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THE  
VICTORIES OF SCIENCE

IN ITS  
WARFARE WITH SUPERSTITION.

A Lecture

DELIVERED BEFORE THE  
SUNDAY LECTURE SOCIETY,

ON  
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BY  
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# SUNDAY LECTURE SOCIETY.

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## SYLLABUS.

Vast number, variety, and vacillation of Religious Beliefs, presented to us by the history of the Human Race.

Distribution amongst mankind of the eight great Theologies (book-religions) of the present day, viz., Zoroastrianism—Brahmanism—Buddhism—Confucianism—Tao-ism—Mosaism—Christianism—Mahommedanism.

No generally acknowledged standard of Theological truth, and why.

Theology explained as a human (logical) system, based upon the blending of Religion with Superstition.

Religion as defined by Herbert Spencer, the late Lord Amberley, and Dr. James Martineau.

Superstition defined as credulity concerning manifestations of the Supernatural inconsistent with the experienced order and veracity of Reason and Nature.

Science explained as generalized human knowledge of Natural Phenomena.

The criticism of Science purifies Theology by purging it of Superstitions, thereby compelling it to undergo transmutations corresponding to the progress of human intelligence.

Illustrations from the conflict of Science with the following Superstitions:—

1. The relative magnitude, flat form, and immobility of the Earth. (*Conflict with Astronomical Science.*)
2. The six days creation of the world 6,000 years ago. (*Conflict with Geological Science.*)
3. The government of human life by Special Providence. (*Conflict with Physical Science.*)
4. The Theological theory of disease, involving miracle-cure, relic-cure, prayer-cure, &c. (*Conflict with Sanitary Science.*)
5. Anthropomorphic conceptions of the Nature, Attributes, and Will of Deity. (*Conflict with Mental and Moral Science.*)

Probability that popular Theologies are still saturated with Superstitions (*e.g.*, belief in the objective efficacy of sacerdotal supplications, humiliations, and asceticisms, supernatural revelations, and exclusive salvations) which the expansion of Science must eventually explode.

Summary of evils of life inflicted by Superstition, and ameliorations of human well-being achieved by Science, showing that the increase of Health, Happiness, and the Moral Virtues is coincident with the decline of Superstition and the advancement of Science.

The debt Religion owes to Science.

# THE VICTORIES OF SCIENCE

IN ITS

## WARFARE WITH SUPERSTITION.

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THE modern student of Universal History, seeking to enlarge and generalize his conception of human nature by the contemplation of the life of man in almost every discovered clime, and throughout the ages of recorded time, finds himself at the confluence of the greatest number of streams of knowledge that have ever been found flowing and converging together; greatly embarrassed therefore, not to say overwhelmed, by the multiplicity and diversity of his materials.

Even limiting his research to that emotional and imaginative yet transcendently interesting aspect of the human mind presented by religious phenomena, he quickly discovers that he is surrounded by a vast number, variety, and almost incessant fluctuation of Beliefs concerning the supernatural, that have everywhere been found more or less prevailing from the earliest dawn of authentic history.

On the one hand, it is remarkable that no people, or trace of a people, has hitherto been discovered absolutely destitute of some of the ultimate elements or sentiments of Religion. Travellers and thinkers entertaining diverse views on historical, political, and social questions, who have made the early history of man, or his most savage condition subjects of careful study, are really agreed on this fundamental point.

On the other hand, the most civilized and polished nations on the face of the globe have exhibited, and still

exhibit almost endless differences, divisions, and distinctions in their theological creeds, rites, and ceremonies.

The time now at our disposal would not suffice for the slightest allusion to the numerous Religions or Mythologies of even the chief Nations of the ancient world. Babylonians, Assyrians, Phœnicians, Egyptians, Arabians (before conversion), Greeks, Romans, various Teuton, Celtic, and Slavonic Nations, the Astecs of Mexico, the Incas of Peru—all having their indigenous and various ways of regarding and worshipping the supernatural—must now be passed by, in order that I may concentrate some general observations, suggested by so endless a variety of supernatural beliefs, upon those great Theologies or book-religions which constitute the religious faiths of the present inhabitants of our globe—viz.—(taking them in the order of their antiquity)—Zoroastrianism, with its sacred Zênd-Avesta, the religion of the Parsees, descendants of the ancient Persians—Brahmanism and Buddhism, with their sacred Vedas and Tripitaka, the chief religions of the inhabitants of the great Indian Peninsula.—Confucianism and Tao-ism with their sacred books of Kings and Taò-te-King, the religions of the Chinese—Mosaism with the Hebrew Scriptures, the religion of the Jews—Christianity with the New Testament, the religion of modern Europeans and Americans—and Mahommedanism, with its sacred volume the Koran, the religion of the Turks and Arabians, and other considerable peoples in Asia.

The numbers of the respective members of these several faiths, as given in Johnston's Physical Atlas, may be summed up thus—assuming the entire population of the earth at 1,000 millions, the Christians constitute 340 millions, the Buddhists 300 millions, the Brahmins 130 millions, the Mahommedans 124 millions, the Jews 6 millions, and all other religions 100 millions. A some-

what different proportion is cited by Professor Max Müller from the geography of Berghaus; where the Buddhists are stated to constitute 31 per cent. of the entire population of the globe, the Christians 30 per cent., the Mahommedans 15 per cent., the Brahmins 13 per cent, the Jews a fraction of 3, and all other religions 8 per cent. These different estimates can of course be only roughly approximate, but either is sufficiently near for illustrating our present purpose.

