and ridding the fish of any legs at all; building lungs and arms for the land and gills and fins for the sea; enabling the mammal to

gestate its young inside its body, and the fowl to incubate hers outside it; offering us, we may say, our choice of any sort of bodily contrivance to maintain our activity and increase our resources.

### VOLUNTARY LONGEVITY

Among other matters apparently changeable at will is the duration of individual life. Weismann, a very clever and suggestive biologist who was unhappily reduced to idiocy by Neo-Darwinism, pointed out that death is not an eternal condition of life, but an expedient introduced to provide for continual renewal without overcrowding. Now Circumstantial Selection does not account for natural death: it accounts only for the survival of species in which the individuals have sense enough to decay and die on purpose. But the individuals do not seem to have calculated very reasonably: nobody can explain why a parrot should live ten times as long as a dog, and a turtle be almost immortal. In the case of man, the operation has overshot its mark: men do not live long enough: they are, for all the purposes of high civilization, mere children when they die; and our Prime Ministers, though rated as mature, divide their time between the golf course and the Treasury Bench in parliament. Presumably, however, the same power that made this mistake can remedy it. If on opportunist grounds Man now fixes the term of his life at three score and ten years, he can equally fix it at three hundred, or three thousand, or even at the genuine Circumstantial Selection limit, which would be until a sooner-or-later-inevitable fatal accident makes an end of the individual. All that is necessary to make him extend his present span is that tremendous catastrophes such as the late war shall convince him of the necessity of at least outliving his taste for golf and cigars if the race is to be saved. This is not fantastic speculation: it is deductive biology, if there is such a science as biology. Here, then, is a stone that we have left unturned, and that may be worth turning. To make the suggestion more entertaining than it would be to most people in the form of a biological treatise, I have written Back to Methuselah as a contribution to the modern Bible.

Many people, however, can read treatises and cannot read Bibles. Darwin could not read Shakespear. Some who can read both, like to learn the history of their ideas. Some are so entangled in the current confusion of Creative Evolution with Circumstantial Selection by their historical ignorance that they are puzzled by any distinction between the two. For all their sakes I must give here a little history of the conflict between the view of Evolution taken by the Darwinians (though not altogether by Darwin himself) and called Natural Selection, and that which is emerging, under the title of Creative Evolution, as the genuinely scientific religion for which all wise men are now anxiously looking.

### THE EARLY EVOLUTIONISTS

The idea of Evolution, or Transformation as it is now sometimes called, was not first conceived by Charles Darwin, nor by Alfred Russel Wallace, who observed the operation of Circumstantial Selection simultaneously with Charles. The celebrated Buffon was a better Evolutionist than either of them; and two thousand years before Buffon was born, the Greek philosopher Empedocles opined that all forms of life are transformations of four elements, Fire, Air, Earth, and Water, effected by the two innate forces of attraction and repulsion, or love and hate. As lately as 1860 I myself was taught as a child that everything was made out of these four elements. Both the Empedocleans and the Evolutionists were opposed to those who believed in the separate creation of all forms of life as described in the book of Genesis. This 'conflict between religion and science', as the phrase went then, did not perplex my infant mind in the least: I knew perfectly well, without knowing that I knew it, that the validity of a story is not the same as the occurrence of a fact. But as I grew up I found that I had to choose between Evolution and Genesis. If you believed that dogs and cats and snakes and birds and beetles and oysters and whales and men and women were all separately designed and made and named in Eden garden at the beginning of things, and have since survived simply by reproducing their kind, then you were not an Evolutionist. If you believed, on the contrary, that all the different species are modifications, variations, and elaborations of one primal stock, or even of a few primal stocks, then you were an Evolutionist. But you were not necessarily a Darwinian; for you might have been a modern Evolutionist twenty years before Charles Darwin was born, and a whole lifetime before he published his Origin of Species.

For that matter, when Aristotle grouped animals with backbones as blood relations, he began the sort of classification which, when extended by Darwin to monkeys and men, so shocked my uncle.

Genesis had held the field until the time (1707-1778) of Linnaeus the famous botanist. In the meantime the microscope had been invented. It revealed a new world of hitherto invisible creatures called Infusorians, as common water was found to be an infusion of them. In the eighteenth century naturalists were very keen on the Infusorian Amoebas, and were much struck by the way in which the members of this old family behaved and developed. But it was still possible for Linnaeus to begin a treatise by saying 'There are just so many species as there were forms created in the beginning,' though there were hundreds of commonplace Scotch gardeners, pigeon fanciers, and stock breeders then living who knew better. Linnaeus himself knew better before he died. In the last edition of his *System of Nature*, he began to wonder whether the transmutation of species by variation might not be possible. Then came the great poet who jumped over the facts to the conclusion. Goethe said that all the shapes of creation were cousins; that there must be some common stock from which all the species had sprung; that it was the environment of air that had produced the eagle, of water the seal, and of earth the mole. He could not say how this happened; but he divined that it did happen. Erasmus Darwin, the grandfather of Charles, carried the environment theory much further, pointing out instance after instance of modifications made in species apparently to adapt it to circumstances and environment: for instance, that the brilliant colors of the leopard, which make it so conspicuous in Regent's Park, conceal it in a tropical jungle. Finally he wrote, as his declaration of faith, 'The world has been evolved, not created: it has arisen little by little from a small beginning, and has increased through the activity of the elemental forces embodied in itself, and so has rather grown than come into being at an almighty word. What a sublime idea of the infinite might of the great Architect, the Cause of all causes, the Father of all fathers, the *Ens Entium*! For if we would compare the Infinite, it would surely require a greater Infinite to cause the causes of effects than to produce the effects themselves.' In this, published in the year 1794, you have nineteenth-century Evolution precisely defined. And Erasmus Darwin was by no means its only apostle. It was in the air then. A German biologist named Treviranus, whose book was published in 1802, wrote, 'In every living being there exists a capacity for endless diversity of form. Each possesses the power of adapting its organization to the variations of the external world; and it is this power, called into activity by cosmic changes, which has enabled the simple zoophytes of the primitive world to climb to higher and higher stages of organization, and has brought endless variety into nature.' There you have your evolution of Man from the amoeba all complete whilst Nelson was still alive on the seas. And in 1809, before the battle of Waterloo, a French soldier named Lamarck, who had beaten his musket into a microscope and turned zoologist, declared that species were an illusion produced by the shortness of our individual lives, and that they were constantly changing and melting into one another and into new forms as surely as the hand of a clock is continually moving, though it moves so slowly that it looks stationary to us. We have since come to think that its industry is less continuous: that the clock stops for a long time, and then is suddenly 'put on' by a mysterious finger. But never mind that just at present.

#### THE ADVENT OF THE NEO-LAMARCKIANS

I call your special attention to Lamarck, because later on there were Neo-Lamarckians as well as Neo-Darwinians. I was a Neo-Lamarckian. Lamarck passed on from the conception of Evolution as a general law to Charles Darwin's department of it, which was the method of Evolution. Lamarck, whilst making many ingenious suggestions as to the reaction of external causes on life and habit, such as changes of climate, food supply, geological upheavals and so forth, really held as his fundamental proposition that living organisms changed because they wanted to. As he stated it, the great factor in Evolution is use and disuse. If you have no eyes, and want to see, and keep trying to see, you will finally get eyes. If, like a mole or a subterranean fish, you have eyes and don't want to see, you will lose your eyes. If you like eating the tender tops of trees enough to make you concentrate all your energies on the stretching of your neck, you will finally get a long neck, like the giraffe. This seems absurd to inconsiderate people at the first blush; but it is within the personal experience of all of us that it is just by this process that a child tumbling about the floor becomes a boy walking erect; and that a man sprawling on the road with a bruised chin, or supine on the ice with a bashed



occiput, becomes a bicyclist and a skater. The process is not continuous, as it would be if mere practice had anything to do with it; for though you may improve at each bicycling lesson *during* the lesson, when you begin your next lesson you do not begin at the point at which you left off: you relapse apparently to the beginning. Finally, you succeed quite suddenly, and do not relapse again. More miraculous still, you at once exercise the new power unconsciously. Although you are adapting your front wheel to your balance so elaborately and actively that the accidental locking of your handle bars for a second will throw you off; though five minutes before you could not do it at all, yet now you do it as unconsciously as you grow your finger nails. You have a new faculty, and must have created some new bodily tissue as its organ. And you have done it solely by willing. For here there can be no question of Circumstantial Selection, or the survival of the fittest. The man who is learning how to ride a bicycle has no advantage over the non-cyclist in the struggle for existence: quite the contrary. He has acquired a new habit, an automatic unconscious habit, solely because he wanted to, and kept trying until it was added unto him.

#### HOW ACQUIREMENTS ARE INHERITED

But when your son tries to skate or bicycle in his turn, he does not pick up the accomplishment where you left it, any more than he is born six feet high with a beard and a tall hat. The set-back that occurred between your lessons occurs again. The race learns exactly as the individual learns. Your son relapses, not to the very beginning, but to a point which no mortal method of measurement can distinguish from the beginning. Now this is odd; for certain other habits of yours, equally acquired (to the Evolutionist, of course, all habits are acquired), equally unconscious, equally automatic, are transmitted without any perceptible relapse. For instance, the very first act of your son when he enters the world as a separate individual is to yell with indignation: that yell which Shakespear thought the most tragic and piteous of all sounds. In the act of yelling he begins to breathe: another habit, and not even a necessary one, as the object of breathing can be achieved in other ways, as by deep sea fishes. He circulates his blood by pumping it with his heart. He demands a meal, and proceeds at once to perform the most elaborate chemical operations on the food he swallows. He manufactures teeth; discards them; and replaces them with fresh ones. Compared to these habitual feats, walking, standing upright, and bicycling are the merest trifles; yet it is only by going through the wanting, trying process that he can stand, walk, or cycle, whereas in the other and far more difficult and complex habits he not only does not consciously want nor consciously try, but actually consciously objects very strongly. Take that early habit of cutting the teeth: would he do that if he could help it? Take that later habit of decaying and eliminating himself by death--equally an acquired habit, remember--how he abhors it! Yet the habit has become so rooted, so automatic, that he must do it in spite of himself, even to his own destruction.

We have here a routine which, given time enough for it to operate, will finally produce the most elaborate forms of organized life on Lamarckian lines without the intervention of Circumstantial Selection at all. If you can turn a pedestrian into a cyclist, and a cyclist into a pianist or violinist, without the intervention of Circumstantial Selection, you can turn an amoeba into a man, or a man into a superman, without it. All of which is rank heresy to the Neo-Darwinian, who imagines that if you stop Circumstantial Selection, you not only stop development but inaugurate a rapid and disastrous degeneration.

Let us fix the Lamarckian evolutionary process well in our minds. You are alive; and you want to be more alive. You want an extension of consciousness and of power. You want, consequently, additional organs, or additional uses of your existing organs: that is, additional habits. You get them because you want them badly enough to keep trying for them until they come. Nobody knows how: nobody knows why: all we know is that the thing actually takes place. We relapse miserably from effort to effort until the old organ is modified or the new one created, when suddenly the impossible becomes possible and the habit is formed. The moment we form it we want to get rid of the consciousness of it so as to economize our consciousness for fresh conquests of life; as all consciousness means preoccupation and obstruction. If we had to think about breathing or digesting or circulating our blood we should have no attention to spare for anything else, as we find to our cost when anything goes wrong with these operations. We want to be unconscious of them just as we wanted to acquire them; and we finally win what we want. But we win unconsciousness of our habits at the cost of

losing our control of them; and we also build one habit and its corresponding functional modification of our organs on another, and so become dependent on our old habits. Consequently we have to persist in them even when they hurt us. We cannot stop breathing to avoid an attack of asthma, or to escape drowning. We can lose a habit and discard an organ when we no longer need them, just as we acquired them; but this process is slow and broken by relapses; and relics of the organ and the habit long survive its utility. And if other and still indispensable habits and modifications have been built on the ones we wish to discard, we must provide a new foundation for them before we demolish the old one. This is also a slow process and a very curious one.

#### THE MIRACLE OF CONDENSED RECAPITULATION

The relapses between the efforts to acquire a habit are important because, as we have seen, they recur not only from effort to effort in the case of the individual, but from generation to generation in the case of the race. This relapsing from generation to generation is an invariable characteristic of the evolutionary process. For instance, Raphael, though descended from eight uninterrupted generations of painters, had to learn to paint apparently as if no Sanzio had ever handled a brush before. But he had also to learn to breathe, and digest, and circulate his blood. Although his father and mother were fully grown adults when he was conceived, he was not conceived or even born fully grown: he had to go back and begin as a speck of protoplasm, and to struggle through an embryonic lifetime, during part of which he was indistinguishable from an embryonic dog, and had neither a skull nor a backbone. When he at last acquired these articles, he was for some time doubtful whether he was a bird or a fish. He had to compress untold centuries of development into nine months before he was human enough to break loose as an independent being. And even then he was still so incomplete that his parents might well have exclaimed 'Good Heavens! have you learnt nothing from our experience that you come into the world in this ridiculously elementary state? Why cant you talk and walk and paint and behave decently?' To that question Baby Raphael had no answer. All he could have said was that this is how evolution or transformation happens. The time may come when the same force that compressed the development of millions of years into nine months may pack many more millions into even a shorter space; so that Raphaels may be born painters as they are now born breathers and blood circulators. But they will still begin as specks of protoplasm, and acquire the faculty of painting in their mother's womb at quite a late stage of their embryonic life. They must recapitulate the history of mankind in their own persons, however briefly they may condense it.

