

An organic form of any kind, vegetable or animal, will remain unchanged only so long as the environment in which it is placed remains unchanged. Should an alteration in the environment occur, the organism will either be modified or destroyed.

Destruction is more likely to happen as the change in the environment is more sudden; modification or transformation is more possible as that change is more gradual.

Since it is demonstrably certain that lifeless Nature has in the lapse of ages undergone vast modifications; since the crust of the earth, and the sea, and the atmosphere, are no longer such as they once were; since the distribution of the land and the ocean and all manner of physical conditions have varied; since there have been such grand changes in the environment of living things on the surface of our planet—it necessarily follows that organic Nature must have passed through destructions and transformations in correspondence thereto.

That such extinctions, such modifications, have taken place, how copious, how convincing, is the evidence!

Here, again, we must observe that, since the disturbing agency was itself following a mathematical law, these its results must be considered as following that law too.

Such considerations, then, plainly force upon us the conclusion that the organic progress of the world has been guided by the operation of immutable law—not determined by discontinuous, disconnected, arbitrary interventions of God. They incline us to view favorably the idea of transmutations of one form into another, rather than that of sudden creations.

Creation implies an abrupt appearance, transformation a gradual change.

In this manner is presented to our contemplation the great theory of Evolution. Every organic being has a place in a chain of events. It is not an isolated, a capricious fact, but an unavoidable phenomenon. It has its place in that vast, orderly concourse which has successively risen in the past, has introduced the present, and is preparing the way for a predestined future. From point to point in this vast progression there has been a gradual, a definite, a continuous unfolding, a resistless order of evolution. But in the midst of these mighty changes stand forth immutable the laws that are dominating over all.

If we examine the introduction of any type of life in the animal series, we find that it is in accordance with transformation, not with creation. Its beginning is under an imperfect form in the midst of other forms, of which the time is nearly complete, and which are passing into extinction. By degrees, one species after another in succession more and more perfect arises, until, after many ages, a culmination is reached. From that there is, in like manner, a long, a gradual decline.

Thus, though the mammal type of life is the characteristic of the Tertiary and post-Tertiary periods, it does not suddenly make its appearance without premonition in those periods. Far back, in the Secondary, we find it under imperfect forms, struggling, as it were, to make good a foothold. At length it gains a predominance under higher and better models.

So, too, of reptiles, the characteristic type of life of the Secondary period. As we see in a dissolving view, out of the fading outlines of a scene that is passing away, the dim form of a new one emerging, which gradually gains strength, reaches its culmination, and then melts away in some other that is displacing it, so rep-

tile-life doubtfully appears, reaches its culmination, and gradually declines. In all this there is nothing abrupt; the changes shade into each other by insensible degrees.

How could it be otherwise? The hot-blooded animals could not exist in an atmosphere so laden with carbonic acid as was that of the primitive times. But the removal of that noxious ingredient from the air by the leaves of plants under the influence of sunlight, the enveloping of its carbon in the earth under the form of coal, the disengagement of its oxygen, permitted their life. As the atmosphere was thus modified, the sea was involved in the change; it surrendered a large part of its carbonic acid, and the limestone hitherto held in solution by it was deposited in the solid form. For every equivalent of carbon buried in the earth, there was an equivalent of carbonate of lime separated from the sea—not necessarily in an amorphous condition, most frequently under an organic form. The sunshine kept up its work day by day, but there were demanded myriads of days for the work to be completed. It was a slow passage from a noxious to a purified atmosphere, and an equally slow passage from a cold-blooded to a hot-blooded type of life. But the physical changes were taking place under the control of law, and the organic transformations were not sudden or arbitrary providential acts. They were the immediate, the inevitable consequences of the physical changes, and therefore, like them, the necessary issue of law.

For a more detailed consideration of this subject, I may refer the reader to Chapters I., II., VII., of the second book of my "Treatise on Human Physiology," published in 1856.

Is the world, then, governed by law or by providen-

tial interventions, abruptly breaking the proper sequence of events?