If we looked somewhat closer we should find that these several religious faiths are mostly subdivided internally into numerous conflicting sects. Christianity, the religion of the most intellectual and cultured peoples in existence, is almost infinitely so divided. In Professor Schaff's comprehensive and learned work upon 'The Creeds of Christendom' we are furnished with the literal texts of nearly 100 distinct creeds, confessions, articles and formularies of faith of the almost endless denominations among which dogmatic Christianity has now become dispersed.

When the mind is thus brought into the simultaneous presence of the irreconcilable dogmas of the numerous and conflicting theological faiths, all devoutly believed in by their respective worshippers, it is difficult to conceive how any one of them can be considered as constituting a supernatural universal scheme necessary for the Salvation of Mankind, seeing that it has not, after upwards of 1,800 years, been believed in, or even so much as heard of by more than about a third part of the great human race.

In view of such manifold differences of theological belief as a simple comparison of creeds discloses, it is almost obvious to observe that there can be no generally acknowledged standard or infallible test of theological truth. To use the words of a late accomplished historian—

Henry Thomas Buckle—"Theological systems are subjects upon which different persons and different nations, equally honest, equally enlightened, and equally competent, have entertained and still entertain the most different opinions, which they advocate with the greatest confidence, and support by arguments perfectly satisfactory to themselves, but contemptuously rejected by their opponents."

It is so very difficult to place oneself at the point of view of any religion save our own that we invariably hear with amazement the arguments or evidence adduced by the advocates of other religions. Dr. Sprenger, in the course of a theological discussion, was seriously asked by a Mussulman how he could possibly disbelieve the religion of Islam, seeing that Mahomet's name was written on the gates of Paradise! and Dr. Morell, in his thoughtful work on "The Philosophy of Religion," relates the following authentic incident. A distinguished friend of his in the East had been arguing for some time with a Mahomedan upon the evidences of Christianity, and apparently with some success. At length the Mahomedan, who had been listening attentively, exclaimed—"I tell you what it is, Rajah. You Franks are very clever people; God has given you the power to make ships and houses and penknives, and to do a great many wonderful things, but he has granted to us what he has denied to you—the knowledge of the true Religion."

The philosopher, though he is confident that all theological systems cannot be wholly true, yet feels that in the search after truth it must be possible, however difficult, to arrive at some explanation that may seem to reconcile the existence of so many divergent faiths; and if we look a little carefully into the constituents of theology we may I think discover a clue to the desired solution. Now we find on examination of any theology



or book-religion that it essentially consists of a body of connected propositions, logically deduced by the human mind from certain assumed to be inspired writings.

So long then as to err is human, and man remains short of being infallible, it is clear that such a system of knowledge must contain some amount of error, and we may therefore assert with tolerable accuracy, that every theology the world has seen will be found on analysis to be compounded of two elements—viz., a germ or substratum of probable truth, and a superstructure or admixture of positive error. The substratum of truth must ultimately be the same in all theologies, but their several superstructures of error will be found to vary; partly in accordance with difference of climate and other geographical circumstances; partly on account of the differing race or genius of the peoples, and their stage of civilization, amongst whom the various theologies have respectively arisen, or by whom they have since been adopted; and partly from the dissimilar mental idiosyncracies of their respective founders or principal expositors.

For the purpose of our argument this afternoon, we may conveniently designate the substratum of truth as Religion, and the superstructure of error as Superstition. Now, keeping this simple distinction clearly in view, we shall find that notwithstanding the abuse and vituperation which the Religious World (as it is phrased), have so incessantly heaped upon Science and its professors, men of science, whose noble purpose ever is simply to arrive at truth, and who, for that end, would impress on us the duty of enquiry, and the folly of credulity, have in reality never attacked Religion at all, but that in their discoveries and contentions for the purpose of enabling truth to prevail, they have only been attacking or unmasking the falsehood and error that are ever found lurking in the guise of Superstition. Superstition—that incubus upon

the human mind, whose malediction was so eloquently pronounced by Buckle, who declared that against the vitality of that dark and ill-omened principle there was only one weapon, and that weapon was Science.

I will now define more exactly what we should understand by the terms Religion and Superstition, in connection with the present discourse.

Religion, whatever other quality we claim for it, must certainly be regarded as true. Its intellectual meaning then must be strictly limited to assertions that cannot be contradicted by the discoveries of Science now or hereafter, or by the truly religious assumption of any theology whatever; for religious and scientific truth must ever be one. In reference to this its fundamental requisite, we find that Religion has been defined by many thoughtful minds. Thus, our profound philosopher Herbert Spencer has described it as "our consciousness of an Inscrutable Power or Cause manifested to us through all phenomena, but whose nature transcends intuition, and is beyond imagination." The late lamented Lord Amberley, in his exhaustive "Analysis of Religious Belief," describes Religion as 'an abstract undefinable pervading sentiment corresponding to the relation subsisting between the hyperphysical (or supernatural) power in the Universe, and the hyperphysical entity in Man.' Dr. James Martineau, one of the most highly cultured and liberal-minded of our theologians, has defined or distinguished Religion and Science thus—"Science discloses the method of the World, Religion its cause, and there is no conflict between them, except when either forgets its ignorance of what the other alone can know."