Nothing was so astonishing and significant in the discoveries of the embryologists, nor anything so absurdly little appreciated, as this recapitulation, as it is now called: this power of hurrying up into months a process which was once so long and tedious that the mere contemplation of it is unendurable by men whose span of life is three-score-and-ten. It widened human possibilities to the extent of enabling us to hope that the most prolonged and difficult operation of our minds may yet become instantaneous, or, as we call it, instinctive. It also directed our attention to examples of this packing up of centuries into seconds which were staring us in the face in all directions. As I write these lines the newspapers are occupied by the exploits of a child of eight, who has just defeated twenty adult chess players in twenty games played simultaneously, and has been able afterwards to reconstruct all the twenty games without any apparent effort of memory. Most people, including myself, play chess (when they play it at all) from hand to mouth, and can hardly recall the last move but one, or foresee the next but two. Also, when I have to make an arithmetical calculation, I have to do it step by step with pencil and paper, slowly, reluctantly, and with so little confidence in the result that I dare not act on it without 'proving' the sum by a further calculation involving more ciphering. But there are men who can neither read, write, nor cipher, to whom the answer to such sums as I can do is instantly obvious without any conscious calculation at all; and the result is infallible. Yet some of these natural arithmeticians have but a small vocabulary; are at a loss when they have to find words for any but the simplest everyday occasions; and cannot for the life of them describe mechanical operations which they perform daily in the course of their trade; whereas to me the whole vocabulary of English literature, from Shakespear to the latest edition of the Encyclopaedia Britannica, is so completely and instantaneously at my call that I have never had to consult even a thesaurus except once or twice when for some reason I wanted a third or fourth synonym. Again, though I have tried and failed to draw recognizable portraits of persons I have seen every day for years, Mr

Bernard Partridge, having seen a man once, will, without more strain than is involved in eating a sandwich, draw him to the life. The keyboard of a piano is a device I have never been able to master; yet Mr Cyril Scott uses it exactly as I use my own fingers; and to Sir Edward Elgar an orchestral score is as instantaneously intelligible at sight as a page of Shakespear is to me. One man cannot, after trying for years, finger the flute fluently. Another will take up a flute with a newly invented arrangement of keys on it, and play it at once with hardly a mistake. We find people to whom writing is so difficult that they prefer to sign their name with a mark, and beside them men who master systems of shorthand and improvise new systems of their own as easily as they learnt the alphabet. These contrasts are to be seen on all hands, and have nothing to do with variations in general intelligence, nor even in the specialized intelligence proper to the faculty in question: for example, no composer or dramatic poet has ever pretended to be able to perform all the parts he writes for the singers, actors, and players who are his executants. One might as well expect Napoleon to be a fencer, or the Astronomer Royal to know how many beans make five any better than his bookkeeper. Even exceptional command of language does not imply the possession of ideas to express; Mezzofanti, the master of fifty-eight languages, had less to say in them than Shakespear with his little Latin and less Greek; and public life is the paradise of voluble windbags.

All these examples, which might be multiplied by millions, are cases in which a long, laborious, conscious, detailed process of acquirement has been condensed into an instinctive and unconscious inborn one. Factors which formerly had to be considered one by one in succession are integrated into what seems a single simple factor. Chains of hardly soluble problems have coalesced in one problem which solves itself the moment it is raised. What is more, they have been pushed back (or forward, if you like) from post-natal to pre-natal ones. The child in the womb may take some time over them; but it is a miraculously shortened time.

The time phenomena involved are curious, and suggest that we are either wrong about our history or else that we enormously exaggerate the periods required for the pre-natal acquirement of habits. In the nineteenth century we talked very glibly about geological periods, and flung millions of eons about in the most lordly manner in our reaction against Archbishop Ussher's chronology. We had a craze for big figures, and positively liked to believe that the progress made by the child in the womb in a month was represented in prehistoric time by ages and ages. We insisted that Evolution advanced more slowly than any snail ever crawled, and that Nature does not proceed by leaps and bounds. This was all very well as long as we were dealing with such acquired habits as breathing or digestion. It was possible to believe that dozens of epochs had gone to the slow building up of these habits. But when we have to consider the case of a man born not only as an accomplished metabolist, but with such an aptitude for shorthand and keyboard manipulation that he is a stenographer or pianist at least five sixths ready-made as soon as he can control his hands intelligently, we are forced to suspect either that keyboards and shorthand are older inventions than we suppose, or else that acquirements can be assimilated and stored as congenital qualifications in a shorter time than we think; so that, as between Lyell and Archbishop Ussher, the laugh may not be with Lyell quite so uproariously as it seemed fifty years ago.

#### HEREDITY AN OLD STORY

It is evident that the evolutionary process is a hereditary one, or, to put it less drily, that human life is continuous and immortal. The Evolutionists took heredity for granted. So did everybody. The human mind has been soaked in heredity as long back as we can trace its thought. Hereditary peers, hereditary monarchs, hereditary castes and trades and classes were the best known of social institutions, and in some cases of public nuisances. Pedigree men counted pedigree dogs and pedigree horses among their most cherished possessions. Far from being unconscious of heredity, or sceptical, men were insanely credulous about it: they not only believed in the transmission of qualities and habits from generation to generation, but expected the son to begin mentally where the father left off.

This belief in heredity led naturally to the practice of Intentional Selection. Good blood and breeding were eagerly sought after in human marriage. In dealing with plants and animals, selection with a view to the

production of new varieties and the improvement and modification of species had been practised ever since men began to cultivate them. My pre-Darwinian uncle knew as well as Darwin that the race-horse and the dray-horse are not separate creations from the Garden of Eden, but adaptations by deliberate human selection of the medieval war-horse to modern racing and industrial haulage. He knew that there are nearly two hundred different sorts of dogs, all capable of breeding with one another and of producing cross varieties unknown to Adam. He knew that the same thing is true of pigeons. He knew that gardeners had spent their lives trying to breed black tulips and green carnations and unheard-of orchids, and had actually produced flowers just as strange to Eve. His quarrel with the Evolutionists was not a quarrel with the evidence for Evolution: he had accepted enough of it to prove Evolution ten times over before he ever heard of it. What he repudiated was cousinship with the ape, and the implied suspicion of a rudimentary tail, because it was offensive to his sense of his own dignity, and because he thought that apes were ridiculous, and tails diabolical when associated with the erect posture. Also he believed that Evolution was a heresy which involved the destruction of Christianity, of which, as a member of the Irish Church (the pseudo-Protestant one), he conceived himself a pillar. But this was only his ignorance; for man may deny his descent from an ape and be eligible as a churchwarden without being any the less a convinced Evolutionist.

#### DISCOVERY ANTICIPATED BY DIVINATION

What is more, the religious folk can claim to be among the pioneers of Evolutionism. Weismann, Neo-Darwinist though he was, devoted a long passage in his *History of Evolution* to the Nature Philosophy of Lorenz Oken, published in 1809. Oken defined natural science as 'the science of the everlasting transmutations of the Holy Ghost in the world.' His religion had started him on the right track, and not only led him to think out a whole scheme of Evolution in abstract terms, but guided his aim in a significantly good scientific shot which brought him within the scope of Weismann. He not only defined the original substance from which all forms of life have developed as protoplasm, or, as he called it, primitive slime (*\_Urschleim\_*), but actually declared that this slime took the form of vesicles out of which the universe was built. Here was the modern cell morphology guessed by a religious thinker long before the microscope and the scalpel forced it on the vision of mere laboratory workers who could not think and had no religion. They worked hard to discover the vital secrets of the glands by opening up dogs and cutting out the glands, or tying up their ducts, or severing their nerves, thereby learning, negatively, that the governors of our vital forces do not hold their incessant conversations through the nerves, and, positively, how miserably a horribly injured dog can die, leaving us to infer that we shall probably perish likewise if we grudge our guineas to Harley Street. Lorenz Oken *thought* very hard to find out what was happening to the Holy Ghost, and thereby made a contribution of extraordinary importance to our understanding of uninjured creatures. The man who was scientific enough to see that the Holy Ghost is a scientific fact got easily in front of the blockheads who could only sin against it. Hence my uncle was turning his back on very respectable company when he derided Evolution, and would probably have recanted and apologized at once had anybody pointed out to him what a solecism he was committing.

The metaphysical side of Evolution was thus no novelty when Darwin arrived. Had Oken never lived, there would still have been millions of persons trained from their childhood to believe that we are continually urged upwards by a force called the Will of God. In 1819 Schopenhauer published his treatise on *The World as Will*, which is the metaphysical complement to Lamarck's natural history, as it demonstrates that the driving force behind Evolution is a will-to-live, and to live, as Christ said long before, more abundantly. And the earlier philosophers, from Plato to Leibniz, had kept the human mind open for the thought of the universe as one idea behind all its physically apprehensible transformations.

#### CORRECTED DATES FOR THE DISCOVERY OF EVOLUTION

All this, remember, is the state of things in the pre-Darwin period, which so many of us still think of as a pre-evolutionary period. Evolutionism was the rage before Queen Victoria came to the throne. To fix this chronology, let me repeat the story told by Weismann of the July revolution in Paris in 1830, when the French

got rid of Charles the Tenth. Goethe was then still living; and a French friend of his called on him and found him wildly excited. 'What do you think of the great event?' said Goethe. 'The volcano is in eruption; and all is in flames. There can no longer be discussion with closed doors.' The Frenchman replied that no doubt it was a terrible business; but what could they expect with such a ministry and such a king? 'Stuff!' said Goethe: 'I am not thinking of these people at all, but of the open rupture in the French Academy between Cuvier and St Hilaire. It is of the utmost importance to science,' The rupture Goethe meant was about Evolution, Cuvier contending that there were four species, and St Hilaire that there was only one.

From 1830, when Darwin was an apparently unpromising lad of twenty-one, until 1859, when he turned the world upside down by his *Origin of Species*, there was a slump in Evolutionism. The first generation of its enthusiasts was ageing and dying out; and their successors were being taught from the Book of Genesis, just as Edward VI was (and Edward VII too, for that matter). Nobody who knew the theory was adding anything to it. This slump not only heightened the impression of entire novelty when Darwin brought the subject to the front again: it probably prevented him from realizing how much had been done before, even by his own grandfather, to whom he was accused of being unjust. Besides, he was not really carrying on the family business. He was an entirely original worker; and he was on a new tack, as we shall see presently. And he would not in any case have thought much, as a practical naturalist, of the more or less mystical intellectual speculations of the Deists of 1790-1830. Scientific workers were very tired of Deism just then. They had given up the riddle of the Great First Cause as insoluble, and were calling themselves, accordingly, Agnostics. They had turned from the inscrutable question of Why things existed, to the spade work of discovering What was really occurring in the world and How it really occurred.

With all his attention bent in this new direction, Darwin soon noticed that a good deal was occurring in an entirely unmystical and even unmeaning way of which the older speculative Deist-Evolutionists had taken little or no account. Nowadays, when we are turning in weary disgust and disillusion from Neo-Darwinism and Mechanism to Vitalism and Creative Evolution, it is difficult to imagine how this new departure of Darwin's could possibly have appealed to his contemporaries as exciting, agreeable, above all as hopeful. Let me therefore try to bring back something of the atmosphere of that time by describing a scene, very characteristic of its superstitions, in which I took what was then considered an unspeakably shocking part.

#### DEFYING THE LIGHTNING: A FRUSTRATED EXPERIMENT

One evening in 1878 or thereabouts, I, being then in my earliest twenties, was at a bachelor party of young men of the professional class in the house of a doctor in the Kensingtonian quarter of London. They fell to talking about religious revivals; and an anecdote was related of a man who, having incautiously scoffed at the mission of Messrs Moody and Sankey, a then famous firm of American evangelists, was subsequently carried home on a shutter, slain by divine vengeance as a blasphemer. A timid minority, without quite venturing to question the truth of the incident--for they naturally did not care to run the risk of going home on shutters themselves--nevertheless shewed a certain disposition to cavil at those who exulted in it; and something approaching to an argument began. At last it was alleged by the most evangelical of the disputants that Charles Bradlaugh, the most formidable atheist on the Secularist platform, had taken out his watch publicly and challenged the Almighty to strike him dead in five minutes if he really existed and disapproved of atheism. The leader of the cavillers, with great heat, repudiated this as a gross calumny, declaring that Bradlaugh had repeatedly and indignantly contradicted it, and implying that the atheist champion was far too pious a man to commit such a blasphemy. This exquisite confusion of ideas roused my sense of comedy. It was clear to me that the challenge attributed to Charles Bradlaugh was a scientific experiment of a quite simple, straightforward, and proper kind to ascertain whether the expression of atheistic opinions really did involve any personal risk. It was certainly the method taught in the Bible, Elijah having confuted the prophets of Baal in precisely that way, with every circumstance of bitter mockery of their god when he failed to send down fire from heaven. Accordingly I said that if the question at issue were whether the penalty of questioning the theology of Messrs Moody and Sankey was to be struck dead on the spot by an incensed deity, nothing could effect a more convincing settlement of it than the very obvious experiment attributed to

Mr Bradlaugh, and that consequently if he had not tried it, he ought to have tried it. The omission, I added, was one which could easily be remedied there and then, as I happened to share Mr Bradlaugh's views as to the absurdity of the belief in these violent interferences with the order of nature by a short-tempered and thin-skinned supernatural deity. Therefore--and at that point I took out my watch.

The effect was electrical. Neither sceptics nor devotees were prepared to abide the result of the experiment. In vain did I urge the pious to trust in the accuracy of their deity's aim with a thunderbolt, and the justice of his discrimination between the innocent and the guilty. In vain did I appeal to the sceptics to accept the logical outcome of their scepticism: it soon appeared that when thunderbolts were in question there were no sceptics. Our host, seeing that his guests would vanish precipitately if the impious challenge were uttered, leaving him alone with a solitary infidel under sentence of extermination in five minutes, interposed and forbade the experiment, pleading at the same time for a change of subject. I of course complied, but could not refrain from remarking that though the dreadful words had not been uttered, yet, as the thought had been formulated in my mind, it was very doubtful whether the consequences could be averted by sealing my lips. However, the rest appeared to feel that the game would be played according to the rules, and that it mattered very little what I thought so long as I said nothing. Only the leader of the evangelical party, I thought, was a little preoccupied until five minutes had elapsed and the weather was still calm.

#### IN QUEST OF THE FIRST CAUSE

Another reminiscence. In those days we thought in terms of time and space, of cause and effect, as we still do; but we do not now demand from a religion that it shall explain the universe completely in terms of cause and effect, and present the world to us as a manufactured article and as the private property of its Manufacturer. We did then. We were invited to pity the delusion of certain heathens who held that the world is supported by an elephant who is supported by a tortoise. Mahomet decided that the mountains are great weights to keep the world from being blown away into space. But we refuted these orientals by asking triumphantly what the tortoise stands on? Freethinkers asked which came first: the owl or the egg. Nobody thought of saying that the ultimate problem of existence, being clearly insoluble and even unthinkable on causation lines, could not be a causation problem. To pious people this would have been flat atheism, because they assumed that God must be a Cause, and sometimes called him The Great First Cause, or, in still choicer language, The Primal Cause. To the Rationalists it would have been a renunciation of reason. Here and there a man would confess that he stood as with a dim lantern in a dense fog, and could see but a little way in any direction into infinity. But he did not really believe that infinity was infinite or that the eternal was also sempiternal: he assumed that all things, known and unknown, were caused.

