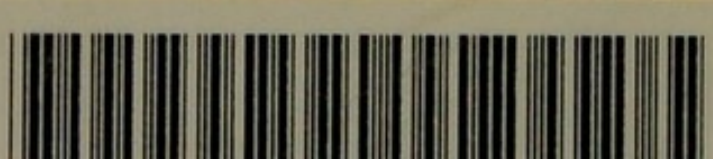
**Evolution and the fall / by the Rev. Francis J. Hall.**



# EVOLUTION AND THE FALL

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1909–1910

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# EVOLUTION AND THE FALL

BY THE

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Dedicated

TO THE

BLESSED MEMORY

OF

SAINT ATHANASIUS

WHOSE EXPOSITION OF THE CATHOLIC DOCTRINE

OF SIN IS HELPFUL AT THIS TIME

# THE BISHOP PADDOCK LECTURES

In the summer of the year 1880, George A. Jarvis, of Brooklyn, New York, moved by his sense of the great good which might thereby accrue to the cause of Christ, and to the Church of which he was an ever-grateful member, gave to the General Theological Seminary of the Protestant Episcopal Church certain securities, exceeding in value eleven thousand dollars, for the foundation and maintenance of a lectureship in said seminary.

Out of love to a former pastor and enduring friend, the Right Reverend Benjamin Henry Paddock, D.D., Bishop of Massachusetts, he named the foundation "The Bishop Paddock Lectureship."

The deed of trust declares that—

"*The subjects* of the lectures shall be such as appertain to the defence of the religion of Jesus Christ, as revealed in the *Holy Bible*, and illustrated in the *Book of Common Prayer*, against the varying errors of the day, whether materialistic, rationalistic, or professedly religious, and also to its defence and confirmation in respect of such central truths as the *Trinity*, the *Atonement*, *Justification*, and the *Inspiration of the Word of God*; and of such central facts as the *Church's Divine Order and Sacraments*, her historical *Reformation*, and her rights and powers as a pure and national Church. *And* other subjects may be chosen if unanimously approved by the Board of Appointment as being both timely and also within the true intent of this Lectureship."

Under the appointment of the Board created by the Trust, the Reverend Francis J. Hall, D.D., Professor of Dogmatic Theology in the Western Theological Seminary, Chicago, Illinois, delivered the lectures for the year 1909–1910, contained in this volume.

# PREFACE

In common with a large and increasing number of theological writers who firmly maintain the catholic faith, the author of these lectures believes that, at the present stage of advance in natural science, the evolutionary theory affords the best available working hypothesis of the origin of species; and that this hypothesis is applicable to the human species in its physical aspects. Whether the evolutionary theory can sustain the test of further scientific investigation and of wider induction — that is, whether it constitutes the final word of science, the lecturer does not pretend to judge. But in the present state of knowledge, it seems presumptuous and futile for one who is not an expert in natural science to join issue with scientists on the subject.

What we are saying has exclusive reference to the general scientific doctrine that the origin of existing species is to be described on its physical side by natural variations in primitive forms of organic life, by inheritance of such variations, and by the persistence of those forms that are best fitted to survive in the struggle for existence. We do not acknowledge that the more specific explanations of evolution, and of its factors, whether Darwinian or other, have attained to the same scientific rank. No one of them can claim general

acceptance among competent investigators. Nor do we acknowledge that the naturalistic philosophy, which is often associated with the evolutionary hypothesis, and which determines the theological implications which many detect in the evolutionary theory, has any scientific validity. It is purely speculative and to be rejected.

The impression prevails among many natural scientists and theological writers that belief in the natural evolution of man's physical organism is fatal to a continued maintenance of the ancient Christian doctrine of the origin of sin. An attempt has been made in these lectures to show that this impression is erroneous — at least so far as the catholic doctrine is concerned. To show this it has been necessary to distinguish between truly ecumenical doctrine and certain speculative accretions that are often confused therewith — especially those discoverable in Augustinian and Calvinistic literature.