Dr. Martineau however does not leave his definition there. He boldly ventures into the region of assumptions, and affirms "that the universe which includes us and folds us round is the life-dwelling of an Eternal Mind; that the

world of our abode is the scene of a moral government incipient but not yet complete ; and that the upper zones of human affection above the clouds of self and passion raise us into the sphere of a Divine Communion." These three assumptions he considers to be independent of any possible result of the natural sciences.

Now let us turn to the consideration of what we are to understand by the term Superstition. Here we have to deal with something that should be regarded as the opposite of Religion, for it is something, which taking its rise from the faculty of fear or dread of the unknown, imaginatively figures to itself the features of some supernatural or super-human power which is manifested in ways that are inconsistent with our knowledge of the established order of nature and the veracity of human reason ; based as such knowledge is on the verified discoveries of science and on the uniformity and analogy of invariable human experience. Superstition then is that which assumes thus to know and to describe the supernatural. But what, we may ask, is the supernatural ? It was well argued by the sublime philosopher Spinoza (whose noble moral life, and subtle thoughts have lately been so powerfully portrayed by the pen of our good friend and lecturer Frederick Pollock) that " we cannot pretend to determine the boundary between the natural and the supernatural until the whole of nature shall be open to our knowledge," and the late Oxford professor, Baden Powell, in his striking *Essay on the Order of Nature* has remarked, and in approval of this acute observation of Spinoza, that the supernatural can really never be a matter of science or knowledge at all, for the moment it is brought within the cognizance of reason it ceases to be supernatural ; and he affirms that all assumed knowledge of the supernatural is the off-

spring of ignorance, and the parent of superstition and idolatry.

Now let us briefly consider what, in connection with our subject, we should understand by the term Science.

Science you know does not pretend to deal with the supernatural. Its views and its researches are limited entirely to Nature. The natural phenomena, matter, force, and energy are its sources of knowledge, whilst its organon of induction, or methods of investigation subordinate the suggestions of the imagination and the emotions to the dictates of Reason and the evidence of Nature — Science then simply signifies methodized or reasoned knowledge of the experienced course of Nature, *i.e.* those invariable co-existences and successions of phenomena — which the human mind discovers by accurate observation and reflection, and then generalizes as laws of Nature or unalterable rules constituting the actual or ultimate government of the course of our lives. In an abstract sense these laws, being inferences drawn by the human mind from the observed uniformity of Nature, may be said to possess in themselves no governing power; and that the force we seem to observe in natural law may in reality be a force behind Nature.

This criticism many of you may remember was most ably and lucidly submitted to us by our respected President Dr. Carpenter in the opening lecture of this year. But the practical danger of pressing this metaphysical assumption of some recondite force, of which Science knows and can know nothing, appears to be this, that it has a manifest tendency to cause us to retrograde from Science back to Superstition, for the mystery it involves inevitably allures the mind to disregard the clearly observed Law, and to make its appeal to the force or power assumed to exist behind the law.

Now, so far as scientific knowledge extends, the existence of any such force has nowhere been proved. Natural law is apparently universal and ultimate. "The growing belief" observes Herbert Spencer "in the universality of law is so conspicuous to cultivated minds as scarcely to need illustration, but," (he shrewdly adds,) "though the fact is sufficiently familiar, the philosophy of the fact is not so." "A natural philosopher," (says Professor Jowett) "capable of seeing creation with a real scientific insight, would behold the reign of law everywhere; one and continuous in all the different spheres of knowledge, in all the different realms of Nature, throughout all time, and over all space." "And," (says Dr. Carpenter, referring for instance to the law of gravitation) "we feel an assurance of its truth which nothing save a complete revolution in the world of matter or in the world of mind can ever shake."

Although then the inference which the mind draws from observing the uniformity of Nature is, at the outset, simply a scientific assumption, similar to the metaphysical assumption of a force existing behind Nature, yet the substantial difference between the two is really this—that whilst the metaphysical assumption ever remains an assumption, the scientific assumption becomes verified as true through the evidence of universal experience.

Such undoubtedly are the conclusions of science, and if they cannot be disproved I submit to you, not speculatively, but as an important practical matter, that we should be counselled to regulate our lives in obedience to, or conformity with the discovered and verified Law of Nature, and not in reference to some unknown force assumed to exist behind Nature.

If now we turn and limit our attention to the more recent history of European Communities we find that

their advance in civilization, that is in material and social comfort, and in the conveniences and even necessities of civilized life, has progressed in a remarkable manner parallel with the development of Science. There is scarcely an improvement in real life that is not strictly traceable to scientific discovery or invention, and all such discovery and invention being the result of the exercise of natural human sagacity is, by its very nature, antagonistic to Superstition; and the process of continually ascertaining and applying the natural law, by which the events of life on earth are found to be really regulated, has the necessary gradual effect of purifying theology, so far as it superstitiously attributes such events to the immediate action of supernatural causes, and thereby of compelling theology to undergo interpretations and modifications corresponding more or less closely, to the continual progress of human intelligence.