Hence it was that I found myself one day towards the end of the eighteen-seventies in a cell in the old Brompton Oratory arguing with Father Addis, who had been called by one of his flock to attempt my conversion to Roman Catholicism. The universe exists, said the father: somebody must have made it. If that somebody exists, said I, somebody must have made him. I grant that for the sake of argument, said the Oratorian. I grant you a maker of God. I grant you a maker of the maker of God. I grant you as long a line of makers as you please; but an infinity of makers is unthinkable and extravagant: it is no harder to believe in number one than in number fifty thousand or fifty million; so why not accept number one and stop there, since no attempt to get behind him will remove your logical difficulty? By your leave, said I, it is as easy for me to believe that the universe made itself as that a maker of the universe made himself: in fact much easier; for the universe visibly exists and makes itself as it goes along, whereas a maker for it is a hypothesis. Of course we could get no further on these lines. He rose and said that we were like two men working a saw, he pushing it forward and I pushing it back, and cutting nothing; but when we had dropped the subject and were walking through the refectory, he returned to it for a moment to say that he should go mad if he lost his belief. I, glorying in the robust callousness of youth and the comedic spirit, felt quite comfortable and said so; though I was touched, too, by his evident sincerity.

These two anecdotes are superficially trivial and even comic; but there is an abyss of horror beneath them.

They reveal a condition so utterly irreligious that religion means nothing but belief in a nursery bogey, and its inadequacy is demonstrated by a toy logical dilemma, neither the bogey nor the dilemma having anything to do with religion, or being serious enough to impose on or confuse any properly educated child over the age of six. One hardly knows which is the more appalling: the abjectness of the credulity or the flippancy of the scepticism. The result was inevitable. All who were strong-minded enough not to be terrified by the bogey were left stranded in empty contemptuous negation, and argued, when they argued at all, as I argued with Father Addis. But their position was not intellectually comfortable. A member of parliament expressed their discomfort when, objecting to the admission of Charles Bradlaugh into parliament, he said 'Hang it all, a man should believe in something or somebody.' It was easy to throw the bogey into the dustbin; but none the less the world, our corner of the universe, did not look like a pure accident: it presented evidences of design in every direction. There was mind and purpose behind it. As the anti-Bradlaugh member would have put it, there must be somebody behind the something: no atheist could get over that.

### PALEY'S WATCH

Paley had put the argument in an apparently unanswerable form. If you found a watch, full of mechanism exquisitely adapted to produce a series of operations all leading to the fulfilment of one central purpose of measuring for mankind the march of the day and night, could you believe that it was not the work of a cunning artificer who had designed and contrived it all to that end? And here was a far more wonderful thing than a watch, a man with all his organs ingeniously contrived, cords and levers, girders and kingposts, circulating systems of pipes and valves, dialysing membranes, chemical retorts, carburettors, ventilators, inlets and outlets, telephone transmitters in his ears, light recorders and lenses in his eye: was it conceivable that this was the work of chance? that no artificer had wrought here? that there was no purpose in this, no design, no guiding intelligence? The thing was incredible. In vain did Helmholtz declare that 'the eye has every possible defect that can be found in an optical instrument, and even some peculiar to itself,' and that 'if an optician tried to sell me an instrument which had all these defects I should think myself quite justified in blaming his carelessness in the strongest terms, and sending him back his instrument.' To discredit the optician's skill was not to get rid of the optician. The eye might not be so cleverly made as Paley thought, but it was made somehow, by somebody.

And then my argument with Father Addis began all over again. It was easy enough to say that every man makes his own eyes: indeed the embryologists had actually caught him doing it. But what about the very evident purpose that prompted him to do it? Why did he want to see, if not to extend his consciousness and his knowledge and his power? That purpose was at work everywhere, and must be something bigger than the individual eye-making man. Only the stupidest muckrakers could fail to see this, and even to know it as part of their own consciousness. Yet to admit it seemed to involve letting the bogey come back, so inextricably had we managed to mix up belief in the bogey's existence with belief in the existence of design in the universe.

### THE IRRESISTIBLE CRY OF ORDER, ORDER!

Our scornful young scientific and philosophic lions of today must not blame the Church of England for this confusion of thought. In 1562 the Church, in convocation in London 'for the avoiding of diversities of opinions and for the establishment of consent touching true religion,' proclaimed in their first utterance, and as an Article of Religion, that God is 'without body, parts, or passions,' or, as we say, an *Elan Vital* or Life Force. Unfortunately neither parents, parsons, nor pedagogues could be induced to adopt that article. St John might say that 'God is spirit' as pointedly as he pleased; our Sovereign Lady Elizabeth might ratify the Article again and again; serious divines might feel as deeply as they could that a God with body, parts, and passions could be nothing but an anthropomorphic idol: no matter: people at large could not conceive a God who was not anthropomorphic: they stood by the Old Testament legends of a God whose parts had been seen by one of the patriarchs, and finally set up as against the Church a God who, far from being without body, parts, or passions, was composed of nothing else, and of very evil passions too. They imposed this idol in practice on

the Church itself, in spite of the First Article, and thereby homeopathically produced the atheist, whose denial of God was simply a denial of the idol and a demonstration against an unbearable and most unchristian idolatry. The idol was, as Shelley had been expelled from Oxford for pointing out, an almighty fiend, with a petty character and unlimited power, spiteful, cruel, jealous, vindictive, and physically violent. The most villainous schoolmasters, the most tyrannical parents, fell far short in their attempts to imitate it. But it was not its social vices that brought it low. What made it scientifically intolerable was that it was ready at a moment's notice to upset the whole order of the universe on the most trumpery provocation, whether by stopping the sun in the valley of Ajalon or sending an atheist home dead on a shutter (the shutter was indispensable because it marked the utter unpreparedness of the atheist, who, unable to save himself by a deathbed repentance, was subsequently roasted through all eternity in blazing brimstone). It was this disorderliness, this refusal to obey its own laws of nature, that created a scientific need for its destruction. Science could stand a cruel and unjust god; for nature was full of suffering and injustice. But a disorderly god was impossible. In the Middle Ages a compromise had been made by which two different orders of truth, religious and scientific, had been recognized, in order that a schoolman might say that two and two make four without being burnt for heresy. But the nineteenth century, steeped in a meddling, presumptuous, reading-and-writing, socially and politically powerful ignorance inconceivable by Thomas Aquinas or even Roger Bacon, was incapable of so convenient an arrangement; and science was strangled by bigoted ignoramuses claiming infallibility for their interpretation of the Bible, which was regarded, not as a literature nor even as a book, but partly as an oracle which answered and settled all questions, and partly as a talisman to be carried by soldiers in their breast pockets or placed under the pillows of persons who were afraid of ghosts. The tract shops exhibited in their windows bullet-dinted testaments, mothers' gifts to their soldier sons whose lives had been saved by it; for the muzzle-loaders of those days could not drive a projectile through so many pages.

#### THE MOMENT AND THE MAN

This superstition of a continual capricious disorder in nature, of a lawgiver who was also a lawbreaker, made atheists in all directions among clever and lightminded people. But atheism did not account for Paley's watch. Atheism accounted for nothing; and it was the business of science to account for everything that was plainly accountable. Science had no use for mere negation: what was desired by it above all things just then was a demonstration that the evidences of design could be explained without resort to the hypothesis of a personal designer. If only some genius, whilst admitting Paley's facts, could knock the brains out of Paley by the discovery of a method whereby watches could happen without watchmakers, that genius was assured of such a welcome from the thought of his day as no natural philosopher had ever enjoyed before.

The time being thus ripe, the genius appeared; and his name was Charles Darwin. And now, what did Darwin really discover?

Here, I am afraid, I shall require once more the assistance of the giraffe, or, as he was called in the days of the celebrated Buffon, the camelopard (by children, cammyleopard). I do not remember how this animal imposed himself illustratively on the Evolution controversy; but there was no getting away from him then; and I am old-fashioned enough to be unable to get away from him now. How did he come by his long neck? Lamarck would have said, by wanting to get at the tender leaves high up on the tree, and trying until he succeeded in wishing the necessary length of neck into existence. Another answer was also possible: namely, that some prehistoric stockbreeder, wishing to produce a natural curiosity, selected the longest-necked animals he could find, and bred from them until at last an animal with an abnormally long neck was evolved by intentional selection, just as the race-horse or the fantail pigeon has been evolved. Both these explanations, you will observe, involve consciousness, will, design, purpose, either on the part of the animal itself or on the part of a superior intelligence controlling its destiny. Darwin pointed out--and this and no more was Darwin's famous discovery--that a third explanation, involving neither will nor purpose nor design either in the animal or anyone else, was on the cards. If your neck is too short to reach your food, you die. That may be the simple explanation of the fact that all the surviving animals that feed on foliage have necks or trunks long enough to



reach it. So bang goes your belief that the necks must have been designed to reach the food. But Lamarck did not believe that the necks were so designed in the beginning; he believed that the long necks were evolved by wanting and trying. Not necessarily, said Darwin. Consider the effect on the giraffes of the natural multiplication of their numbers, as insisted on by Malthus. Suppose the average height of the foliage-eating animals is four feet, and that they increase in numbers until a time comes when all the trees are eaten away to within four feet of the ground. Then the animals who happen to be an inch or two short of the average will die of starvation. All the animals who happen to be an inch or so above the average will be better fed and stronger than the others. They will secure the strongest and tallest mates; and their progeny will survive whilst the average ones and the sub-average ones will die out. This process, by which the species gains, say, an inch in reach, will repeat itself until the giraffe's neck is so long that he can always find food enough within his reach, at which point, of course, the selective process stops and the length of the giraffe's neck stops with it. Otherwise, he would grow until he could browse off the trees in the moon. And this, mark you, without the intervention of any stockbreeder, human or divine, and without will, purpose, design, or even consciousness beyond the blind will to satisfy hunger. It is true that this blind will, being in effect a will to live, gives away the whole case; but still, as compared to the open-eyed intelligent wanting and trying of Lamarck, the Darwinian process may be described as a chapter of accidents. As such, it seems simple, because you do not at first realize all that it involves. But when its whole significance dawns on you, your heart sinks into a heap of sand within you. There is a hideous fatalism about it, a ghastly and damnable reduction of beauty and intelligence, of strength and purpose, of honor and aspiration, to such casually picturesque changes as an avalanche may make in a mountain landscape, or a railway accident in a human figure. To call this Natural Selection is a blasphemy, possible to many for whom Nature is nothing but a casual aggregation of inert and dead matter, but eternally impossible to the spirits and souls of the righteous. If it be no blasphemy, but a truth of science, then the stars of heaven, the showers and dew, the winter and summer, the fire and heat, the mountains and hills, may no longer be called to exalt the Lord with us by praise; their work is to modify all things by blindly starving and murdering everything that is not lucky enough to survive in the universal struggle for hogwash.

#### THE BRINK OF THE BOTTOMLESS PIT

Thus did the neck of the giraffe reach out across the whole heavens and make men believe that what they saw there was a gloaming of the gods. For if this sort of selection could turn an antelope into a giraffe, it could conceivably turn a pond full of amoebas into the French Academy. Though Lamarck's way, the way of life, will, aspiration, and achievement, remained still possible, this newly shewn way of hunger, death, stupidity, delusion, chance, and bare survival was also possible: was indeed most certainly the way in which many apparently intelligently designed transformations had actually come to pass. Had I not precluded with the apparently idle story of my revival of the controversial methods of Elijah, I should be asked how it was that the explorer who opened up this gulf of despair, far from being stoned or crucified as the destroyer of the honor of the race and the purpose of the world, was hailed as Deliverer, Savior, Prophet, Redeemer, Enlightener, Rescuer, Hope Giver, and Epoch Maker; whilst poor Lamarck was swept aside as a crude and exploded guesser hardly worthy to be named as his erroneous forerunner. In the light of my anecdote, the explanation is obvious. The first thing the gulf did was to swallow up Paley, and the Disorderly Designer, and Shelley's Almighty Fiend, and all the rest of the pseudo-religious rubbish that had blocked every upward and onward path since the hopes of men had turned to Science as their true Savior. It seemed such a convenient grave that nobody at first noticed that it was nothing less than the bottomless pit, now become a very real terror. For though Darwin left a path round it for his soul, his followers presently dug it right across the whole width of the way. Yet for the moment, there was nothing but wild rejoicing: a sort of scientific mafficking. We had been so oppressed by the notion that everything that happened in the world was the arbitrary personal act of an arbitrary personal god of dangerously jealous and cruel personal character, so that even the relief of the pains of childbed and the operating table by chloroform was objected to as an interference with his arrangements which he would probably resent, that we just jumped at Darwin. When Napoleon was asked what would happen when he died, he said that Europe would express its intense relief with a great 'Ouf!': Well, when Darwin killed the god who objected to chloroform, everybody who had ever thought about it said

'Ouf!' Paley was buried fathoms deep with his watch, now fully accounted for without any divine artificer at all. We were so glad to be rid of both that we never gave a thought to the consequences. When a prisoner sees the door of his dungeon open, he dashes for it without stopping to think where he shall get his dinner outside. The moment we found that we could do without Shelley's almighty fiend intellectually, he went into the gulf that seemed only a dustbin with a suddenness that made our own lives one of the most astonishing periods in history. If I had told that uncle of mine that within thirty years from the date of our conversation I should be exposing myself to suspicions of the grossest superstition by questioning the sufficiency of Darwin; maintaining the reality of the Holy Ghost; declaring that the phenomenon of the Word becoming Flesh was occurring daily, he would have regarded me as the most extravagant madman our family had ever produced. Yet it was so. In 1906 I might have vituperated Jehovah more heartily than ever Shelley did without eliciting a protest in any circle of thinkers, or shocking any public audience accustomed to modern discussion; but when I described Darwin as 'an intelligent and industrious pigeon fancier,' that blasphemous levity, as it seemed, was received with horror and indignation. The tide has now turned; and every puny whipster may say what he likes about Darwin; but anyone who wants to know what it was to be a Lamarckian during the last quarter of the nineteenth century has only to read Mr Festing Jones's memoir of Samuel Butler to learn how completely even a man of genius could isolate himself by antagonizing Darwin on the one hand and the Church on the other.

#### WHY DARWIN CONVERTED THE CROWD

I am well aware that in describing the effect of Darwin's discovery on naturalists and on persons capable of serious reflection on the nature and attributes of God, I am leaving the vast mass of the British public out of account. I have pointed out elsewhere that the British nation does not consist of atheists and Plymouth Brothers; and I am not now going to pretend that it ever consisted of Darwinians and Lamarckians. The average citizen is irreligious and unscientific: you talk to him about cricket and golf, market prices and party politics, not about evolution and relativity, transubstantiation and predestination. Nothing will knock into his head the fateful distinction between Evolution as promulgated by Erasmus Darwin, and Circumstantial (so-called Natural) Selection as revealed by his grandson. Yet the doctrine of Charles reached him, though the doctrine of Erasmus had passed over his head. Why did not Erasmus Darwin popularize the word Evolution as effectively as Charles?