The lecturer has endeavoured to avoid unnecessary polemical references to the arguments of individual theological writers; but he has felt constrained to notice some of the more important arguments of Dr. F. R. Tennant, contained in his *Origin of Sin*, and in his *Sources of the Doctrines of the Fall and Original Sin.* These works contain the most important argument on the theological side for the position which is here rejected — that the evolutionary origin of man requires an abandonment of the ancient doctrines of man's primitive state and of original sin. It has seemed

necessary, therefore, to refer to some of that writer's arguments, and to give reasons for regarding them as inconclusive. No attempt is made, however, to give a formal or exhaustive criticism of the two works to which we refer. Dissenting as we do from the position therein maintained, and rejecting the sufficiency of the arguments by which it is supported, we gladly acknowledge that Dr. Tennant has presented valuable data, and has thrown needed light upon certain aspects of the problem of sin.

Owing to the brevity with which he has been compelled to treat of certain points, and to the fact that his method of treatment is in some respects peculiar, the writer has ventured to give a number of references to his own previous works, in which these matters are more fully discussed.

Some repetitions will be found in these pages. They are to be explained by the fact that the form and sequence of argument were controlled by the exigencies of prospective oral delivery.

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# EVOLUTION AND THE FALL

## LECTURE I

### MODERN DIFFICULTIES

It is indisputable that difficulties of faith are very widely felt to-day; and multitudes are ceasing to regard the contents of Christian doctrine either as capable of proof or as coming within the range of that kind of certainty which is ordinarily termed knowledge.

It would be a mistake, however, to suppose that difficulties of faith are peculiarly modern. No doubt they are more widely felt in our day than in previous ages of Christian history; but this is largely because education is more general than ever before, and the problems which try the souls of advanced thinkers are being ventilated and discussed everywhere, instead of being, as in earlier centuries, considered only by scholars and philosophers. It is an age in which almost every one knows, or thinks that he knows, a little about everything; and a little knowledge is a dangerous thing, since it raises problems without enabling men either to solve them or to realize that their inability to solve them is not necessarily a reason for unbelief.

But every age has its own difficulties of faith; and it is not invariably a proof of insincerity that professing

Christians should feel these difficulties, and should fail to attain to that certainty touching Christian doctrine which characterizes faith in its perfection. Faith may be very genuine, and yet be attended by tormenting doubts. One may cry, "I believe; help Thou mine unbelief," [1] without misrepresenting himself in either half of the cry. Belief has many stages, reaching all the way from hesitating opinion up to the full assurance of knowledge; and if its goal is freedom from doubt, that goal is won, in countless instances among sincere believers, only by long continued struggle with difficulties of faith.

Obvious reasons for this exist. The truths of religion are exceedingly mysterious. They may indeed be revealed in very definite and intelligible terms — terms which are true so far as they go, and which will never cease to be true. But the realities with which these terms are concerned transcend any capacity of ours adequately to grasp them. And while it is possible for us to gain true knowledge concerning them, this knowledge is exceedingly fragmentary — so fragmentary that the darkness of our ignorance often threatens to swallow up and hide from view the light of the knowledge which is actually available.

The result is that the language of dogma and of theology is to some degree symbolical. That does not mean that it is untrue, or that we err in insisting that it will never cease to be true. It really means that the conception of truth which theological language conveys

[1] St. Mark ix. 24.

to our minds is incipient rather than full formed, inadequate, and certain to be misleading, if we treat it as complete, or as sufficient to justify the hope of being able to construct a complete and final system of theology.[1] Theology is as truly a progressive science as is any physical science, and not less truly so because its most significant data are divinely revealed. The best man-made systems of doctrine contain speculative elements, and therefore each development of human thought necessitates their modification. Theological reconstruction has to be undertaken repeatedly, and no conservative influences are strong enough to prevent an unceasing development of doctrine.[2] This being the case, we ought to feel no surprise when we find that many thoughtful men are more impressed with the non-finality of theological systems than with the reasons for believing that their primary data have been divinely revealed, and can be rationally accepted with the certainty which is usually described by the word knowledge.