To complete our view of this question, we turn finally to what, in one sense, is the most insignificant, in another the most important, case that can be considered. Do human societies, in their historic career, exhibit the marks of a predetermined progress in an unavoidable track? Is there any evidence that the life of nations is under the control of immutable law?

May we conclude that, in society, as in the individual man, parts never spring from nothing, but are evolved or developed from parts that are already in existence?

If any one should object to or deride the doctrine of the evolution or successive development of the animated forms which constitute that unbroken organic chain reaching from the beginning of life on the globe to the present times, let him reflect that he has himself passed through modifications the counterpart of those he disputes. For nine months his type of life was aquatic, and during that time he assumed, in succession, many distinct but correlated forms. At birth his type of life became aërial; he began respiring the atmospheric air; new elements of food were supplied to him; the mode of his nutrition changed; but as yet he could see nothing, hear nothing, notice nothing. By degrees conscious existence was assumed; he became aware that there is an external world. In due time organs adapted to another change of food, the teeth, appeared, and a change of food ensued. He then passed through the stages of childhood and youth, his bodily form developing, and with it his intellectual powers. At about fifteen years, in consequence of the evolution which special parts of his system had attained, his moral character changed. New ideas, new passions, influenced him. And that

that was the cause, and this the effect, is demonstrated when, by the skill of the surgeon, those parts have been interfered with. Nor does the development, the metamorphosis, end here; it requires many years for the body to reach its full perfection, many years for the mind. A culmination is at length reached, and then there is a decline. I need not picture its mournful incidents—the corporeal, the intellectual enfeeblement. Perhaps there is little exaggeration in saying that in less than a century every human being on the face of the globe, if not cut off in an untimely manner, has passed through all these changes.

Is there for each of us a providential intervention as we thus pass from stage to stage of life? or shall we not rather believe that the countless myriads of human beings who have peopled the earth have been under the guidance of an unchanging, a universal law?

But individuals are the elementary constituents of communities—nations. They maintain therein a relation like that which the particles of the body maintain to the body itself. These, introduced into it, commence and complete their function; they die, and are dismissed.

Like the individual, the nation comes into existence without its own knowledge, and dies without its own consent, often against its own will. National life differs in no particular from individual, except in this, that it is spread over a longer span, but no nation can escape its inevitable term. Each, if its history be well considered, shows its time of infancy, its time of youth, its time of maturity, its time of decline, if its phases of life be completed.

In the phases of existence of all, so far as those phases are completed, there are common characteristics, and, as like accordances in individuals point out that all

are living under a reign of law, we are justified in inferring that the course of nations, and indeed the progress of humanity, does not take place in a chance or random way, that supernatural interventions never break the chain of historic acts, that every historic event has its warrant in some preceding event, and gives warrant to others that are to follow.

But this conclusion is the essential principle of Stoicism—that Grecian philosophical system which, as I have already said, offered a support in their hour of trial and an unwavering guide in the vicissitudes of life, not only to many illustrious Greeks, but also to some of the great philosophers, statesmen, generals, and emperors of Rome; a system which excluded chance from every thing, and asserted the direction of all events by irresistible necessity, to the promotion of perfect good; a system of earnestness, sternness, austerity, virtue—a protest in favor of the common-sense of mankind. And perhaps we shall not dissent from the remark of Montesquieu, who affirms that the destruction of the Stoics was a great calamity to the human race; for they alone made great citizens, great men.

To the principle of government by law, Latin Christianity, in its papal form, is in absolute contradiction. The history of this branch of the Christian Church is almost a diary of miracles and supernatural interventions. These show that the supplications of holy men have often arrested the course of Nature—if, indeed, there be any such course; that images and pictures have worked wonders; that bones, hairs, and other sacred relics, have wrought miracles. The criterion or proof of the authenticity of many of these objects is, not an unchallengeable record of their origin and history, but an exhibition of their miracle-working powers.

Is not that a strange logic which finds proof of an asserted fact in an inexplicable illustration of something else?