The reason was, I think, that Circumstantial Selection is easier to understand, more visible and concrete, than Lamarckian evolution. Evolution as a philosophy and physiology of the will is a mystical process, which can be apprehended only by a trained, apt, and comprehensive thinker. Though the phenomena of use and disuse, of wanting and trying, of the manufacture of weight lifters and wrestlers from men of ordinary strength, are familiar enough as facts, they are extremely puzzling as subjects of thought, and lead you into metaphysics the moment you try to account for them. But pigeon fanciers, dog fanciers, gardeners, stock breeders, or stud grooms, can understand Circumstantial Selection, because it is their business to produce transformation by imposing on flowers and animals a Selection From Without. All that Darwin had to say to them was that the mere chapter of accidents is always doing on a huge scale what they themselves are doing on a very small scale. There is hardly a laborer attached to an English country house who has not taken a litter of kittens or puppies to the bucket, and drowned all of them except the one he thinks the most promising. Such a man has nothing to learn about the survival of the fittest except that it acts in more ways than he has yet noticed; for he knows quite well, as you will find if you are not too proud to talk to him, that this sort of selection occurs naturally (in Darwin's sense) too: that, for instance, a hard winter will kill off a weakly child as the bucket kills off a weakly puppy. Then there is the farm laborer. Shakespear's Touchstone, a court-bred fool, was shocked to find in the shepherd a natural philosopher, and opined that he would be damned for the part he took in the sexual selection of sheep. As to the production of new species by the selection of variations, that is no news to your gardener. Now if you are familiar with these three processes: the survival of the fittest, sexual selection, and variation leading to new kinds, there is nothing to puzzle you in Darwinism.

That was the secret of Darwin's popularity. He never puzzled anybody. If very few of us have read *The Origin*

of *Species* from end to end, it is not because it overtaxes our mind, but because we take in the whole case and are prepared to accept it long before we have come to the end of the innumerable instances and illustrations of which the book mainly consists. Darwin becomes tedious in the manner of a man who insists on continuing to prove his innocence after he has been acquitted. You assure him that there is not a stain on his character, and beg him to leave the court; but he will not be content with enough evidence: he will have you listen to all the evidence that exists in the world. Darwin's industry was enormous. His patience, his perseverance, his conscientiousness reached the human limit. But he never got deeper beneath or higher above his facts than an ordinary man could follow him. He was not conscious of having raised a stupendous issue, because, though it arose instantly, it was not his business. He was conscious of having discovered a process of transformation and modification which accounted for a great deal of natural history. But he did not put it forward as accounting for the whole of natural history. He included it under the heading of Evolution, though it was only pseudo-evolution at best; but he revealed it as *a* method of evolution, not as *the* method of evolution. He did not pretend that it excluded other methods, or that it was the chief method. Though he demonstrated that many transformations which had been taken as functional adaptations (the current phrase for Lamarckian evolution) either certainly were or conceivably might be due to Circumstantial Selection, he was careful not to claim that he had superseded Lamarck or disproved Functional Adaptation. In short, he was not a Darwinian, but an honest naturalist working away at his job with so little preoccupation with theological speculation that he never quarrelled with the theistic Unitarianism into which he was born, and remained to the end the engagingly simple and socially easy-going soul he had been in his boyhood, when his elders doubted whether he would ever be of much use in the world.

#### HOW WE RUSHED DOWN A STEEP PLACE

Not so the rest of us intellectuals. We all began going to the devil with the utmost cheerfulness. Everyone who had a mind to change, changed it. Only Samuel Butler, on whom Darwin had acted homeopathically, reacted against him furiously; ran up the Lamarckian flag to the top-gallant peak; declared with penetrating accuracy that Darwin had 'banished mind from the universe'; and even attacked Darwin's personal character, unable to bear the fact that the author of so abhorrent a doctrine was an amiable and upright man. Nobody would listen to him. He was so completely submerged by the flowing tide of Darwinism that when Darwin wanted to clear up the misunderstanding on which Butler was basing his personal attacks, Darwin's friends, very foolishly and snobbishly, persuaded him that Butler was too ill-conditioned and negligible to be answered. That they could not recognize in Butler a man of genius mattered little: what did matter was that they could not understand the provocation under which he was raging. They actually regarded the banishment of mind from the universe as a glorious enlightenment and emancipation for which he was ignorantly ungrateful. Even now, when Butler's eminence is unchallenged, and his biographer, Mr Festing Jones, is enjoying a vogue like that of Boswell or Lockhart, his memoirs shew him rather as a shocking example of the bad controversial manners of our country parsonages than as a prophet who tried to head us back when we were gaily dancing to our damnation across the rainbow bridge which Darwinism had thrown over the gulf which separates life and hope from death and despair. We were intellectually intoxicated with the idea that the world could make itself without design, purpose, skill, or intelligence: in short, without life. We completely overlooked the difference between the modification of species by adaptation to their environment and the appearance of new species: we just threw in the word 'variations' or the word 'sports' (fancy a man of science talking of an unknown factor as a sport instead of as  $x$ !) and left them to 'accumulate' and account for the difference between a cockatoo and a hippopotamus. Such phrases set us free to revel in demonstrating to the Vitalists and Bible worshippers that if we once admit the existence of any kind of force, however unintelligent, and stretch out the past to unlimited time for such force to operate accidentally in, that force may conceivably, by the action of Circumstantial Selection, produce a world in which every function has an organ perfectly adapted to perform it, and therefore presents every appearance of having been designed, like Paley's watch, by a conscious and intelligent artificer for the purpose. We took a perverse pleasure in arguing, without the least suspicion that we were reducing ourselves to absurdity, that all the books in the British Museum library might have been written word for word as they stand on the shelves if no human being had ever been conscious, just as the trees stand in the forest doing wonderful things without consciousness.

And the Darwinians went far beyond denying consciousness to trees. Weismann insisted that the chick breaks out of its eggshell automatically; that the butterfly, springing into the air to avoid the pounce of the lizard, 'does not wish to avoid death; knows nothing about death,' what has happened being simply that a flight instinct evolved by Circumstantial Selection reacts promptly to a visual impression produced by the lizard's movement. His proof is that the butterfly immediately settles again on the flower, and repeats the performance every time the lizard springs, thus shewing that it learns nothing from experience, and--Weismann concludes--is not conscious of what it does.

It should hardly have escaped so curious an observer that when the cat jumps up on the dinner table, and you put it down, it instantly jumps up again, and finally establishes its right to a place on the cloth by convincing you that if you put it down a hundred times it will jump up a hundred and one times; so that if you desire its company at dinner you can have it only on its own terms. If Weismann really thought that cats act thus without any consciousness or any purpose, immediate or ulterior, he must have known very little about cats. But a thoroughgoing Weismannite, if any such still survive from those mad days, would contend that I am not at present necessarily conscious of what I am doing; that my writing of these lines, and your reading of them, are effects of Circumstantial Selection; that I heed know no more about Darwinism than a butterfly knows of a lizard's appetite; and that the proof that I actually am doing it unconsciously is that as I have spent forty years in writing in this fashion without, as far as I can see, producing any visible effect on public opinion, I must be incapable of learning from experience, and am therefore a mere automaton. And the Weismannite demonstration of this would of course be an equally unconscious effect of Circumstantial Selection.

#### DARWINISM NOT FINALLY REFUTABLE

Do not too hastily say that this is inconceivable. To Circumstantial Selection all mechanical and chemical reactions are possible, provided you accept the geologists' estimates of the great age of the earth, and therefore allow time enough for the circumstances to operate. It is true that mere survival of the fittest in the struggle for existence plus sexual selection fail as hopelessly to account for Darwin's own life work as for my conquest of the bicycle; but who can prove that there are not other soulless factors, unnoticed or undiscovered, which only require imagination enough to fit them to the evolution of an automatic Jesus or Shakespear? When a man tells you that you are a product of Circumstantial Selection solely, you cannot finally disprove it. You can only tell him out of the depths of your inner conviction that he is a fool and a liar. But as this, though British, is uncivil, it is wiser to offer him the counter-assurance that you are the product of Lamarckian evolution, formerly called Functional Adaptation and now Creative Evolution, and challenge him to disprove *that*, which he can no more do than you can disprove Circumstantial Selection, both forces being conceivably able to produce anything if you only give them rope enough. You may also defy him to act for a single hour on the assumption that he may safely cross Oxford Street in a state of unconsciousness, trusting to his dodging reflexes to react automatically and promptly enough to the visual impression produced by a motor bus, and the audible impression produced by its hooter. But if you allow yourself to defy him to explain any particular action of yours by Circumstantial Selection, he should always be able to find some explanation that will fit the case if only he is ingenious enough and goes far enough to find it. Darwin found several such explanations in his controversies. Anybody who really wants to believe that the universe has been produced by Circumstantial Selection co-operating with a force as inhuman as we conceive magnetism to be can find a logical excuse for his belief if he tries hard enough.

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#### THREE BLIND MICE

The stultification and damnation which ensued are illustrated by a comparison of the ease and certainty with which Butler's mind moved to humane and inspiring conclusions with the grotesque stupidities and cruelties of the idle and silly controversy which arose among the Darwinians as to whether acquired habits can be transmitted from parents to offspring. Consider, for example, how Weismann set to work on that subject. An Evolutionist with a live mind would first have dropped the popular expression 'acquired habits,' because to an Evolutionist there are no other habits and can be no others, a man being only an amoeba with acquirements.

He would then have considered carefully the process by which he himself had acquired his habits. He would have assumed that the habits with which he was born must have been acquired by a similar process. He would have known what a habit is: that is, an Action voluntarily attempted until it has become more or less automatic and involuntary; and it would never have occurred to him that injuries or accidents coming from external sources against the will of the victim could possibly establish a habit; that, for instance, a family could acquire a habit of being killed in railway accidents.

And yet Weismann began to investigate the point by behaving like the butcher's wife in the old catch. He got a colony of mice, and cut off their tails. Then he waited to see whether their children would be born without tails. They were not, as Butler could have told him beforehand. He then cut off the children's tails, and waited to see whether the grandchildren would be born with at least rather short tails. They were not, as I could have told him beforehand. So with the patience and industry on which men of science pride themselves, he cut off the grandchildren's tails too, and waited, full of hope, for the birth of curtailed great-grandchildren. But their tails were quite up to the mark, as any fool could have told him beforehand. Weismann then gravely drew the inference that acquired habits cannot be transmitted. And yet Weismann was not a born imbecile. He was an exceptionally clever and studious man, not without roots of imagination and philosophy in him which Darwinism killed as weeds.

How was it that he did not see that he was not experimenting with habits or characteristics at all? How had he overlooked the glaring fact that his experiment had been tried for many generations in China on the feet of Chinese women without producing the smallest tendency on their part to be born with abnormally small feet? He must have known about the bound feet even if he knew nothing of the mutilations, the clipped ears and docked tails, practised by dog fanciers and horse breeders on many generations of the unfortunate animals they deal in. Such amazing blindness and stupidity on the part of a man who was naturally neither blind nor stupid is a telling illustration of what Darwin unintentionally did to the minds of his disciples by turning their attention so exclusively towards the part played in Evolution by accident and violence operating with entire callousness to suffering and sentiment.

A vital conception of Evolution would have taught Weismann that biological problems are not to be solved by assaults on mice. The scientific form of his experiment would have been something like this. First, he should have procured a colony of mice highly susceptible to hypnotic suggestion. He should then have hypnotized them into an urgent conviction that the fate of the musque world depended on the disappearance of its tail, just as some ancient and forgotten experimenter seems to have convinced the cats of the Isle of Man. Having thus made the mice desire to lose their tails with a life-or-death intensity, he would very soon have seen a few mice born with little or no tail. These would be recognized by the other mice as superior beings, and privileged in the division of food and in sexual selection. Ultimately the tailed mice would be put to death as monsters by their fellows, and the miracle of the tailless mouse completely achieved.

The objection to this experiment is not that it seems too funny to be taken seriously, and is not cruel enough to overawe the mob, but simply that it is impossible because the human experimenter cannot get at the mouse's mind. And that is what is wrong with all the barren cruelties of the laboratories. Darwin's followers did not think of this. Their only idea of investigation was to imitate 'Nature' by perpetrating violent and senseless cruelties, and watch the effect of them with a paralyzing fatalism which forbade the smallest effort to use their minds instead of their knives and eyes, and established an abominable tradition that the man who hesitates to be as cruel as Circumstantial Selection itself is a traitor to science. For Weismann's experiment upon the mice was a mere joke compared to the atrocities committed by other Darwinians in their attempts to prove that mutilations could not be transmitted. No doubt the worst of these experiments were not really experiments at all, but cruelties committed by cruel men who were attracted to the laboratory by the fact that it was a secret refuge left by law and public superstition for the amateur of passionate torture. But there is no reason to suspect Weismann of Sadism. Cutting off the tails of several generations of mice is not voluptuous enough to tempt a scientific Nero. It was a mere piece of one-eyedness; and it was Darwin who put out Weismann's humane and sensible eye. He blinded many another eye and paralyzed many another will also. Ever since he

set up Circumstantial Selection as the creator and ruler of the universe, the scientific world has been the very citadel of stupidity and cruelty. Fearful as the tribal god of the Hebrews was, nobody ever shuddered as they passed even his meanest and narrowest Little Bethel or his proudest war-consecrating cathedral as we shudder now when we pass a physiological laboratory. If we dreaded and mistrusted the priest, we could at least keep him out of the house; but what of the modern Darwinist surgeon whom we dread and mistrust ten times more, but into whose hands we must all give ourselves from time to time? Miserably as religion had been debased, it did at least still proclaim that our relation to one another was that of a fellowship in which we were all equal and members one of another before the judgment-seat of our common father. Darwinism proclaimed that our true relation is that of competitors and combatants in a struggle for mere survival, and that every act of pity or loyalty to the old fellowship is a vain and mischievous attempt to lessen the severity of the struggle and preserve inferior varieties from the efforts of Nature to weed them out. Even in Socialist Societies which existed solely to substitute the law of fellowship for the law of competition, and the method of providence and wisdom for the method of rushing violently down a steep place into the sea, I found myself regarded as a blasphemer and an ignorant sentimentalist because whenever the Neo-Darwinian doctrine was preached there I made no attempt to conceal my intellectual contempt for its blind coarseness and shallow logic, or my natural abhorrence of its sickening inhumanity.