Again, the scriptural assertion that spiritual things are "spiritually examined"[3] is a strictly scientific proposition. Every science has its own methods of investigation, and these methods are determined by the nature of what is investigated. Mental phenomena cannot be successfully examined or interpreted by the

[1] See J. B. Mozley, *Predestination*, ch. ii, *init.* We return to the subject in Lec. v, *init.*

[2] On the development of doctrine see the author's *Authority, Eccles. and Biblical*, ch. ix, where numerous references are given.

[3] 1 Cor. ii. 14.

methods of astronomy, nor can spiritual realities be discovered or understood by the methods of the laboratory. To understand spiritual things requires the employment of a spiritual faculty, just as the perception of beauty calls into exercise an æsthetic faculty. It also requires a certain moral attitude—a predisposition towards the consideration of divine things, and a readiness to accept truths which can be seen to involve in their acceptance an enlargement of responsibilities from which carnally minded men recoil. The development of this spiritual faculty and disposition depends upon supernatural assistance by the Holy Spirit as well as upon self-discipline. The sum of the matter is that conditions have to be fulfilled, and methods have to be employed, in the investigation of spiritual realities which differ widely from the conditions and methods to which most men are habituated and which they are naturally disposed to appropriate. Theology appears very unlike anything that the majority of modern scientists are accustomed to regard as scientific, or as concerned with true knowledge of reality. This unlikeness is apt to suggest the conclusion that faith and spiritual knowledge lie outside the domain of reason altogether. Christian believers are able to see that belief and knowledge do not cease to be rational when concerned with spiritual things, and that divine grace is not a substitute for sound reason but its spiritual telescope, so to speak, and its equipment for a spiritual line of activity. They can also see that the reason which is employed in faith is the reason

upon which we depend in every sphere of rational thinking. There is but one human reason, and to abandon its use in any field is to become irrational. An irrational faith can never hold its own among rational men. But, and this is the point, no man can see all this until he has had some experience in spiritual knowledge, and the natural man needs to be moved by higher than merely natural considerations before he will set himself to acquire spiritual experience.

Nor is this all; the faculties of the mind which are called into exercise in the investigation and assimilation of spiritual verities are very subtle, and are more easily deranged than any others — especially by moral causes. Faith is not only a mental act, but also, by reason of the conditions of its successful exercise, a virtue. I do not mean that it is impossible to possess a genuine faith without having perfect character. The capacity to believe and to exercise the reason successfully in spiritual things lies within the reach of all who will submit to the conditions of spiritual knowledge. But perfect faith and complete emancipation from doubt, like perfect virtue, is the goal, rather than an early stage of spiritual growth. The beginner, if he is sincere in his efforts to lay hold upon divine truth, can acquire a very genuine faith — one which is the earnest of a final acquisition of the certainty which is called knowledge. But at every stage of its growth the capacity to assimilate divine truth depends upon a combination of conditions which may easily be disturbed; and when they are disturbed doubt obtrudes

itself, and every argument for unbelief and for denial of the possibility of spiritual knowledge then becomes formidable.[1]

The conclusion of the matter is that difficulties of faith must always be felt even among sincere truth-seekers, and the fact that they are felt to-day does not afford sufficient reason either for undiscriminating condemnation of doubters or for a pessimistic estimate of the state of belief in this age. Much doubt is in evidence, and there has never been a more urgent need of efforts to succour distressed faith. But there is another and more encouraging aspect of the situation. There have never been more truth-seekers than at this moment. Multitudes are turning their faces earnestly towards the light; and if their faith is attended by the torment of doubt, it is, in very many instances, their faith rather than their doubts which determines their ideals of life. This fact affords abundant reason for the hope and conviction that the faith which is now struggling with doubt will in due season win the victory. At all events a true apologetic should be both sympathetic and hopeful.