Even in the darkest ages intelligent Christian men must have had misgivings as to these alleged providential or miraculous interventions. There is a solemn grandeur in the orderly progress of Nature which profoundly impresses us; and such is the character of continuity in the events of our individual life that we instinctively doubt the occurrence of the supernatural in that of our neighbor. The intelligent man knows well that, for his personal behoof, the course of Nature has never been checked; for him no miracle has ever been worked; he attributes justly every event of his life to some antecedent event; this he looks upon as the cause, that as the consequence. When it is affirmed that, in his neighbor's behalf, such grand interventions have been vouchsafed, he cannot do otherwise than believe that his neighbor is either deceived, or practising deception.

As might, then, have been anticipated, the Catholic doctrine of miraculous intervention received a rude shock at the time of the Reformation, when predestination and election were upheld by some of the greatest theologians, and accepted by some of the greatest Protestant Churches. With stoical austerity Calvin declares: "We were elected from eternity, before the foundation of the world, from no merit of our own, but according to the purpose of the divine pleasure." In affirming this, Calvin was resting on the belief that God has from all eternity decreed whatever comes to pass. Thus, after the lapse of many ages, were again emerging into prominence the ideas of the Basilidians and Valentinians, Christian sects of the second century, whose Gnostical views led to the engraftment of the great

doctrine of the Trinity upon Christianity. They asserted that all the actions of men are necessary, that even faith is a natural gift, to which men are forcibly determined, and must therefore be saved, though their lives be ever so irregular. From the Supreme God all things proceeded. Thus, also, came into prominence the views which were developed by Augustine in his work, "*De dono perseverantiae*." These were: that God, by his arbitrary will, has selected certain persons without respect to foreseen faith or good works, and has infallibly ordained to bestow upon them eternal happiness; other persons, in like manner, he has condemned to eternal reprobation. The Sublapsarians believed that "God permitted the fall of Adam;" the Supralapsarians that "he predestinated it, with all its pernicious consequences, from all eternity, and that our first parents had no liberty from the beginning." In this, these sectarians disregarded the remark of St. Augustine: "*Nefas est dicere Deum aliquid nisi bonum predestinare*."

Is it true, then, that "predestination to eternal happiness is the everlasting purpose of God, whereby, before the foundations of the world were laid, he hath constantly decreed by his council, secret to us, to deliver from curse and damnation those whom he hath chosen out of mankind?" Is it true that of the human family there are some who, in view of no fault of their own, Almighty God has condemned to unending torture, eternal misery?

In 1595 the Lambeth Articles asserted that "God from eternity hath predestinated certain men unto life; certain he hath reprobated." In 1618 the Synod of Dort decided in favor of this view. It condemned the remonstrants against it, and treated them with such se-

verity, that many of them had to flee to foreign countries. Even in the Church of England, as is manifested by its seventeenth Article of Faith, these doctrines have found favor.

Probably there was no point which brought down from the Catholics on the Protestants severer condemnation than this, their partial acceptance of the government of the world by law. In all Reformed Europe miracles ceased. But, with the cessation of shrine-cure, relic-cure, great pecuniary profits ended. Indeed, as is well known, it was the sale of indulgences that provoked the Reformation—indulgences which are essentially a permit from God for the practice of sin, conditioned on the payment of a certain sum of money to the priest.

Philosophically, the Reformation implied a protest against the Catholic doctrine of incessant divine intervention in human affairs, invoked by sacerdotal agency; but this protest was far from being fully made by all the Reforming Churches. The evidence in behalf of government by law, which has of late years been offered by science, is received by many of them with suspicion, perhaps with dislike; sentiments which, however, must eventually give way before the hourly-increasing weight of evidence.

Shall we not, then, conclude with Cicero, who, quoted by Lactantius, says: "One eternal and immutable law embraces all things and all times?"

CHAPTER X.

LATIN CHRISTIANITY IN RELATION TO MODERN CIVILIZATION.

For more than a thousand years Latin Christianity controlled the intelligence of Europe, and is responsible for the result.