#### THE GREATEST OF THESE IS SELF-CONTROL

As there is no place in Darwinism for free will, or any other sort of will, the Neo-Darwinists held that there is no such thing as self-control. Yet self-control is just the one quality of survival value which Circumstantial Selection must invariably and inevitably develop in the long run. Uncontrolled qualities may be selected for survival and development for certain periods and under certain circumstances. For instance, since it is the ungovernable gluttons who strive the hardest to get food and drink, their efforts would develop their strength and cunning in a period of such scarcity that the utmost they could do would not enable them to over-eat themselves. But a change of circumstances involving a plentiful supply of food would destroy them. We see this very thing happening often enough in the case of the healthy and vigorous poor man who becomes a millionaire by one of the accidents of our competitive commerce, and immediately proceeds to dig his grave with his teeth. But the self-controlled man survives all such changes of circumstance, because he adapts himself to them, and eats neither as much as he can hold nor as little as he can scrape along on, but as much as is good for him. What is self-control? It is nothing but a highly developed vital sense, dominating and regulating the mere appetites. To overlook the very existence of this supreme sense; to miss the obvious inference that it is the quality that distinguishes the fittest to survive; to omit, in short, the highest moral claim of Evolutionary Selection: all this, which the Neo-Darwinians did in the name of Natural Selection, shewed the most pitiable want of mastery of their own subject, the dullest lack of observation of the forces upon which Natural Selection works.

#### A SAMPLE OF LAMARCKO-SHAVIAN INVECTIVE

The Vitalist philosophers made no such mistakes. Nietzsche, for example, thinking out the great central truth of the Will to Power instead of cutting off mouse-tails, had no difficulty in concluding that the final objective of this Will was power over self, and that the seekers after power over others and material possessions were on a false scent.

The stultification naturally became much worse as the first Darwinians died out. The prestige of these pioneers, who had the older evolutionary culture to build on, and were in fact no more Darwinian in the modern sense than Darwin himself, ceased to dazzle us when Huxley and Tyndall and Spencer and Darwin passed away, and we were left with the smaller people who began with Darwin and took in nothing else. Accordingly, I find that in the year 1906 I indulged my temper by hurling invectives at the Neo-Darwinians in the following terms.

I really do not wish to be abusive; but when I think of these poor little dullards, with their precarious hold of

just that corner of evolution that a blackbeetle can understand--with their retinue of twopenny-halfpenny Torquemadas wallowing in the infamies of the vivisector's laboratory, and solemnly offering us as epoch-making discoveries their demonstrations that dogs get weaker and die if you give them no food; that intense pain makes mice sweat; and that if you cut off a dog's leg the three-legged dog will have a four-legged puppy, I ask myself what spell has fallen on intelligent and humane men that they allow themselves to be imposed on by this rabble of dolts, blackguards, impostors, quacks, liars, and, worst of all, credulous conscientious fools. Better a thousand times Moses and Spurgeon [a then famous preacher] back again. After all, you cannot understand Moses without imagination nor Spurgeon without metaphysics; but you can be a thorough-going Neo-Darwinian without imagination, metaphysics, poetry, conscience, or decency. For "Natural Selection" has no moral significance: it deals with that part of evolution which has no purpose, no intelligence, and might more appropriately be called accidental selection, or better still, Unnatural Selection, since nothing is more unnatural than an accident. If it could be proved that the whole universe had been produced by such Selection, only fools and rascals could bear to live.'

#### THE HUMANITARIANS AND THE PROBLEM OF EVIL

Yet the humanitarians were as delighted as anybody with Darwinism at first. They had been perplexed by the Problem of Evil and the Cruelty of Nature. They were Shelleyists, but not atheists. Those who believed in God were at a terrible disadvantage with the atheist. They could not deny the existence of natural facts so cruel that to attribute them to the will of God is to make God a demon. Belief in God was impossible to any thoughtful person without belief in the Devil as well. The painted Devil, with his horns, his barbed tail, and his abode of burning brimstone, was an incredible bogey; but the evil attributed to him was real enough; and the atheists argued that the author of evil, if he exists, must be strong enough to overcome God, else God is morally responsible for everything he permits the Devil to do. Neither conclusion delivered us from the horror of attributing the cruelty of nature to the workings of an evil will, or could reconcile it with our impulses towards justice, mercy, and a higher life.

A complete deliverance was offered by the discovery of Circumstantial Selection: that is to say, of a method by which horrors having every appearance of being elaborately planned by some intelligent contriver are only accidents without any moral significance at all. Suppose a watcher from the stars saw a frightful accident produced by two crowded trains at full speed crashing into one another! How could he conceive that a catastrophe brought about by such elaborate machinery, such ingenious preparation, such skilled direction, such vigilant industry, was quite unintentional? Would he not conclude that the signal-men were devils?

Well, Circumstantial Selection is largely a theory of collisions: that is, a theory of the innocence of much apparently designed devilry. In this way Darwin brought intense relief as well as an enlarged knowledge of facts to the humanitarians. He destroyed the omnipotence of God for them; but he also exonerated God from a hideous charge of cruelty. Granted that the comfort was shallow, and that deeper reflection was bound to shew that worse than all conceivable devil-deities is a blind, deaf, dumb, heartless, senseless mob of forces that strike as a tree does when it is blown down by the wind, or as the tree itself is struck by lightning. That did not occur to the humanitarians at the moment: people do not reflect deeply when they are in the first happiness of escape from an intolerably oppressive situation. Like Bunyan's pilgrim they could not see the wicket gate, nor the Slough of Despond, nor the castle of Giant Despair; but they saw the shining light at the end of the path, and so started gaily towards it as Evolutionists.

And they were right; for the problem of evil yields very easily to Creative Evolution. If the driving power behind Evolution is omnipotent only in the sense that there seems no limit to its final achievement; and if it must meanwhile struggle with matter and circumstance by the method of trial and error, then the world must be full of its unsuccessful experiments. Christ may meet a tiger, or a High Priest arm-in-arm with a Roman Governor, and be the unfittest to survive under the circumstances. Mozart may have a genius that prevails against Emperors and Archbishops, and a lung that succumbs to some obscure and noxious property of foul air. If all our calamities are either accidents or sincerely repented mistakes, there is no malice in the Cruelty of

Nature and no Problem of Evil in the Victorian sense at all. The theology of the women who told us that they became atheists when they sat by the cradles of their children and saw them strangled by the hand of God is succeeded by the theology of Blanco Posnet, with his 'It was early days when He made the croup, I guess. It was the best He could think of then; but when it turned out wrong on His hands He made you and me to fight the croup for Him.'

#### HOW ONE TOUCH OF DARWIN MAKES THE WHOLE WORLD KIN

Another humanitarian interest in Darwinism was that Darwin popularized Evolution generally, as well as making his own special contribution to it. Now the general conception of Evolution provides the humanitarian with a scientific basis, because it establishes the fundamental equality of all living things. It makes the killing of an animal murder in exactly the same sense as the killing of a man is murder. It is sometimes necessary to kill men as it is always necessary to kill tigers; but the old theoretic distinction between the two acts has been obliterated by Evolution. When I was a child and was told that our dog and our parrot, with whom I was on intimate terms, were not creatures like myself, but were brutal whilst I was reasonable, I not only did not believe it, but quite consciously and intellectually formed the opinion that the distinction was false; so that afterwards, when Darwin's views were first unfolded to me, I promptly said that I had found out all that for myself before I was ten years old; and I am far from sure that my youthful arrogance was not justified; for this sense of the kinship of all forms of life is all that is needed to make Evolution not only a conceivable theory, but an inspiring one. St Anthony was ripe for the Evolution theory when he preached to the fishes, and St Francis when he called the birds his little brothers. Our vanity, and our snobbish conception of Godhead as being, like earthly kingship, a supreme class distinction instead of the rock on which Equality is built, had led us to insist on God offering us special terms by placing us apart from and above all the rest of his creatures. Evolution took that conceit out of us; and now, though we may kill a flea without the smallest remorse, we at all events know that we are killing our cousin. No doubt it shocks the flea when the creature that an almighty Celestial Flea created expressly for the food of fleas, destroys the jumping lord of creation with his sharp and enormous thumbnail; but no flea will ever be so foolish as to preach that in slaying fleas Man is applying a method of Natural Selection which will finally evolve a flea so swift that no man can catch him, and so hardy of constitution that Insect Powder will have no more effect on him than strychnine on an elephant.

#### WHY DARWIN PLEASED THE SOCIALISTS

The Humanitarians were not alone among the agitators in their welcome to Darwin. He had the luck to please everybody who had an axe to grind. The Militarists were as enthusiastic as the Humanitarians, the Socialists as the Capitalists. The Socialists were specially encouraged by Darwin's insistence on the influence of environment. Perhaps the strongest moral bulwark of Capitalism is the belief in the efficacy of individual righteousness. Robert Owen made desperate efforts to convince England that her criminals, her drunkards, her ignorant and stupid masses, were the victims of circumstance: that if we would only establish his new moral world we should find that the masses born into an educated and moralized community would be themselves educated and moralized. The stock reply to this is to be found in Lewes's *Life of Goethe*. Lewes scorned the notion that circumstances govern character. He pointed to the variety of character in the governing rich class to prove the contrary. Similarity of circumstance can hardly be carried to a more desolating dead level than in the case of the individuals who are born and bred in English country houses, and sent first to Eton or Harrow, and then to Oxford or Cambridge, to have their minds and habits formed. Such a routine would destroy individuality if anything could. Yet individuals come out from it as different as Pitt from Fox, as Lord Russell from Lord Gurzon, as Mr Winston Churchill from Lord Robert Cecil. This acceptance of the congenital character of the individual as the determining factor in his destiny had been reinforced by the Lamarckian view of Evolution. If the giraffe can develop his neck by wanting and trying, a man can develop his character in the same way. The old saying, 'Where there is a will, there is a way,' condenses Lamarck's theory of functional adaptation into a proverb. This felt bracingly moral to strong minds, and reassuringly pious to feeble ones. There was no more effective retort to the Socialist than to tell him to reform himself before he pretends to reform society. If you were rich, how pleasant it was to feel that you owed your riches to the



superiority of your own character! The industrial revolution had turned numbers of greedy dullards into monstrosly rich men. Nothing could be more humiliating and threatening to them than the view that the falling of a shower of gold into their pockets was as pure an accident as the falling of a shower of hail on their umbrellas, and happened alike to the just and unjust. Nothing could be more flattering and fortifying to them than the assumption that they were rich because they were virtuous.

Now Darwinism made a clean sweep of all such self-righteousness. It more than justified Robert Owen by discovering in the environment of an organism an influence on it more potent than Owen had ever claimed. It implied that street arabs are produced by slums and not by original sin: that prostitutes are produced by starvation wages and not by feminine concupiscence. It threw the authority of science on the side of the Socialist who said that he who would reform himself must first reform society. It suggested that if we want healthy and wealthy citizens we must have healthy and wealthy towns; and that these can exist only in healthy and wealthy countries. It could be led to the conclusion that the type of character which remains indifferent to the welfare of its neighbors as long as its own personal appetite is satisfied is the disastrous type, and the type which is deeply concerned about its environment the only possible type for a permanently prosperous community. It shewed that the surprising changes which Robert Owen had produced in factory children by a change in their circumstances which does not seem any too generous to us nowadays were as nothing to the changes--changes not only of habits but of species, not only of species but of orders--which might conceivably be the work of environment acting on individuals without any character or intellectual consciousness whatever. No wonder the Socialists received Darwin with open arms.

#### DARWIN AND KARL MARX

Besides, the Socialists had an evolutionary prophet of their own, who had discredited Manchester as Darwin discredited the Garden of Eden. Karl Marx had proclaimed in his Communist Manifesto of 1848 (now enjoying Scriptural authority in Russia) that civilization is an organism evolving irresistibly by circumstantial selection; and he published the first volume of his *Das Kapital* in 1867. The revolt against anthropomorphic idolatry, which was, as we have seen, the secret of Darwin's success, had been accompanied by a revolt against the conventional respectability which covered not only the brigandage and piracy of the feudal barons, but the hypocrisy, inhumanity, snobbery, and greed of the bourgeoisie, who were utterly corrupted by an essentially diabolical identification of success in life with big profits. The moment Marx shewed that the relation of the bourgeoisie to society was grossly immoral and disastrous, and that the whited wall of starched shirt fronts concealed and defended the most infamous of all tyrannies and the basest of all robberies, he became an inspired prophet in the mind of every generous soul whom his book reached. He had said and proved what they wanted to have proved; and they would hear nothing against him. Now Marx was by no means infallible: his economics, half borrowed, and half home-made by a literary amateur, were not, when strictly followed up, even favorable to Socialism. His theory of civilisation had been promulgated already in Buckle's *History of Civilization*, a book as epoch-making in the minds of its readers as *Das Kapital*. There was nothing about Socialism in the widely read first volume of *Das Kapital*: every reference it made to workers and capitalists shewed that Marx had never breathed industrial air, and had dug his case out of bluebooks in the British Museum. Compared to Darwin, he seemed to have no power of observation: there was not a fact in *Das Kapital* that had not been taken out of a book, nor a discussion that had not been opened by somebody else's pamphlet. No matter: he exposed the bourgeoisie and made an end of its moral prestige. That was enough: like Darwin he had for the moment the World Will by the ear. Marx had, too, what Darwin had not: implacability and a fine Jewish literary gift, with terrible powers of hatred, invective, irony, and all the bitter qualities bred, first in the oppression of a rather pampered young genius (Marx was the spoilt child of a well-to-do family) by a social system utterly uncongenial to him, and later on by exile and poverty. Thus Marx and Darwin between them toppled over two closely related idols, and became the prophets of two new creeds.

#### WHY DARWIN PLEASED THE PROFITEERS ALSO

But how, at this rate, did Darwin succeed with the capitalists too? It is not easy to make the best of both worlds when one of the worlds is preaching a Class War, and the other vigorously practising it. The explanation is that Darwinism was so closely related to Capitalism that Marx regarded it as an economic product rather than as a biological theory. Darwin got his main postulate, the pressure of population on the available means of subsistence, from the treatise of Malthus on Population, just as he got his other postulate of a practically unlimited time for that pressure to operate from the geologist Lyell, who made an end of Archbishop Ussher's Biblical estimate of the age of the earth as 4004 B.C. plus A.D. The treatises of the Ricardian economists on the Law of Diminishing Return, which was only the Manchester School's version of the giraffe and the trees, were all very fiercely discussed when Darwin was a young man. In fact the discovery in the eighteenth century by the French Physiocrats of the economic effects of Commercial Selection in soils and sites, and by Malthus of a competition for subsistence which he attributed to pressure of population on available subsistence, had already brought political science into that unbreathable atmosphere of fatalism which is the characteristic blight of Darwinism. Long before Darwin published a line, the Ricardo-Malthusian economists were preaching the fatalistic Wages Fund doctrine, and assuring the workers that Trade Unionism is a vain defiance of the inexorable laws of political economy, just as the Neo-Darwinians were presently assuring us that Temperance Legislation is a vain defiance of Natural Selection, and that the true way to deal with drunkenness is to flood the country with cheap gin and let the fittest survive. Cobdenism is, after all, nothing but the abandonment of trade to Circumstantial Selection.