We shall I think meet with ample evidence of this progressive change in theological beliefs if we examine, by way of illustration, some few of the more conspicuous examples of that ceaseless conflict which Science, since the establishment of Christianity in Europe, has ever had to wage with superstition, and where it has come into collision with the prevailing theological dogmas of the day.

The first of these memorable contests which I will mention relates to the supposed magnitude, immobility, and flat form of the Earth. At the time when this conflict seriously arose (about the beginning of the 16th century), the Bible was universally believed to be an inspired supernatural authority for every matter asserted or treated of within its various pages, and its true interpretation in any ambiguous matter to have been authoritatively declared in the dogmas decreed by successive Councils of the Church, or in the commentaries

of a succession of personages of extraordinary learning and sanctity termed the Fathers, and it was not only thought to be utterly fallacious but to be awfully wicked for anyone to set up an opinion adverse to so revered a weight of authority as the Bible, Councils, and Fathers combined was held to be.

Amongst other matters of fact, believed to have been thereby decided as infallibly true, were the size and shape of the Earth. It was declared to be the largest or chief body in the Universe, and in form or shape to be a flat plane—and relatively immoveable—and that the sun, moon, and stars all moved round it; and every attempt to show, from observation of Nature or calculations of the reason based on such observation, that these views were physically untrue was met for a long time with simple scorn and derision: which only became converted into the actual persecution of Science and its professors when so large an amount of evidence to the contrary had been collected, and marshalled in such a way as to produce a profound impression upon the lay intelligence of the age, and when therefore the scientific views could no longer be safely ignored by ecclesiastical power.

This evidence I can only glance at, and indeed we are all now of course more or less familiar with it. For instance, the voyages of those adventurous navigators Columbus and Vasco de Gama in the years 1492—97, and of Magellan in the year 1519, who had amongst them actually sailed round the earth, proving to demonstration by this astonishing achievement that it was of definite and comparatively small size, and not in form a flat plane, but a circular or globular body. Then the startling astronomical researches of Copernicus, Tycho Brahe, and Kepler, had resulted in demonstrating the Earth's motion round the Sun. That it was the Sun that was stationary

and not the Earth: and then Galileo who, supplementing previous discoveries by his own, and by the aid of the telescope, then recently invented, verified, visually as well as mathematically, the great outline of our Solar System in a manner that utterly contradicted and indeed outraged all that men had been taught to believe, and did then verily believe, on the faith of scriptural and patristic authority.

The discoveries resulting from the invention of the telescope were indeed simply astounding, and they exercised such a withering influence upon the prevailing orthodox theories that many of the theologians refused even to look through the telescope, being afraid to behold the heavenly phenomena then revealed for the first time to mortal eyes. A most amusing letter on the subject from Galileo to Kepler, written in the year 1609 has been preserved: "Oh, my dear Kepler," he writes, "how I wish we could have one hearty laugh together. Here, at Padua, is the professor of Philosophy, whom I have repeatedly requested to look at the moon and planets through my glass, pertinaciously refusing to do so. Why are you not here? What laughter we should have at this glorious folly, and to hear the professor labouring before the Grand Duke with logical arguments, as with magical incantations, to charm the new planets out of the sky!"

Now Galileo, you remember, was accused of having attacked Religion; he was prosecuted accordingly, and, though the consummate audacity of the infallible Roman Church has since been equal to the denial of its complicity in his condemnation—he was summoned before the tribunal of the Holy Inquisition, the grand ecclesiastical Court of the time, and he was made, as you know, to recant all his scientific convictions. We have the exact words of his recantation, and they are still worthy



of being repeated. Galileo was compelled to declare—first, his proposition, “that the Sun is the Centre of the World and immovable from its place,” is absurd, philosophically false, and formally heretical, because it is expressly contrary to Holy Scripture. Secondly, his proposition, “that the Earth is not the Centre of the World nor immovable, but that it moves, and also with a diurnal motion,” is absurd, philosophically false, and theologically considered, erroneous in faith.

Now it should be observed that the Cardinal Inquisitors who sentenced Galileo were amongst the most enlightened ecclesiastics of their age; they were not bad men, they acted conscientiously according to their light, and their views were in harmony with the generally accepted religious knowledge and sentiments of the time.

The case therefore was one in which it was solemnly adjudged by theologians that Science had attacked and was in conflict with Religion. We, living now, know perfectly well that it was nothing of the sort—that it was Science in possession of the truth, sapping the superstitions that formed the superstructure of the theological system of the day; and now every schoolboy is taught that Galileo’s recanted propositions are matters of verified astronomical science, and therefore cannot be contradictory to, but must be in harmony with, real religious truth. Thus the discoveries and reasoning of these astronomers and their illustrious successors Newton, Laplace, Herschel, and divers others, constitute the first complete victory achieved by Science over Superstition.

I need not stop to dilate upon the deep importance to our thoughts and lives of the transcendent truths discovered by Astronomers, having given a summary of the subject in a lecture delivered here four years ago, and

still in print, "*On the Influence of Astronomical discovery in the development of the human Mind.*"

We will now turn to a second illustration of the main argument of the present lecture. Until quite recently, almost within the memory of living men, we were supposed to possess in the Bible a supernatural revelation of the Creation of the World, and the time when and the manner in which it took place. There are ecclesiastical commentaries on the book of Genesis which undertake to inform the reader by means of biblical interpretation the exact month and day of the week when this stupendous event occurred. Generally however, what is known as Archbishop Ussher's chronology was believed as a part of religious faith, and that system of dates placed the Creation as occurring precisely 4004 years before the birth of Christ; and the authority of other books of the Pentateuch is explicit and confirmatory of the Creation having been accomplished in six days, and according to the method described in the opening chapters of Genesis.