My subject in these lectures is *Evolution and the Fall*, and I have chosen such a topic for several reasons. In the first place the doctrine of the fall has been thought by many to be peculiarly difficult to maintain under the conditions of modern thought; and this is largely due

[1] The author has more fully discussed the subject of the part of reason in faith and spiritual knowledge in his *Introd. to Dog. Theol.*, chh. iv, v.

to a supposed impossibility of reconciling its contents with the evolutionary hypothesis. I believe that an important reason for this appearance of contradiction is a mistaken conception of the doctrine in question, and I am moved to do what I can to correct this conception.

Again, as you no doubt are aware, the scientific world has this year been celebrating the centennial of the birth of Charles Darwin and the fiftieth anniversary of the publication of his *Origin of Species*, the book which first secured for the evolutionary hypothesis a recognized place in scientific thought. It appears, therefore, a suitable time to reconsider this theory and its bearings, so far as it has any, on Christian doctrine. There is the more reason for undertaking such reconsideration in view of a rather important modification of the Darwinian hypothesis which has been thought by some scientists to be required by the results of recent biological investigation.[1]

After a brief survey of the chief causes and forms of opposition to Christian doctrine that are in evidence at the present time, I shall devote the rest of this lecture to a consideration of the aims, methods, and limitations of sciences in general, and of physical sciences in particular, and to an effort to define the attitude towards scientific conclusions which Christian believers and theologians ought to adopt. The next two lectures will be concerned with the evolutionary theory —

[1] The allusion is to the investigations of de Vries and others, and to the mutations theory which is based upon them. See Lec. ii, Pt. IV, below.

its historical forms, and the arguments by which it is supported. In the fourth lecture I intend to discuss the bearings of evolutionary views upon Christian doctrines at large; and in the last two lectures I expect to consider their bearing upon the doctrine of man's primitive state and fall.

## I

This is truly an age of faith. But it is also an age of doubt, and faith reveals itself in a multitude of instances in the form of battle with doubt. The fierceness of the battle, while it shows that peculiar difficulties have to be overcome before faith can be made secure, also shows that faith is full of fighting energy, and that the desire to believe is wide-spread. It is possible to detect several causes of the present power of doubt.

(*a*) One cause is the vast enlargement of scientific knowledge which has occurred during the past century, and the suddenness with which it has been brought about. This enlargement is perhaps greater than that of all previous centuries put together. Discovery has followed discovery with bewildering rapidity, and it has been impossible for ordinary men to keep pace with the progress of the sciences in their efforts to adjust their conceptions of the universe to the latest knowledge. This larger knowledge is not only vast in range, but reopens questions which our forefathers regarded as settled, and appears to have important bearings on Christian doctrine. In brief, men's mental perspec-

tives have been shaken as by an earthquake; and ordinary men have not yet had time to recover from their consequent dizziness, and to distinguish between what has been either changed or destroyed and what remains unchanged in the new outlook.

(*b*) This and other causes have led to the development of a highly critical temper — one which is by no means confined to specialists in criticism, but which has modified the mental attitude of millions in every walk of life. The scientific as well as the common-sense principle, that previously accepted conclusions and beliefs ought not to be repudiated or abandoned without adequate proof that they are no longer tenable, has ceased to control the "modern mind." Instead of realizing that the burden of proof lies with those who innovate upon traditional positions, men are apt to assume that the traditional must be false. Because some of its particulars require correction, men are led to think that all must be changed, and that the real truth in every direction must wait for its manifestation upon the labours of modern experts. The theories of experts, however conjectural, are frequently regarded as more weighty than the most fundamental convictions and postulates upon which Christian thought has heretofore been based. In former days novelty in Christian doctrine was thought to be a proof of error. To-day the tendency of many is to regard the antiquity of any doctrine as a sufficient reason for disputing its credibility. Such a tendency makes for confusion rather than for an intelligent faith.