It is hardly possible to exaggerate the importance of this preparation for Darwinism by a vast political and clerical propaganda of its moral atmosphere. Never in history, as far as we know, had there been such a determined, richly subsidized, politically organized attempt to persuade the human race that all progress, all prosperity, all salvation, individual and social, depend on an unrestrained conflict for food and money, on the suppression and elimination of the weak by the strong, on Free Trade, Free Contract, Free Competition, Natural Liberty, Laisser-faire: in short, on 'doing the other fellow down' with impunity, all interference by a guiding government, all organization except police organization to protect legalized fraud against fisticuffs, all attempt to introduce human purpose and design and forethought into the industrial welter, being 'contrary to the laws of political economy.' Even the proletariat sympathized, though to them Capitalist liberty meant only wage slavery without the legal safeguards of chattel slavery. People were tired of governments and kings and priests and providences, and wanted to find out how Nature would arrange matters if she were let alone. And they found it out to their cost in the days when Lancashire used up nine generations of wage slaves in one generation of their masters. But their masters, becoming richer and richer, were very well satisfied, and Bastiat proved convincingly that Nature had arranged Economic Harmonies which would settle social questions far better than theocracies or aristocracies or mobocracies, the real *deus ex machina* being unrestrained plutocracy.

#### THE POETRY AND PURITY OF MATERIALISM

Thus the stars in their courses fought for Darwin. Every faction drew a moral from him; every catholic hater of faction founded a hope on him; every blackguard felt justified by him; and every saint felt encouraged by him. The notion that any harm could come of so splendid an enlightenment seemed as silly as the notion that the atheists would steal all our spoons. The physicists went further than the Darwinians. Tyndall declared that he saw in Matter the promise and potency of all forms of life, and with his Irish graphic lucidity made a picture of a world of magnetic atoms, each atom with a positive and a negative pole, arranging itself by attraction and repulsion in orderly crystalline structure. Such a picture is dangerously fascinating to thinkers oppressed by the bloody disorders of the living world. Craving for purer subjects of thought, they find in the contemplation of crystals and magnets a happiness more dramatic and less childish than the happiness found by the mathematicians in abstract numbers, because they see in the crystals beauty and movement without the corrupting appetites of fleshly vitality. In such Materialism as that of Lucretius and Tyndall there is a nobility which produces poetry: John Davidson found his highest inspiration in it. Even its pessimism as it faces the cooling of the sun and the return of the ice-caps does not degrade the pessimist: for example, the Quincy Adamases, with their insistence on modern democratic degradation as an inevitable result of solar shrinkage,

are not dehumanized as the vivisectionists are. Perhaps nobody is at heart fool enough to believe that life is at the mercy of temperature: Dante was not troubled by the objection that Brunetto could not have lived in the fire nor Ugolino in the ice.

But the physicists found their intellectual vision of the world incommunicable to those who were not born with it. It came to the public simply as Materialism; and Materialism lost its peculiar purity and dignity when it entered into the Darwinian reaction against Bible fetichism. Between the two of them religion was knocked to pieces; and where there had been a god, a cause, a faith that the universe was ordered however inexplicable by us its order might be, and therefore a sense of moral responsibility as part of that order, there was now an utter void. Chaos had come again. The first effect was exhilarating: we had the runaway child's sense of freedom before it gets hungry and lonely and frightened. In this phase we did not desire our God back again. We printed the verses in which William Blake, the most religious of our great poets, called the anthropomorphic idol Old Nobodaddy, and giped at him in terms which the printer had to leave us to guess from his blank spaces. We had heard the parson droning that God is not mocked; and it was great fun to mock Him to our hearts' content and not be a penny the worse. It did not occur to us that Old Nobodaddy, instead of being a ridiculous fiction, might be only an impostor, and that the exposure of this Koeppenik Captain of the heavens, far from proving that there was no real captain, rather proved the contrary: that, in short, Nobodaddy could not have impersonated anybody if there had not been Somebodaddy to impersonate. We did not see the significance of the fact that on the last occasion on which God had been 'expelled with a pitchfork,' men so different as Voltaire and Robespierre had said, the one that if God did not exist it would be necessary to invent him, and the other that after an honest attempt to dispense with a Supreme Being in practical politics, some such hypothesis had been found quite indispensable, and could not be replaced by a mere Goddess of Reason. If these two opinions were quoted at all, they were quoted as jokes at the expense of Nobodaddy. We were quite sure for the moment that whatever lingering superstition might have daunted these men of the eighteenth century, we Darwinians could do without God, and had made a good riddance of Him.

#### THE VICEROYS OF THE KING OF KINGS

Now in politics it is much easier to do without God than to do without his viceroys and vicars and lieutenants; and we begin to miss the lieutenants long before we begin to miss their principal. Roman Catholics do what their confessors advise without troubling God; and Royalists are content to worship the King and ask the policeman. But God's trustiest lieutenants often lack official credentials. They may be professed atheists who are also men of honor and high public spirit. The old belief that it matters dreadfully to God whether a man thinks himself an atheist or not, and that the extent to which it matters can be stated with exactness as one single damn, was an error: for the divinity is in the honor and public spirit, not in the mouthed *credo* or *non credo*. The consequences of this error became grave when the fitness of a man for public trust was tested, not by his honor and public spirit, but by asking him whether he believed in Nobodaddy or not. If he said yes, he was held fit to be a Prime Minister, though, as our ablest Churchman has said, the real implication was that he was either a fool, a bigot, or a liar. Darwin destroyed this test; but when it was only thoughtlessly dropped, there was no test at all; and the door to public trust was open to the man who had no sense of God because he had no sense of anything beyond his own business interests and personal appetites and ambitions. As a result, the people who did not feel in the least inconvenienced by being no longer governed by Nobodaddy soon found themselves very acutely inconvenienced by being governed by fools and commercial adventurers. They had forgotten not only God but Goldsmith, who had warned them that 'honor sinks where commerce long prevails.'

The lieutenants of God are not always persons: some of them are legal and parliamentary fictions. One of them is Public Opinion. The pre-Darwinian statesmen and publicists were not restrained directly by God; but they restrained themselves by setting up an image of a Public Opinion which would not tolerate any attempt to tamper with British liberties. Their favorite way of putting it was that any Government which proposed such and such an infringement of such and such a British liberty would be hurled from office in a week. This was not true: there was no such public opinion, no limit to what the British people would put up with in the

abstract, and no hardship short of immediate and sudden starvation that it would not and did not put up with in the concrete. But this very helplessness of the people had forced their rulers to pretend that they were not helpless, and that the certainty of a sturdy and unconquerable popular resistance forbade any trifling with Magna Carta or the Petition of Rights or the authority of parliament. Now the reality behind this fiction was the divine sense that liberty is a need vital to human growth. Accordingly, though it was difficult enough to effect a political reform, yet, once parliament had passed it, its wildest opponent had no hope that the Government would cancel it, or shelve it, or be bought off from executing it. From Walpole to Campbell-Bannerman there was no Prime Minister to whom such reneguing or trafficking would ever have occurred, though there were plenty who employed corruption unsparingly to procure the votes of members of parliament for their policy.

#### POLITICAL OPPORTUNISM IN EXCELSIS

The moment Nobodaddy was slain by Darwin, Public Opinion, as divine deputy, lost its sanctity. Politicians no longer told themselves that the British public would never suffer this or that: they allowed themselves to know that for their own personal purposes, which are limited to their ten or twenty years on the front benches in parliament, the British public can be humbugged and coerced into believing and suffering everything that it pays to impose on them, and that any false excuse for an unpopular step will serve if it can be kept in countenance for a fortnight: that is, until the terms of the excuse are forgotten. The people, untaught or mistaught, are so ignorant and incapable politically that this in itself would not greatly matter; for a statesman who told them the truth would not be understood, and would in effect mislead them more completely than if he dealt with them according to their blindness instead of to his own wisdom. But though there is no difference in this respect between the best demagogue and the worst, both of them having to present their cases equally in terms of melodrama, there is all the difference in the world between the statesman who is humbugging the people into allowing him to do the will of God, in whatever disguise it may come to him, and one who is humbugging them into furthering his personal ambition and the commercial interests of the plutocrats who own the newspapers and support him on reciprocal terms. And there is almost as great a difference between the statesman who does this naively and automatically, or even does it telling himself that he is ambitious and selfish and unscrupulous, and the one who does it on principle, believing that if everyone takes the line of least material resistance the result will be the survival of the fittest in a perfectly harmonious universe. Once produce an atmosphere of fatalism on principle, and it matters little what the opinions or superstitions of the individual statesmen concerned may be. A Kaiser who is a devout reader of sermons, a Prime Minister who is an emotional singer of hymns, and a General who is a bigoted Roman Catholic may be the executants of the policy; but the policy itself will be one of unprincipled opportunism; and all the Governments will be like the tramp who walks always with the wind and ends as a pauper, or the stone that rolls down the hill and ends as an avalanche: their way is the way to destruction.

#### THE BETRAYAL OF WESTERN CIVILIZATION

Within sixty years from the publication of Darwin's *Origin of Species* political opportunism had brought parliaments into contempt; created a popular demand for direct action by the organized industries ('Syndicalism'); and wrecked the centre of Europe in a paroxysm of that chronic terror of one another, that cowardice of the irreligious, which, masked in the bravado of militarist patriotism, had ridden the Powers like a nightmare since the Franco-Prussian war of 1870-71. The sturdy old cosmopolitan Liberalism vanished almost unnoticed. At the present moment all the new ordinances for the government of our Grown Colonies contain, as a matter of course, prohibitions of all criticism, spoken or written, of their ruling officials, which would have scandalized George III and elicited Liberal pamphlets from Catherine II. Statesmen are afraid of the suburbs, of the newspapers, of the profiteers, of the diplomatists, of the militarists, of the country houses, of the trade unions, of everything ephemeral on earth except the revolutions they are provoking; and they would be afraid of these if they were not too ignorant of society and history to appreciate the risk, and to know that a revolution always seems hopeless and impossible the day before it breaks out, and indeed never does break out until it seems hopeless and impossible; for rulers who think it possible take care to insure the risk by

ruling reasonably. This brings about a condition fatal to all political stability: namely, that you never know where to have the politicians. If the fear of God was in them it might be possible to come to some general understanding as to what God disapproves of; and Europe might pull together on that basis. But the present panic, in which Prime Ministers drift from election to election, either fighting or running away from everybody who shakes a fist at them, makes a European civilization impossible. Such peace and prosperity as we enjoyed before the war depended on the loyalty of the Western States to their own civilization. That loyalty could find practical expression only in an alliance of the highly civilized Western Powers against the primitive tyrannies of the East. Britain, Germany, France, and the United States of America could have imposed peace on the world, and nursed modern civilization in Russia, Turkey, and the Balkans. Every meaner consideration should have given way to this need for the solidarity of the higher civilization. What actually happened was that France and England, through their clerks the diplomatists, made an alliance with Russia to defend themselves against Germany; Germany made an alliance with Turkey to defend herself against the three; and the two unnatural and suicidal combinations fell on one another in a war that came nearer to being a war of extermination than any wars since those of Timur the Tartar; whilst the United States held aloof as long as they could, and the other States either did the same or joined in the fray through compulsion, bribery, or their judgment as to which side their bread was buttered. And at the present moment, though the main fighting has ceased through the surrender of Germany on terms which the victors have never dreamt of observing, the extermination by blockade and famine, which was what forced Germany to surrender, still continues, although it is certain that if the vanquished starve the victors will starve too, and Europe will liquidate its affairs by going, not into bankruptcy, but into chaos.

Now all this, it will be noticed, was fundamentally nothing but an idiotic attempt on the part of each belligerent State to secure for itself the advantage of the survival of the fittest through Circumstantial Selection. If the Western Powers had selected their allies in the Lamarckian manner intelligently, purposely, and vitally, *ad majorem Dei gloriam*, as what Nietzsche called good Europeans, there would have been a League of Nations and no war. But because the selection relied on was purely circumstantial opportunist selection, so that the alliances were mere marriages of convenience, they have turned out, not merely as badly as might have been expected, but far worse than the blackest pessimist had ever imagined possible.

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#### CIRCUMSTANTIAL SELECTION IN FINANCE

How it will all end we do not yet know. When wolves combine to kill a horse, the death of the horse only sets them fighting one another for the choicest morsels. Men are no better than wolves if they have no better principles: accordingly, we find that the Armistice and the Treaty have not extricated us from the war. A handful of Serbian regicides flung us into it as a sporting navvy throws a bull pup at a cat; but the Supreme Council, with all its victorious legions and all its prestige, cannot get us out of it, though we are heartily sick and tired of the whole business, and know now very well that it should never have been allowed to happen. But we are helpless before a slate scrawled with figures of National Debts. As there is no money to pay them because it was all spent on the war (wars have to be paid for on the nail) the sensible thing to do is to wipe the slate and let the wrangling States distribute what they can spare, on the sound communist principle of from each according to his ability, to each according to his need. But no: we have no principles left, not even commercial ones; for what sane commercialist would decree that France must not pay for her failure to defend her own soil; that Germany must pay for her success in carrying the war into the enemy's country; and that as Germany has not the money to pay, and under our commercial system can make it only by becoming once more a commercial competitor of England and France, which neither of them will allow, she must borrow the money from England, or America, or even from France: an arrangement by which the victorious creditors will pay one another, and wait to get their money back until Germany is either strong enough to refuse to pay or ruined beyond the possibility of paying? Meanwhile Russia, reduced to a scrap of fish and a pint of cabbage soup a day, has fallen into the hands of rulers who perceive that Materialist Communism is at all events more effective than Materialist Nihilism, and are attempting to move in an intelligent and ordered manner, practising a very strenuous Intentional Selection of workers as fitter to survive than idlers; whilst the Western Powers are drifting and colliding and running on the rocks, in the hope that if they continue to do their worst

they will get Naturally Selected for survival without the trouble of thinking about it.