We read therein, amongst other amazing assertions, that God rested on the seventh day, and we, or those to whom these writings are assumed to have been addressed, are commanded to keep the seventh day holy on that account, and there can be no doubt of belief in these narrative and injunction being considered as an essential part of religious faith. Indeed the wearying gloom and austerity in which the religious world still struggle to retain our Sunday are strictly traceable to credulity in the superstition in question.

Now, the science of Geology, which, as most of you know, consists primarily of an actual examination of the Earth's crust or surface and strata beneath for the purpose of ascertaining what they may teach concerning the Earth's age and history, establishes the existence of a multiplicity of facts which are utterly contradictory to

and subversive of—first, the alleged creation of the Earth only some 6,000 years ago, and secondly, of its present order of inhabitants, vegetable, animal, and human, having then been brought into existence in the course of the six days mentioned in the Book of Genesis, and in the order of succession therein particularised. How thoroughly irreconcilable with the Biblical account of the Creation are the scientific conclusions of Geology will sufficiently appear from the consideration of, amongst others, the two following well-established geological conclusions:—Evidence has been obtained in Egypt of the existence of inhabitants to some extent civilized in that country 13,000 years ago, and geologists of eminence, however differing on the details of their science are agreed that the present condition of the rocks over and near to which flow the Falls of Niagara evidencing the recession of the falls from Queenstown to their present site, has been occasioned by the continuous action of water throughout a period of 30,000 years—and the most trustworthy and recent geological authorities, such as Lyell, Croll, Darwin, Haeckel, Boyd-Dawkins, and Geikie concur in considering that the antiquity of man is to be reckoned not by tens of thousands, but by hundreds of thousands of years!

But I need not occupy your time by considerations showing how utterly fallacious were the religious notions on the subject derived simply from the study of the Scriptures—their fallacy is now on all hands conceded. I may quote as recent theological authority for our present scientific views the statement of the Rev. Robert Main, Radcliffe observer in the University of Oxford:—“Some school books,” he remarks, “still teach to the ignorant that the Earth is only 6,000 years old, and that all things were created in six days—No well educated person of the present day shares in the delusion. What-

ever the meaning of the six days, ending with the seventh day's mystical and symbolical rest, indisputably we cannot accept them in their literal meaning, they as plainly do not denote the order of succession of all the individual creations." And Dr. James Martineau has declared emphatically "that the whole history of the genesis of things Religion must now unconditionally surrender to Science."

Well, but there is hardly any class of scientific men who have been more vehemently denounced for attacking religion than the geologists. The great argument used to discredit their researches was the old cry that their conclusions contradicted Scripture, and accordingly volumes upon volumes have been published all composed on the same argumentative basis, viz., That what contradicts Scripture cannot be true—an argument as some of you may have heard, as old at least as the time of Galileo. "If nature contradicts Scripture" (said the schoolmen to Galileo), "Nature must be mistaken, for we know that the Scriptures are true!"

And now how does the case stand as regards our illustration. Geological science being true could not have been attacking religion, but only those parts of the theological system which had been constructed from the superstitions of the day, and thus it has come to pass that, through the discoveries of the geologists, a second great victory has been achieved by Science in its warfare with Superstition.

A third illustration I will refer to relates to the superstition which I have mentioned in the syllabus of the Lecture as belief in the government of human life by special Providence;—the question being whether the affairs of life are carried on subject to incessant supernatural intervention, or whether they take place through the operation of constant invariable natural law.

Previously to the rise of the physical Sciences, especially Astronomy and Geology, the almost universal belief of Christian Europe was that every significant act and occurrence of life was the direct result of the exercise of the providence of God, or the power of the Devil. Not only was this conclusion directly deducible from the literal interpretation of the language of the Bible, but, it being the manifest interest of a priesthood, (whose aim is ever to stand between the prayer of the Votary and the providential act,) to encourage this belief, books of devotion are composed by them based upon this idea, in which instructions are given to enable the worshipper to beseech the Almighty in a becoming manner for almost every conceivable thing the circumstances of his life may for the time being seem to require.

The church of England book of Common Prayer compiled more than three centuries ago, that is long before the Physical Sciences had been popularly heard of in this Country, need only to be opened at random to confirm what I am now submitting to you. But the progress of Science has proved beyond rational doubt, that those circumstances of our lives which were theologically referred to as direct Providential or Satanic interventions, the inflictions, chastisement, temptations, judgments, or whatever other sacerdotal phrases are employed to define supposed manifestations of supernatural Will, are the result of the operation of natural Law, that is, they are the direct consequences of the disregard of some natural law which might have been observed and obeyed by the sagacious use of man's natural and moral intelligence. So now, in reference, for example, to the cause and cure of sickness, our attention is being most usefully drawn away by Science from miserably moping over manuals of devotion to the exhilarating study of handy books on the laws of health—and thus it is, in the words of

Professor Huxley, that "Science is teaching the World that the ultimate Court of Appeal is observation and experiment, and not theological authority, she is teaching us to estimate the value of evidence, she is creating a firm and living faith in the existence of immutable moral and physical laws, perfect obedience to which is the highest possible aim of an intelligent being."