(*c*) Finally there is what has been called "the babel of sects," which very seriously interferes with every attempt to make known the contents of the historic faith of Christendom. The world at large can hardly be expected to discriminate intelligently between the claims of rival Christian bodies to possess the genuine doctrines of Christianity; and when the average man discovers, as he can hardly fail to discover, that every definite teaching of "the Churches" is rejected by one or more of the Christian denominations, we have no reason for feeling surprised if he concludes that no authentic Christian doctrine exists, except a vague belief in the pre-eminence of Jesus Christ. What such pre-eminence signifies, and upon what certainties it is based, he is apt to regard as highly problematical. "What think ye of Christ? Whose Son is He?" Who can say with authority? As for the spiritual knowledge which our Lord imparted to His disciples—knowledge intended and needed for the guidance of our steps to God—Christians are hopelessly disagreed as to its content.

The result of the doctrinal conflicts which were inaugurated in the sixteenth century has been to produce serious doubts as to the possibility of acquiring any sure knowledge of spiritual things; and professing Christians are drifting into the habit of substituting conduct for the knowledge which makes a correct determination of conduct possible. This is as if one should say that, provided one seeks to apply truth to life, it is unimportant whether or not he is acquainted with the

truth which he seeks to apply. Determinate Christian doctrines are now commonly identified in men's minds with partisan shibboleths concerning the unknowable. This attitude — an attitude which is really sceptical and anti-Christian, although it is assumed by men who sincerely profess Christianity — accounts for, and is illustrated by, the demand which is now being made that "the Churches" get together and bury their doctrinal differences in museums of antiquities. Of course, if, as St. Paul says, Christ made His ministers stewards of the mysteries of God which He revealed, we cannot be faithful Christian ministers unless we share in the sentiment which dictated the words, "Woe is me, if I preach not the Gospel." However shameful the divisions of Christendom may be, and however imperative it is that we should display love towards all the brethren for whom Christ died, to seek Church unity at the cost of sacrificing the propagation of what Christ committed to His Church to proclaim, is as if we should seek to speak the truth in love by ceasing to speak it altogether. It is also to acquiesce in an agnosticism which must inevitably kill the Christianity of any religious body that is permanently dominated by it.

Unless Christ prayed in vain for unity, Christians will certainly, in God's own time, get together. But to suppose that this glorious event is possible apart from the working out of the practical axiom — "Truth is mighty and will prevail," is to adopt an unintelligent supposition. And Christian apologists cannot successfully meet the difficulties of our age, or of any

age, by proclaiming an emasculated Christianity. If Christianity is true, its truth and reasonableness will be most adequately exhibited when its doctrines are fully and coherently set forth. This ought carefully to be remembered by you, who are preparing to become preachers of the Gospel and apologists in behalf of a religion upon the successful propagation of which depends the higher welfare of mankind. From the moment that you surrender to the demands of the age one single genuine content of the historic faith of Christendom you also begin to surrender in effect the task of propagating the actual religion which the great Redeemer established. You must indeed translate ancient phrases into language which moderns can understand, but to translate means to convey the original meaning of what is translated. You will also have need to distinguish between the historic faith and the speculative opinions of later theologians and schools, refusing to be hampered by the latter. But a Christian apologist is an apologist of Christianity — that is, of a religion which is now nineteen centuries old, and which, like its Founder, is "the same yesterday, to-day, and forever."

## II

Having considered the chief causes of modern difficulties of faith, let us define for ourselves the leading forms of opposition to Christian doctrine with which Christian apologists now have to deal. They are rationalistic biblical criticism, pantheism, and natural-

ism. It is the last named which demands especial attention in connection with the task undertaken in these lectures, but a rapid survey of the whole field of conflict seems desirable.