#### THE HOMEOPATHIC REACTION AGAINST DARWINISM

When, like the Russians, our Nihilists have it urgently borne in on them, by the brute force of rising wages that never overtake rising prices, that they are being Naturally Selected for destruction, they will perhaps remember that 'Dont Care came to a bad end,' and begin to look round for a religion. And the whole purpose of this book is to shew them where to look. For, throughout all the godless welter of the infidel half-century, Darwinism has been acting not only directly but homeopathically, its poison rallying our vital forces not only to resist it and cast it out, but to achieve a new Reformation and put a credible and healthy religion in its place. Samuel Butler was the pioneer of the reaction as far as the casting out was concerned; but the issue was confused by the physiologists, who were divided on the question into Mechanists and Vitalists. The Mechanists said that life is nothing but physical and chemical action; that they have demonstrated this in many cases of so-called vital phenomena; and that there is no reason to doubt that with improved methods they will presently be able to demonstrate it in all of them. The Vitalists said that a dead body and a live one are physically and chemically identical, and that the difference can be accounted for only by the existence of a Vital Force. This seems simple; but the Anti-Mechanists objected to be called Vitalists (obviously the right name for them) on two contradictory grounds. First, that vitality is scientifically inadmissible, because it cannot be isolated and experimented with in the laboratory. Second, that force, being by definition anything that can alter the speed or direction of matter in motion (briefly, that can overcome inertia), is essentially a mechanistic conception. Here we had the New Vitalist only half extricated from the Old Mechanist, objecting to be called either, and unable to give a clear lead in the new direction. And there was a deeper antagonism. The Old Vitalists, in postulating a Vital Force, were setting up a comparatively mechanical conception as against the divine idea of the life breathed into the clay nostrils of Adam, whereby he became a living soul. The New Vitalists, filled by their laboratory researches with a sense of the miraculousness of life that went far beyond the comparatively uninformed imaginations of the authors of the Book of Genesis, regarded the Old Vitalists as Mechanists who had tried to fill up the gulf between life and death with an empty phrase denoting an imaginary physical force.

These professional faction fights are ephemeral, and need not trouble us here. The Old Vitalist, who was essentially a Materialist, has evolved into the New Vitalist, who is, as every genuine scientist must be, finally a metaphysician. And as the New Vitalist turns from the disputes of his youth to the future of his science, he will cease to boggle at the name Vitalist, or at the inevitable, ancient, popular, and quite correct use of the term Force to denote metaphysical as well as physical overcomers of inertia.

Since the discovery of Evolution as the method of the Life Force the religion of metaphysical Vitalism has been gaining the definiteness and concreteness needed to make it assimilable by the educated critical man. But it has always been with us. The popular religions, disgraced by their Opportunist cardinals and bishops, have been kept in credit by canonized saints whose secret was their conception of themselves as the instruments and vehicles of divine power and aspiration: a conception which at moments becomes an actual experience of ecstatic possession by that power. And above and below all have been millions of humble and obscure persons, sometimes totally illiterate, sometimes unconscious of having any religion at all, sometimes believing in their simplicity that the gods and temples and priests of their district stood for their instinctive righteousness, who have kept sweet the tradition that good people follow a light that shines within and above and ahead of them, that bad people care only for themselves, and that the good are saved and blessed and the bad damned and miserable. Protestantism was a movement towards the pursuit of a light called an inner light because every man must see it with his own eyes and not take any priest's word for it or any Church's account of it. In short, there is no question of a new religion, but rather of redistilling the eternal spirit of religion and thus extricating it from the sludgy residue of temporalities and legends that are making belief impossible, though they are the stock-in-trade of all the Churches and all the Schools.

#### RELIGION AND ROMANCE

It is the adulteration of religion by the romance of miracles and paradises and torture chambers that makes it reel at the impact of every advance in science, instead of being clarified by it. If you take an English village lad, and teach him that religion means believing that the stories of Noah's Ark and the Garden of Eden are literally true on the authority of God himself, and if that boy becomes an artisan and goes into the town among the sceptical city proletariat, then, when the jibes of his mates set him thinking, and he sees that these stories cannot be literally true, and learns that no candid prelate now pretends to believe them, he does not make any fine distinctions: he declares at once that religion is a fraud, and parsons and teachers hypocrites and liars. He becomes indifferent to religion if he has little conscience, and indignantly hostile to it if he has a good deal.

The same revolt against wantonly false teaching is happening daily in the professional classes whose recreation is reading and whose intellectual sport is controversy. They banish the Bible from their houses, and sometimes put into the hands of their unfortunate children Ethical and Rationalist tracts of the deadliest dullness, compelling these wretched infants to sit out the discourses of Secularist lecturers (I have delivered some of them myself), who bore them at a length now forbidden by custom in the established pulpit. Our minds have reacted so violently towards provable logical theorems and demonstrable mechanical or chemical facts that we have become incapable of metaphysical truth, and try to cast out incredible and silly lies by credible and clever ones, calling in Satan to cast out Satan, and getting more into his clutches than ever in the process. Thus the world is kept sane less by the saints than by the vast mass of the indifferent, who neither act nor react in the matter. Butler's preaching of the gospel of Laodicea was a piece of common sense founded on his observation of this.

But indifference will not guide nations through civilization to the establishment of the perfect city of God. An indifferent statesman is a contradiction in terms; and a statesman who is indifferent on principle, a Laisser-faire or Muddle-Through doctrinaire, plays the deuce with us in the long run. Our statesmen must get a religion by hook or crook; and as we are committed to Adult Suffrage it must be a religion capable of vulgarization. The thought first put into words by the Mills when they said 'There is no God; but this is a family secret,' and long held unspoken by aristocratic statesmen and diplomatists, will not serve now; for the revival of civilization after the war cannot be effected by artificial breathing: the driving force of an undeluded popular consent is indispensable, and will be impossible until the statesman can appeal to the vital instincts of the people in terms of a common religion. The success of the Hang the Kaiser cry at the last General Election shews us very terrifyingly how a common irreligion can be used by myopic demagogy; and common irreligion will destroy civilization unless it is countered by common religion.

#### THE DANGER OF REACTION

And here arises the danger that when we realize this we shall do just what we did half a century ago, and what Pliable did in *The Pilgrim's Progress* when Christian landed him in the Slough of Despond: that is, run back in terror to our old superstitions. We jumped out of the frying-pan into the fire; and we are just as likely to jump back again, now that we feel hotter than ever. History records very little in the way of mental activity on the part of the mass of mankind except a series of stampedes from affirmative errors into negative ones and back again. It must therefore be said very precisely and clearly that the bankruptcy of Darwinism does not mean that Nobodaddy was Somebodaddy *with* 'body, parts, and passions' after all; that the world was made in the year 4004 B.C.; that damnation means a eternity of blazing brimstone; that the Immaculate Conception means that sex is sinful and that Christ was parthenogenetically brought forth by a virgin descended in like manner from a line of virgins right back to Eve; that the Trinity is an anthropomorphic monster with three heads which are yet only one head; that in Rome the bread and wine on the altar become flesh and blood, and in England, in a still more mystical manner, they do and they do not; that the Bible is an infallible scientific manual, an accurate historical chronicle, and a complete guide to conduct; that we may lie and cheat and murder and then wash ourselves innocent in the blood of the lamb on Sunday at the cost of a *credo* and a penny in the plate, and so on and so forth. Civilization cannot be saved by people not only crude enough to believe these things, but irreligious enough to believe that such belief constitutes a religion. The education of children cannot safely be left in their hands. If dwindling sects like the Church of England, the Church of

Rome, the Greek Church, and the rest, persist in trying to cramp the human mind within the limits of these grotesque perversions of natural truths and poetic metaphors, then they must be ruthlessly banished from the schools until they either perish in general contempt or discover the soul that is hidden in every dogma. The real Class War will be a war of intellectual classes; and its conquest will be the souls of the children.

#### A TOUCHSTONE FOR DOGMA

The test of a dogma is its universality. As long as the Church of England preaches a single doctrine that the Brahman, the Buddhist, the Mussulman, the Parsee, and all the other sectarians who are British subjects cannot accept, it has no legitimate place in the counsels of the British Commonwealth, and will remain what it is at present, a corrupter of youth, a danger to the State, and an obstruction to the Fellowship of the Holy Ghost. This has never been more strongly felt than at present, after a war in which the Church failed grossly in the courage of its profession, and sold its lilies for the laurels of the soldiers of the Victoria Cross. All the cocks in Christendom have been crowing shame on it ever since; and it will not be spared for the sake of the two or three faithful who were found even among the bishops. Let the Church take it on authority, even my authority (as a professional legend maker) if it cannot see the truth by its own light: no dogma can be a legend. A legend can pass an ethnical frontier as a legend, but not as a truth; whilst the only frontier to the currency of a sound dogma as such is the frontier of capacity for understanding it.

This does not mean that we should throw away legend and parable and drama: they are the natural vehicles of dogma; but woe to the Churches and rulers who substitute the legend for the dogma, the parable for the history, the drama for the religion! Better by far declare the throne of God empty than set a liar and a fool on it. What are called wars of religion are always wars to destroy religion by affirming the historical truth or material substantiality of some legend, and killing those who refuse to accept it as historical or substantial. But who has ever refused to accept a good legend with delight as a legend? The legends, the parables, the dramas, are among the choicest treasures of mankind. No one is ever tired of stories of miracles. In vain did Mahomet repudiate the miracles ascribed to him: in vain did Christ furiously scold those who asked him to give them an exhibition as a conjurer: in vain did the saints declare that God chose them not for their powers but for their weaknesses; that the humble might be exalted, and the proud rebuked. People will have their miracles, their stories, their heroes and heroines and saints and martyrs and divinities to exercise their gifts of affection, admiration, wonder, and worship, and their Judases and devils to enable them to be angry and yet feel that they do well to be angry. Every one of these legends is the common heritage of the human race; and there is only one inexorable condition attached to their healthy enjoyment, which is that no one shall believe them literally. The reading of stories and delighting in them made Don Quixote a gentleman: the believing them literally made him a madman who slew lambs instead of feeding them. In England today good books of Eastern religious legends are read eagerly; and Protestants and Atheists read Roman Catholic legends of the Saints with pleasure. But such fare is shirked by Indians and Roman Catholics. Freethinkers read the Bible: indeed they seem to be its only readers now except the reluctant parsons at the church lecterns, who communicate their discomfort to the congregation by gargling the words in their throats in an unnatural manner that is as repulsive as it is unintelligible. And this is because the imposition of the legends as literal truths at once changes them from parables into falsehoods. The feeling against the Bible has become so strong at last that educated people not only refuse to outrage their intellectual consciences by reading the legend of Noah's Ark, with its funny beginning about the animals and its exquisite end about the birds: they will not read even the chronicles of King David, which may very well be true, and are certainly more candid than the official biographies of our contemporary monarchs.

#### WHAT TO DO WITH THE LEGENDS

What we should do, then, is to pool our legends and make a delightful stock of religious folk-lore on an honest basis for all mankind. With our minds freed from pretence and falsehood we could enter into the heritage of all the faiths. China would share her sages with Spain, and Spain her saints with China. The Ulster man who now gives his son an unmerciful thrashing if the boy is so tactless as to ask how the evening and the



morning could be the first day before the sun was created, or to betray an innocent calf-love for the Virgin Mary, would buy him a bookful of legends of the creation and of mothers of God from all parts of the world, and be very glad to find his laddie as interested in such things as in marbles or Police and Robbers. That would be better than beating all good feeling towards religion out of the child, and blackening his mind by teaching him that the worshippers of the holy virgins, whether of the Parthenon or St Peter's, are fire-doomed heathens and idolaters. All the sweetness of religion is conveyed to the world by the hands of storytellers and image-makers. Without their fictions the truths of religion would for the multitude be neither intelligible nor even apprehensible; and the prophets would prophesy and the teachers teach in vain. And nothing stands between the people and the fictions except the silly falsehood that the fictions are literal truths, and that there is nothing in religion but fiction.

#### A LESSON FROM SCIENCE TO THE CHURCHES

Let the Churches ask themselves why there is no revolt against the dogmas of mathematics though there is one against the dogmas of religion. It is not that the mathematical dogmas are more comprehensible. The law of inverse squares is as incomprehensible to the common man as the Athanasian creed. It is not that science is free from legends, witchcraft, miracles, biographic boostings of quacks as heroes and saints, and of barren scoundrels as explorers and discoverers. On the contrary, the iconography and hagiology of Scientism are as copious as they are mostly squalid. But no student of science has yet been taught that specific gravity consists in the belief that Archimedes jumped out of his bath and ran naked through the streets of Syracuse shouting Eureka, Eureka, or that the law of inverse squares must be discarded if anyone can prove that Newton was never in an orchard in his life. When some unusually conscientious or enterprising bacteriologist reads the pamphlets of Jenner, and discovers that they might have been written by an ignorant but curious and observant nurserymaid, and could not possibly have been written by any person with a scientifically trained mind, he does not feel that the whole edifice of science has collapsed and crumbled, and that there is no such thing as smallpox. It may come to that yet; for hygiene, as it forces its way into our schools, is being taught as falsely as religion is taught there; but in mathematics and physics the faith is still kept pure, and you may take the law and leave the legends without suspicion of heresy. Accordingly, the tower of the mathematician stands unshaken whilst the temple of the priest rocks to its foundation.

#### THE RELIGIOUS ART OF THE TWENTIETH CENTURY

Creative Evolution is already a religion, and is indeed now unmistakeably the religion of the twentieth century, newly arisen from the ashes of pseudo-Christianity, of mere scepticism, and of the soulless affirmations and blind negations of the Mechanists and Neo-Darwinians. But it cannot become a popular religion until it has its legends, its parables, its miracles. And when I say popular I do not mean apprehensible by villagers only. I mean apprehensible by Cabinet Ministers as well. It is unreasonable to look to the professional politician and administrator for light and leading in religion. He is neither a philosopher nor a prophet: if he were, he would be philosophizing and prophesying, and not neglecting both for the drudgery of practical government. Socrates and Coleridge did not remain soldiers, nor could John Stuart Mill remain the representative of Westminster in the House of Commons even when he was willing. The Westminster electors admired Mill for telling them that much of the difficulty of dealing with them arose from their being inveterate liars. But they would not vote a second time for the man who was not afraid to break the crust of mendacity on which they were all dancing; for it seemed to them that there was a volcanic abyss beneath, not having his philosophic conviction that the truth is the solidest standing ground in the end. Your front bench man will always be an exploiter of the popular religion or irreligion. Not being an expert, he must take it as he finds it; and before he can take it, he must have been told stories about it in his childhood and had before him all his life an elaborate iconography of it produced by writers, painters, sculptors, temple architects, and artists of all the higher sorts. Even if, as sometimes happens, he is a bit of an amateur in metaphysics as well as a professional politician, he must still govern according to the popular iconography, and not according to his own personal interpretations if these happen to be heterodox.