No one then who has impartially watched the course and improvement of human life, since we have come to study and to treat its healthy physical and moral existence as immediately dependent upon the observance of natural law, can doubt that the illustration we are considering constitutes another most important triumph of Science over Superstition.

Connected with the last illustration, or rather a continuation of it, is what we may not inaptly term the theological theory of disease—viz. the notion that diseases, and epidemics especially, were punishments or judgments inflicted by the hand of the Almighty for some individual or national sins, and that they are to be cured sometimes by a miracle, sometimes by devotion to the shrine or relics of a Saint, and sometimes by simple prayer addressed to the Supreme. All these various ways and practices of appealing for relief to supernatural power were until quite recent times devoutly believed in throughout almost the whole of Europe, and were supposed to form essential parts of religious faith.

Even now in visiting Roman Catholic Churches, especially on the Continent, you cannot fail to observe the number of Votive offerings that are fixed or suspended round the shrine and image of a favorite Saint by those who believe that they have recovered from diseases or misfortunes through the intervention of the Saint in answer to the invocations of the patient. This practice, (like the Ritualistic lighting of candles on the Altars of

Churches in the day time,) has been copied from the service of the Temples of the Pagan religions which prevailed in Ancient Rome at the time of the establishment of Christianity in the reign of the Emperor Constantine. Well therefore asks the astute Middleton, in his instructive "Letter from Rome,"—"what is all this but a revival of the old impostures, with no other difference, than what the Pagan priests ascribed to the imaginary help of their Deities, the Romish priests as foolishly impute to the favor of their Saints." Of course it has been the policy of the Church to discourage the physician and his science. He interfered too much with the gifts to and profits of the shrines.

At one time it was a constant practice on the breaking out of an epidemic to carry the relics of the Patron Saint of the locality round the infected districts to drive the disease away. The superstitious belief we are considering had become so extravagant, and the practice in connection with it had obtained a height so ludicrous, that no longer ago than the end of the last century, the clergy in Spain induced the people to believe that a pestilence then raging was caused by their allowing the performance of so ungodly an entertainment as the opera, and it is a fact that the opera had actually on that account to be put a stop to!

Although sanitary science has now in this country completely triumphed over the Superstition in question, yet owing to our still continued narrow theological teaching very lamentable occurrences are occasionally seen to happen. For instance, it is still taught at those strongholds of sacerdotalism, our two great Universities, that the Bible is in every part of it supernaturally inspired truth. Mr. Burgon, recently one of the select preachers at Oxford, in a work addressed to the junior members of the University, thus expressed himself:—"The Bible is

none other than the Voice of Him that sitteth upon the Throne. Every book of it, every chapter of it, every verse of it, every word of it, every syllable of it, every letter of it, is the direct utterance of the Most High. The Bible is none other than the Word of God—not some part of it more some part of it less, but all alike the utterance of Him who sitteth upon the Throne—absolute, faultless, unerring, supreme!” We cannot wonder then that there should be persons who repose faith in its verbal teaching as applicable at the present time, and who seek to derive benefit from strictly and literally following its plainly expressed precepts. One of the apparently plainest of its injunctions is contained in the general Epistle of St. James the 5th chap. and the 14th and 15th verses. “Is any sick among you? Let him call for the elders of the Church, and let them pray over him anointing him with oil in the name of the Lord. And the prayer of faith shall save the sick, and the Lord shall raise him up.”

A religious sect known as the Peculiar People rigidly follow this injunction in cases of sickness, and it is not so long since we were scandalized by the spectacle of a criminal prosecution, on account of the death of a child whose parents had treated it biblically and not medically, and the Magistrate, (Bible and University theological teaching *non obstante*,) found the Parents to have been guilty of culpable neglect for relying on the Bible, without calling in medical assistance, and punished them accordingly.

This case strikingly illustrates the spirit of our age, showing as it does that secular teaching is in point of intelligence very far in advance of theological teaching; yet it is impossible not to feel commiseration for the unfortunate people who are so drugged with dogma that their religious beliefs actually become conducive to the deaths of their own offspring, and who are only roused



out of their superstitions by finding them thus rudely shocked by the judgment and penal sentence of the law.

With this exception we in England may be said to have entirely freed ourselves from the folly of this branch of superstition, unless it may be thought still to linger at Guy's Hospital, where, as we have lately seen, praying nurses are placed in authority over scientific physicians!

The only further illustration I will now give you has reference to those anthropomorphic conceptions of Deity which have more or less disfigured all the theological systems of the world, and until recently characterised our own conception of the God of Christianity, who is of course the historical continuation of the Jehovah of the Hebrew Scriptures; for, though the Deity of the New Testament has attributes somewhat different from those of Jehovah (to which I shall presently refer), He is evidently the same God throughout.

It might not be easy, it would indeed be impracticable within the time now at our disposal, to exhibit the successive steps which have resulted in generally endowing the foremost minds of our generation with that correct and exalted standard of morality or moral sense by which our social actions, opinions, and beliefs are righteously judged in the last resort, and whereby the practice of life has become so mild and humane and unselfish compared with that of our ancestors, or other semi-barbarous peoples.