(*a*) By rationalistic biblical criticism I mean criticism which is controlled in method and result by the presupposition that the supernatural does not need to be allowed for in determining the dates, authorships, texts, and truth of the several portions and teachings of the Scriptures. The Scriptures may not be regarded as exempt from sound criticism, which is nothing more than a scientific scrutiny of their form and contents. If this scrutiny is really scientific — that is, sound in presuppositions and method, and adequate in the data with which it reckons — no genuine truth-seeker will fail to welcome it and be guided by its final results. For a Christian to fear the truth in any domain is for him to cause a well-grounded suspicion that he prefers the triumph of opinions to a victory of truth. No thoughtful person will attempt to justify such a position.

That many modern critics refuse to allow for supernatural factors in the history of Israel, and in the production of the Scriptures in the canonical form in which they have come to us, is too notorious to be disputed. They insist that biblical literature must be criticised exactly like any other literature — that is, as determined in form and content by purely human causes. If they are mistaken, and if it is a fact that supernatural causes have been at work, and that the Scrip-

tures are supernaturally inspired, then their criticism is based upon inadequate data, and their failure to allow for supernatural factors destroys the finality of their conclusions. In brief, they presuppose what in view of immemorial Christian doctrine they ought to have proved, that the Scriptures are not affected in either language or teaching by other causes than those which are summed up in the phrase, "natural evolution of religion." Similarly, it is unscientific to take for granted, as many do, that the miracles alleged in Scripture are one and all to be regarded as suspicious because miraculous. Their reality is a question of evidence, and to assume without serious consideration of the evidence that they must be explained away is to vitiate criticism and to nullify the scientific validity of its results.

It is impossible in these lectures to discuss the matter at length. I can only state my conviction, based upon careful study, that while biblical criticism has thrown much needed light upon the human aspects of the Scriptures, and has clarified our notions touching the methods of inspiration, as distinguished from the fact that it is supernatural in causation, it has not established one single conclusion which ought to hinder men from believing the Bible to be of divine authority, and to be infallible within the sphere of its inspired purpose. Just as an infallible watch means one which can be implicitly trusted as a timekeeper, so the Bible can still be trusted without reserve, when correctly used and interpreted, for the purely religious purposes of

its inspiration.[1] Not one conclusion of biblical critics can be alleged to the contrary which cannot be shown to be unscientific by reason of the question-begging and rationalistic denial of the supernatural upon which it is based. Certain alleged results of criticism, which seem, to ordinary men at least, to nullify Christian doctrines, are supported by very plausible arguments. But in every instance of this kind careful scrutiny will bring to light the vitiating fallacy of which I have been speaking. The plausibility depends upon the premises; and naturalistic premises should be proved. They may not, scientifically speaking, be taken for granted.

But the most disturbing effect of biblical criticism is this, that not even a belief in the supernatural can account for what appears to be the presence of historical and scientific inaccuracies in Scripture. Few scholars can be found to-day who will venture to maintain the historical and scientific value of the early chapters of Genesis, and the entire freedom of the Gospel narratives from mutual inconsistencies of detail. Those who have adequately considered this difficulty are not troubled by it. The Bible was not inspired for historical and scientific purposes, but for religious ends. And these ends did not require that the sacred writers should be made infallible in history and science. So far as the narratives of Scripture embody what is taught by catholic dogma, they are not found to be erroneous; and the mutual varia-

[1] I borrow this watch illustration from Marcus Dods, *The Bible*, ch. v.

tions of the Gospel narratives strengthen rather than weaken their concurrent witness to the fundamental facts upon which the Christian religion is based. But those who have not mastered the arguments of Christian apologists are confused by the attacks of biblical critics upon the historical trustworthiness of Scripture; and, as a result, many are losing confidence in the credibility of historical Christianity. I believe that the ground which is being lost on this account is destined fully to be recovered. But the victory will not be won by abandoning the ancient doctrine of biblical inspiration. It will be achieved rather by propagating sound views of the purpose of such inspiration, and of the proper interpretation and use of Scripture.[1]