It will be seen then that the revival of religion on a scientific basis does not mean the death of art, but a glorious rebirth of it. Indeed art has never been great when it was not providing an iconography for a live religion. And it has never been quite contemptible except when imitating the iconography after the religion had become a superstition. Italian painting from Giotto to Carpaccio is all religious painting; and it moves us deeply and has real greatness. Compare with it the attempts of our painters a century ago to achieve the effects of the old masters by imitation when they should have been illustrating a faith of their own. Contemplate, if you can bear it, the dull daubs of Hilton and Haydon, who knew so much more about drawing and scumbling and glazing and perspective and anatomy and 'marvellous foreshortening' than Giotto, the latchet of whose shoe they were nevertheless not worthy to unloose. Compare Mozart's Magic Flute, Beethoven's Ninth Symphony, Wagner's Ring, all of them reachings-forward to the new Vitalist art, with the dreary pseudo-sacred oratorios and cantatas which were produced for no better reason than that Handel had formerly made splendid thunder in that way, and with the stale confectionery, mostly too would-be pious to be even cheerfully toothsome, of Spohr and Mendelssohn, Stainer and Parry, which spread indigestion at our musical festivals until I publicly told Parry the bludgeoning truth about his Job and woke him to conviction of sin. Compare Flaxman and Thorwaldsen and Gibson with Phidias and Praxiteles, Stevens with Michael Angelo, Bouguereau's Virgin with Cimabue's, or the best operatic Christs of Scheffer and Müller with the worst Christs that the worst painters could paint before the end of the fifteenth century, and you must feel that until we have a great religious movement we cannot hope for a great artistic one. The disillusioned Raphael could paint a mother and child, but not a queen of Heaven as much less skilful men had done in the days of his great-grandfather; yet he could reach forward to the twentieth century and paint a Transfiguration of the Son of Man as they could not. Also, please note, he could decorate a house of pleasure for a cardinal very beautifully with voluptuous pictures of Cupid and Psyche; for this simple sort of Vitalism is always with us, and, like portrait painting, keeps the artist supplied with subject-matter in the intervals between the ages of faith; so that your sceptical Rembrandts and Velasquezs are at least not compelled to paint shop fronts for want of anything else to paint in which they can really believe.

#### THE ARTIST-PROPHETS

And there are always certain rare but intensely interesting anticipations. Michael Angelo could not very well believe in Julius II or Leo X, or in much that they believed in; but he could paint the Superman three hundred years before Nietzsche wrote *Also Sprach Zarathustra* and Strauss set it to music. Michael Angelo won the primacy among all modern painters and sculptors solely by his power of shewing us superhuman persons. On the strength of his decoration and color alone he would hardly have survived his own death twenty years; and even his design would have had only an academic interest; but as a painter of prophets and sibyls he is greatest among the very greatest in his craft, because we aspire to a world of prophets and sibyls. Beethoven never heard of radioactivity nor of electrons dancing in vortices of inconceivable energy; but pray can anyone explain the last movement of his Hammerklavier Sonata, Opus 106, otherwise than as a musical picture of these whirling electrons? His contemporaries said he was mad, partly perhaps because the movement was so hard to play; but we, who can make a pianola play it to us over and over until it is as familiar as Pop Goes the Weasel, know that it is sane and methodical. As such, it must represent something; and as all Beethoven's serious compositions represent some process within himself, some nerve storm or soul storm, and the storm here is clearly one of physical movement, I should much like to know what other storm than the atomic storm could have driven him to this oddest of all those many expressions of cyclonic energy which have given him the same distinction among musicians that Michael Angelo has among draughtsmen.

In Beethoven's day the business of art was held to be 'the sublime and beautiful.' In our day it has fallen to be the imitative and voluptuous. In both periods the word passionate has been freely employed; but in the eighteenth century passion meant irresistible impulse of the loftiest kind: for example, a passion for astronomy or for truth. For us it has come to mean concupiscence and nothing else. One might say to the art of Europe what Antony said to the corpse of Caesar: 'Are all thy conquests, glories, triumphs, spoils, shrunk to this little measure?' But in fact it is the mind of Europe that has shrunk, being, as we have seen, wholly preoccupied with a busy spring-cleaning to get rid of its superstitions before readjusting itself to the new

conception of Evolution.

## EVOLUTION IN THE THEATRE

On the stage (and here I come at last to my own particular function in the matter), Comedy, as a destructive, derisory, critical, negative art, kept the theatre open when sublime tragedy perished. From Molière to Oscar Wilde we had a line of comedic playwrights who, if they had nothing fundamentally positive to say, were at least in revolt against falsehood and imposture, and were not only, as they claimed, 'chastening morals by ridicule,' but, in Johnson's phrase, clearing our minds of cant, and thereby shewing an uneasiness in the presence of error which is the surest symptom of intellectual vitality. Meanwhile the name of Tragedy was assumed by plays in which everyone was killed in the last act, just as, in spite of Molière, plays in which everyone was married in the last act called themselves comedies. Now neither tragedies nor comedies can be produced according to a prescription which gives only the last moments of the last act. Shakespear did not make Hamlet out of its final butchery, nor Twelfth Night out of its final matrimony. And he could not become the conscious iconographer of a religion because he had no conscious religion. He had therefore to exercise his extraordinary natural gifts in the very entertaining art of mimicry, giving us the famous 'delineation of character' which makes his plays, like the novels of Scott, Dumas, and Dickens, so delightful. Also, he developed that curious and questionable art of building us a refuge from despair by disguising the cruelties of Nature as jokes. But with all his gifts, the fact remains that he never found the inspiration to write an original play. He furbished up old plays, and adapted popular stories, and chapters of history from Holinshed's Chronicle and Plutarch's biographies, to the stage. All this he did (or did not; for there are minus quantities in the algebra of art) with a recklessness which shewed that his trade lay far from his conscience. It is true that he never takes his characters from the borrowed story, because it was less trouble and more fun to him to create them afresh; but none the less he heaps the murders and villainies of the borrowed story on his own essentially gentle creations without scruple, no matter how incongruous they may be. And all the time his vital need for a philosophy drives him to seek one by the quaint professional method of introducing philosophers as characters into his plays, and even of making his heroes philosophers; but when they come on the stage they have no philosophy to expound: they are only pessimists and railers; and their occasional would-be philosophic speeches, such as *The Seven Ages of Man* and *The Soliloquy on Suicide*, shew how deeply in the dark Shakespear was as to what philosophy means. He forced himself in among the greatest of playwrights without having once entered that region in which Michael Angelo, Beethoven, Goethe, and the antique Athenian stage poets are great. He would really not be great at all if it were not that he had religion enough to be aware that his religionless condition was one of despair. His towering *King Lear* would be only a melodrama were it not for its express admission that if there is nothing more to be said of the universe than Hamlet has to say, then 'as flies to wanton boys are we to the gods: they kill us for their sport.'

Ever since Shakespear, playwrights have been struggling with the same lack of religion; and many of them were forced to become mere panders and sensation-mongers because, though they had higher ambitions, they could find no better subject-matter. From Congreve to Sheridan they were so sterile in spite of their wit that they did not achieve between them the output of Molière's single lifetime; and they were all (not without reason) ashamed of their profession, and preferred to be regarded as mere men of fashion with a rakish hobby. Goldsmith's was the only saved soul in that pandemonium.

The leaders among my own contemporaries (now veterans) snatched at minor social problems rather than write entirely without any wider purpose than to win money and fame. One of them expressed to me his envy of the ancient Greek playwrights because the Athenians asked them, not for some 'new and original' disguise of the half-dozen threadbare plots of the modern theatre, but for the deepest lesson they could draw from the familiar and sacred legends of their country. 'Let us all,' he said, 'write an *Electra*, an *Antigone*, an *Agamemnon*, and shew what we can do with it.' But he did not write any of them, because these legends are no longer religious: Aphrodite and Artemis and Poseidon are deadlier than their statues. Another, with a commanding position and every trick of British farce and Parisian drama at his fingers' ends, finally could not write without a sermon to preach, and yet could not find texts more fundamental than the hypocrisies of sham

Puritanism, or the matrimonial speculation which makes our young actresses as careful of their reputations as of their complexions. A third, too tenderhearted to break our spirits with the realities of a bitter experience, coaxed a wistful pathos and a dainty fun out of the fairy cloudland that lay between him and the empty heavens. The giants of the theatre of our time, Ibsen and Strindberg, had no greater comfort for the world than we: indeed much less; for they refused us even the Shakespearian-Dickensian consolation of laughter at mischief, accurately called comic relief. Our emancipated young successors scorn us, very properly. But they will be able to do no better whilst the drama remains pre-Evolutionist. Let them consider the great exception of Goethe. He, no richer than Shakespear, Ibsen, or Strindberg in specific talent as a playwright, is in the empyrean whilst they are gnashing their teeth in impotent fury in the mud, or at best finding an acid enjoyment in the irony of their predicament. Goethe is Olympian: the other giants are infernal in everything but their veracity and their repudiation of the irreligion of their time: that is, they are bitter and hopeless. It is not a question of mere dates. Goethe was an Evolutionist in 1830: many playwrights, even young ones, are still untouched by Creative Evolution in 1920. Ibsen was Darwinized to the extent of exploiting heredity on the stage much as the ancient Athenian playwrights exploited the Eumenides; but there is no trace in his plays of any faith in or knowledge of Creative Evolution as a modern scientific fact. True, the poetic aspiration is plain enough in his Emperor or Galilean; but it is one of Ibsen's distinctions that nothing was valid for him but science; and he left that vision of the future which his Roman seer calls 'the third Empire' behind him as a Utopian dream when he settled down to his serious grapple with realities in those plays of modern life with which he overcame Europe, and broke the dusty windows of every dry-rotten theatre in it from Moscow to Manchester.

MY OWN

## PART IN THE MATTER

In my own activities as a playwright I found this state of things intolerable. The fashionable theatre prescribed one serious subject: clandestine adultery: the dullest of all subjects for a serious author, whatever it may be for audiences who read the police intelligence and skip the reviews and leading articles. I tried slum-landlordism, doctrinaire Free Love (pseudo-Ibsenism), prostitution, militarism, marriage, history, current politics, natural Christianity, national and individual character, paradoxes of conventional society, husband hunting, questions of conscience, professional delusions and impostures, all worked into a series of comedies of manners in the classic fashion, which was then very much out of fashion, the mechanical tricks of Parisian 'construction' being *de rigueur* in the theatre. But this, though it occupied me and established me professionally, did not constitute me an iconographer of the religion of my time, and thus fulfil my natural function as an artist. I was quite conscious of this; for I had always known that civilization needs a religion as a matter of life or death; and as the conception of Creative Evolution developed I saw that we were at last within reach of a faith which complied with the first condition of all the religions that have ever taken hold of humanity: namely, that it must be, first and fundamentally, a science of metabiology. This was a crucial point with me; for I had seen Bible fetichism, after standing up to all the rationalistic batteries of Hume, Voltaire, and the rest, collapse before the onslaught of much less gifted Evolutionists, solely because they discredited it as a biological document; so that from that moment it lost its hold, and left literate Christendom faithless. My own Irish eighteenth-centuryism made it impossible for me to believe anything until I could conceive it as a scientific hypothesis, even though the abominations, quackeries, impostures, venalities, credulities, and delusions of the camp followers of science, and the brazen lies and priestly pretensions of the pseudo-scientific cure-mongers, all sedulously inculcated by modern 'secondary education,' were so monstrous that I was sometimes forced to make a verbal distinction between science and knowledge lest I should mislead my readers. But I never forgot that without knowledge even wisdom is more dangerous than mere opportunist ignorance, and that somebody must take the Garden of Eden in hand and weed it properly.

Accordingly, in 1901, I took the legend of Don Juan in its Mozartian form and made it a dramatic parable of Creative Evolution. But being then at the height of my invention and comedic talent, I decorated it too brilliantly and lavishly. I surrounded it with a comedy of which it formed only one act, and that act was so

completely episodal (it was a dream which did not affect the action of the piece) that the comedy could be detached and played by itself: indeed it could hardly be played at full length owing to the enormous length of the entire work, though that feat has been performed a few times in Scotland by Mr Esme Percy, who led one of the forlorn hopes of the advanced drama at that time. Also I supplied the published work with an imposing framework consisting of a preface, an appendix called *The Revolutionist's Handbook*, and a final display of aphoristic fireworks. The effect was so vertiginous, apparently, that nobody noticed the new religion in the centre of the intellectual whirlpool. Now I protest I did not cut these cerebral capers in mere inconsiderate exuberance. I did it because the worst convention of the criticism of the theatre current at that time was that intellectual seriousness is out of place on the stage; that the theatre is a place of shallow amusement; that people go there to be soothed after the enormous intellectual strain of a day in the city: in short, that a playwright is a person whose business it is to make unwholesome confectionery out of cheap emotions. My answer to this was to put all my intellectual goods in the shop window under the sign of Man and Superman. That part of my design succeeded. By good luck and acting, the comedy triumphed on the stage; and the book was a good deal discussed. Since then the sweet-shop view of the theatre has been out of countenance; and its critical exponents have been driven to take an intellectual pose which, though often more trying than their old intellectually nihilistic vulgarity, at least concedes the dignity of the theatre, not to mention the usefulness of those who live by criticizing it. And the younger playwrights are not only taking their art seriously, but being taken seriously themselves. The critic who ought to be a newsboy is now comparatively rare.

I now find myself inspired to make a second legend of Creative Evolution without distractions and embellishments. My sands are running out; the exuberance of 1901 has aged into the garrulity of 1930; and the war has been a stern intimation that the matter is not one to be trifled with. I abandon the legend of Don Juan with its erotic associations, and go back to the legend of the Garden of Eden. I exploit the eternal interest of the philosopher's stone which enables men to live for ever. I am not, I hope, under more illusion than is humanly inevitable as to the crudity of this my beginning of a Bible for Creative Evolution. I am doing the best I can at my age. My powers are waning; but so much the better for those who found me unbearably brilliant when I was in my prime. It is my hope that a hundred apter and more elegant parables by younger hands will soon leave mine as far behind as the religious pictures of the fifteenth century left behind the first attempts of the early Christians at iconography. In that hope I withdraw and ring up the curtain.

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BACK TO METHUSELAH.

## PART I

In the Beginning

ACT I

\_The Garden of Eden. Afternoon. An immense serpent is sleeping with her head buried in a thick bed of Johnswort, and her body coiled in apparently endless rings through the branches of a tree, which is already well grown; for the days of creation have been longer than our reckoning. She is not yet visible to anyone unaware of her presence, as her colors of green and brown make a perfect camouflage. Near her head a low rock shows above the Johnswort.

The rock and tree are on the border of a glade in which lies a dead fawn all awry, its neck being broken. Adam, crouching with one hand on the rock, is staring in consternation at the dead body. He has not noticed the serpent on his left hand. He turns his face to his right and calls excitedly.\_

ADAM. Eve! Eve!

EVE'S VOICE. What is it, Adam?