One great effort to improve the morality of Princes and Rulers stands out conspicuous—I mean the great work of Hugo Grotius published at Paris in the year 1625 and entitled, "Three books concerning the Rights of War and Peace;" a work whose main objects were, First—To induce nations to abstain as far as possible from resorting to the dreadful ordeal of war, and to

cultivate that noble ideal of the lovers of mankind—a perpetual peace. To recognise the sovereignty of the moral or social law, and to submit their quarrels and conflicting claims to be judged at the bar of conscience. To this end to establish Courts of Conciliation, and agree to settle international disputes by arbitration. Secondly—when that could not be done, or war avoided, to conduct their warfare with as generous a humanity as possible. And thirdly—To treat prisoners of war with the clemency due to them as human beings and brothers, and not with the relentless cruelties that were then habitually practised towards those unfortunate persons.

The chief contents of Grotius' grand work consist of discussions historical and moral enlivened and embellished with abundant and interesting citations from the most celebrated authors of classical and sacred antiquity—poets, orators, historians, philosophers, and sages of all times and nations are, with the very splendour of learning, laid under contributions for the purpose of supporting, by their conspiring sentiments and reasonings, the benevolent objects of the good and great Grotius; showing in short the unanimity of the higher order of minds of the whole human race on the great rules of duty, and the fundamental principles of morals.

If we, studying the lofty argument of Grotius at the present day, can hardly fail to find our views of virtue and humanity expanded and inspired by so impressive a display of the principles it expounds, we can easily believe what is related of it when first published—viz. that it at once fascinated all the sovereigns and ministers and great men of the time; that the king of Sweden, Gustavus Adolphus carried it about with him and kept it under his pillow; that a professorship was founded to teach and diffuse its doctrines; and that it was translated (from its original latin) into most modern languages.

There has been of course, since the time of the illustrious Grotius, a succession of similar though lesser lights, whom I will not now stop to name, all exhibiting and enforcing his humane and philanthropic views.

Another cause operating in the same direction has been the gradual improvement in the nature and number of criminal punishments. The penal codes of all European nations during the times of theological ascendancy were painfully disfigured by the practice of judicial torture and arbitrary imprisonments, and the cruel and vindictive punishments inflicted upon criminals. Bearing in mind too how large an extent the moral sense or conscience of a community is a reflection of its legal system, the present mitigated severity and graduated scale of punishments, more or less proportioned to the nature and gravity of the offence, and to the frailty of and temptation besetting the offender, must have materially assisted in maturing and refining the public moral sentiment.

A similar effect is also observable as proceeding from the more civilized character of our popular amusements—bear baiting, bull baiting, badger baiting, dog fighting, cock fighting and shying, and other cruel and depraving sports have now almost ceased amongst us, and if we desire an example to show the connection between such barbarous cruelties and the influence of Superstition, we need only turn our gaze towards Spain, where we see the most brutalizing of sports—bull-fighting—is still the principle pastime of the most superstitious people on the face of Europe.

Now that the cause of our advance in intelligence and morality, and of our more earnest love of toleration and truth, has been scientific or secular, and not theological, seems plain from the fact that it has resulted in causing us to view with a sentiment akin to horror, some of the anthropomorphic attributes and commands of Deity that

we find recorded in the books of the Bible, and which previously to the scientific culture and elevation of our moral sense were generally acquiesced in quite as a matter of course; were to be believed (suggested an eminent theologian, the late Dean Mansel,) as God's temporary suspensions of the laws of moral obligation, or moral miracles! Thus, in the old Testament the Almighty is represented as walking on the Earth, eating with Abraham, wrestling with Jacob, appearing in a visible form to Moses, tempting men, and speaking with human speech. Then the shocking stories related, such as the Divine sanction of the frightful massacres of the Canaanites and Levites, with the ruthless slaughter of women and children, the divine patronage of the odious Jacob—and numerous instances of extraordinary cruelties ascribed to Jehovah in the books of the Pentateuch, making him out to be a man of war, cruel, capricious, revengeful, and not to be trusted.

In the New Testament indeed we find an improved character of the Deity, and one in many important aspects widely different. There is however attributed to the God of the New Testament what, if rigorously balanced against the failings ascribed to Jehovah, must be considered to outweigh them all; viz., the eternity of punishment which he will inflict in a future life. No efforts of the disciplined human reason, which is guided by the consciousness of right, can discover any justification for the creation of beings whose lives are to terminate in endless torment. The enlightened intellectual and moral capacity of civilized man rejects the idea of eternal punishment as utterly revolting to its sense of justice, mercy, and charity, and any attempt to realise 'in the unpolluted temple of the mind' an enormity so awful causes it to recoil from its imputed author, who (as is alleged) could create the human race with the infallible foreknowledge, and therefore

with the intention, that the majority, or even some were eventually to be consigned to the horrible and everlasting torture of Hell-fire !

From the slight review we have now taken of the influence of Science upon Superstition, and the modifications that religious creeds have thereby undergone, we may feel assured that the process is not yet ended, and that popular theologies are still disfigured by superstitions which expanding science will explode. Such for instance probably, as belief in the objective efficacy of the supplications, humiliations, fastings, and other asceticisms prescribed by priestcraft, and not improbably, I venture to think, our beliefs in supernatural revelations and exclusive salvations.