That result is manifested by the condition of the city of Rome at the Reformation, and by the condition of the Continent of Europe in domestic and social life.—European nations suffered under the coexistence of a dual government, a spiritual and a temporal.—They were immersed in ignorance, superstition, discomfort.—Explanation of the failure of Catholicism.—Political history of the papacy: it was transmuted from a spiritual confederacy into an absolute monarchy.—Action of the College of Cardinals and the Curia.—Demoralization that ensued from the necessity of raising large revenues.

The advantages accruing to Europe during the Catholic rule arose not from direct intention, but were incidental.

The general result is, that the political influence of Catholicism was prejudicial to modern civilization.

LATIN Christianity is responsible for the condition and progress of Europe from the fourth to the sixteenth century. We have now to examine how it discharged its trust.

It will be convenient to limit to the case of Europe what has here to be presented, though, from the claim of the papacy to superhuman origin, and its demand for universal obedience, it should strictly be held to account for the condition of all mankind. Its inefficacy against the great and venerable religions of Southern and East-

ern Asia would furnish an important and instructive theme for consideration, and lead us to the conclusion that it has impressed itself only where Roman imperial influences have prevailed; a political conclusion which, however, it contemptuously rejects.

Doubtless at the inception of the Reformation there were many persons who compared the existing social condition with what it had been in ancient times. Morals had not changed, intelligence had not advanced, society had little improved. From the Eternal City itself its splendors had vanished. The marble streets, of which Augustus had once boasted, had disappeared. Temples, broken columns, and the long, arcaded vistas of gigantic aqueducts bestriding the desolate Campagna, presented a mournful scene. From the uses to which they had been respectively put, the Capitol had been known as Goats' Hill, and the site of the Roman Forum, whence laws had been issued to the world, as Cows' Field. The palace of the Cæsars was hidden by mounds of earth, crested with flowering shrubs. The baths of Caracalla, with their porticoes, gardens, reservoirs, had long ago become useless through the destruction of their supplying aqueducts. On the ruins of that grand edifice, "flowery glades and thickets of odoriferous trees extended in ever-winding labyrinths upon immense platforms, and dizzy arches suspended in the air." Of the Coliseum, the most colossal of Roman ruins, only about one-third remained. Once capable of accommodating nearly ninety thousand spectators, it had, in succession, been turned into a fortress in the middle ages, and then into a stone-quarry to furnish material for the palaces of degenerate Roman princes. Some of the popes had occupied it as a woollen-mill, some as a saltpetre-factory; some had planned the conversion of its mag-

nificent arcades into shops for tradesmen. The iron clamps which bound its stones together had been stolen. The walls were fissured and falling. Even in our own times botanical works have been composed on the plants which have made this noble wreck their home. "The Flora of the Coliseum" contains four hundred and twenty species. Among the ruins of classical buildings might be seen broken columns, cypresses, and mouldy frescoes, dropping from the walls. Even the vegetable world participated in the melancholy change: the myrtle, which once flourished on the Aventine, had nearly become extinct; the laurel, which once gave its leaves to encircle the brows of emperors, had been replaced by ivy—the companion of death.

But perhaps it may be said the popes were not responsible for all this. Let it be remembered that in less than one hundred and forty years the city had been successively taken by Alaric, Genseric, Ricimer, Vitiges, Totila; that many of its great edifices had been converted into defensive works. The aqueducts were destroyed by Vitiges, who ruined the Campagna; the palace of the Cæsars was ravaged by Totila; then there had been the Lombard sieges; then Robert Guiscard and his Normans had burnt the city from the Antonine Column to the Flaminian Gate, from the Lateran to the Capitol; then it was sacked and mutilated by the Constable Bourbon; again and again it was flooded by inundations of the Tiber and shattered by earthquakes. We must, however, bear in mind the accusation of Machiavelli, who says, in his "History of Florence," that nearly all the barbarian invasions of Italy were by the invitations of the pontiffs, who called in those hordes! It was not the Goth, nor the Vandal, nor the Norman, nor the Saracen, but the popes and their neph-