We now know through the Science of Geology, whose connected sequence of events was so admirably summarised by Professor Ramsay, in his Presidential address last year to the British Association for the advancement of Science, that in the physical government of the world, throughout the long ages whose history is embraced by this marvellous science, all progress has been continuous and orderly, not varying in kind and intensity from that of which we now have experience, is indeed the effect of causes still in full operation, that is, without cataclysms or catastrophes of any kind. Reasoning by analogy we should say that if such has been the course of the material world the course of the spiritual world (the sphere of religious development) has most probably been similar, and that if there has been no physical cataclysm in the one world, neither has there been a spiritual cataclysm in the other, such as a sudden supernatural revelation accompanied by miracles would undoubtedly be, but that throughout the ages all spiritual enlightenment has progressed by the same means and in the same manner as at the present moment.

Probably therefore it may come to be generally believed that the only real revelation is in Science, which, as Herbert Spencer observes, is a continuous disclosure, through the intelligence with which we are endowed, of the established order of the Universe.

If time permitted me now to enter upon a catalogue of the evil effects wrought by Superstition, that is false demoralising beliefs relating to the supernatural, we should find that there is scarcely a single one of the great miseries of life that is not distinctly traceable to this cause. I will only now recall to your mind the horrors of the Crusades, the numerous religious wars, the Spanish Inquisition, the persecutions, burnings, martyrdoms, massacres, and other hideous atrocities that for ages formed part of the very staple of European history, and which directly arose out of the superstitious beliefs engendered by their dogmatic Theology, which, in its merciless endeavours to crush freedom of thought and speech, has impelled man to inflict upon his fellow-man every species of cruelty and calamity that bigotted and intolerant fanaticism could devise.

Now one of the habits engendered by superstitious belief is of course a tendency to assume that everything happens through the interposition of providence, and must accordingly be right however unscrutable; and, however disastrous, yet sent for some good purpose and to chasten or to benefit us somehow and eventually. Of course such a tendency operates mischievously by its withdrawing our minds and energies and precious time from the search in this world for those natural causes of misery which when discovered show that it is remediable by scientific effort, in other words, that it is to be alleviated by the application of our natural intelligence, and not by our taking refuge in that sanctuary of Superstition (profanely called) the Will of God.

To enumerate the ameliorations of human well-being that have been achieved through the exercise of man's natural intelligence would be a theme almost exhaustless. In reference to these I will now confine myself to merely quoting to you the striking summing-up by Macaulay in his brilliant Essay on Lord Bacon, of the utilitarian result of the development of scientific method, so luminously expounded to his contemporaries, and impressed upon his posterity by the genius of the great English Philosopher, who enunciated the fruitful axiom that true philosophy, whatever its theory, is practically the application of the discoveries and methods of the sciences to the regulation of the affairs and conduct of our lives:—

“Ask a follower of Bacon what Science has effected for mankind and his answer is ready. It has lengthened life; it has mitigated pain; it has extinguished diseases; it has increased the fertility of the soil; it has given new securities to the mariner; it has furnished new arms to the warrior; it has spanned great rivers with bridges of form unknown to our fathers; it has guided the thunderbolt innocuously from heaven to earth; it has lighted up the night with the splendour of the day; it has extended the range of the human vision; it has multiplied the power of the human muscles; it has accelerated motion; it has annihilated distance; it has facilitated intercourse, correspondence, all friendly offices, all dispatch of business; it has enabled man to descend to the depths of the sea, to soar into the air, to penetrate securely into the noxious recesses of the earth; to traverse the land in carriages which whirl along without horses, and the ocean in ships which run ten knots an hour against the wind. These are but a part of its fruits, and of its first fruits—for Science never rests, its law is progress.”

But in truth every page of the history of civilization shows us that improvement in the health, the happiness, and the virtue of mankind has taken place entirely through the intellectual and moral progress resulting from the teaching of Science. You will find the unanswerable details of this history very clearly exhibited in Dr. Draper's remarkable work on “The intellectual development of Europe,” and also in its condensed and

lucid summary, published under the title of 'The Conflict between Religion and Science.' An unhappy misnomer this title, however, if the argument of my lecture be a sound one, viz., That it is not Religion that Science has attacked or come into conflict with—but only the superstitions of the hour, that were ignorantly and erroneously supposed to form parts of Religion, and that were 'intent on offering to the Author of Truth the unclean sacrifice of a lie.' Now, in exposing and stamping out Superstition and that old theological spirit which has brought so much misery upon the world, Science has actually rendered the most vital service to Religion; for the true beliefs which Science has thus compelled Theology to adopt are far more really religious than the superstitious beliefs which Science has from time to time forced Theology to surrender.

Let us rejoice, in the cause of Humanity, that such has been the case, and moreover that this purifying process is yet proceeding, and that Science, whose courageous career has hitherto been unstained by cruelty, oppression, or crime, will, in her warfare with Superstition, still continue marching on to Victories alike beneficent and bloodless; for

Science is a child as yet,  
And her power and scope shall grow,  
And her triumphs in the future  
Shall diminish toil and woe.