(*b*) A second form of opposition to Christian doctrine is pantheism — a name which stands for various systems of thought that are inconsistent with any clear distinction between the Creator and His creatures. Pantheistic forms of thought and language are somewhat widely prevalent, even among those who would repudiate any clear assertion of the identity of God and the universe. The chief cause of this is a new way of regarding the universe which has been brought in by evolutionary thought. Before the time of Darwin men were apt to think of the universe as a vast machine which God created and completed once for all, and with which He cannot interfere without subverting

[1] The position here taken is more elaborately exhibited and defended in the author's *Authority, Eccles. and Biblical*, chh. vi, vii. See pp. 119–123, below, for a continuation of the subject of biblical infallibility.

the laws by which its operations are governed. God was conceived of as external to His universe, and as a Mechanic who is debarred from tampering with what He has constructed. Darwinism has caused a strong reaction against such a conception of things; and has led men to look upon the world as a growing thing, having the principle of its development within itself. An evolutionary theist naturally considers God to be this interior principle of evolution, and is led to dwell upon divine immanence rather than, as his predecessors did, upon the transcendence of God. A sound theologian is able to see that the truths of transcendence and immanence are equally essential to a correct notion of God, and neither of them has lacked emphasis in catholic theology. But they must be held together, if we are to avoid onesidedness and caricature of the doctrine of God.

If the eighteenth-century tendency was to bow the Creator out of His universe, the present tendency is often to submerge God in the world, and to reduce Him to an impersonal and immanent force — a sort of *anima mundi;* — and this line of thought has pantheism for its logical conclusion. That any genuine form of pantheism can be reconciled with Christian doctrine cannot be conceded by one who has rightly understood such doctrine. Pantheism nullifies the validity of moral distinctions, and is as fatal to the Christian postulate of a personal Creator and providential Governor of the world as any theory can be. The mystery of personality is profound, and those who are not dis-

posed to acquiesce in mystery are being led by their efforts to solve the problem of personality into what in reality is an anti-theistic position. The combined influence of pantheistic idealism and agnosticism causes many to regard the conception of divine personality as hopelessly and misleadingly anthropomorphic. Some are trying to substitute the supra-personal for the personal, which is as if we should substitute the supra-highest for the highest. No term is adequate to describe the Supreme Being; but no sound thinker either forgets this or conceives of God as limited by the finite connotations of the terms by which His attributes are symbolized. To call God personal is to insist that He is not inferior to His creatures, and to deny that He is personal is to nullify the validity of all religious and moral truths and principles. And right here lies the real fallacy of every form of pantheistic immanationism. No view of things which either disregards, explains away, or nullifies the facts of religious and moral experience can be accepted as either adequate or true. The proposition that God is personal, and other in being than His creatures, is the fundamental postulate of all religion and morality. That God is immanent we must believe, but every form of assertion of this truth which fails to leave room for an insistence upon His transcendence and personal control of all things is anti-Christian in its logic.[1]

[1] On pantheism, see Flint, *Anti-theistic Theories*, Lecs. IX, X; Fraser, *Philos. of Theism*, pp. 76–103; Liddon, *Some Elements of Religion*, pp. 59–66; Christlieb, *Modern Doubt*, pp. 161–190. Cf. the author's *Being and Attributes of God*, ch. ix. § 5.

The distinction between the natural and the supernatural is necessarily brought to mind when we do justice to the personal sovereignty of God over the universe. If God is the true Cause of all reality, and if His will is expressed and fulfilled by the progress of things, there must be operations which are supernatural to the things which by means of them are lifted to a higher level of being and life. And this holds good whether the progress takes place by law or by innovating fiat, whether by imperceptible variation or by sudden mutation. No nature can evolve itself into a nature that is higher in kind except by higher forces than the nature thus developed originally possesses. And, if the course of events is working out a rational plan, the occurrence of phenomena which imply the operation of supernatural forces — forces, that is, that are not resident in previously existing natures — is to be expected. No event, however amazing and exceeding the capacity of scientists to co-ordinate with previous events, may be regarded as irrational or incredible, unless it can be seen to have no place in the larger plan of God. The miracles of the Gospel are as well attested as any ancient events well can be; and, when viewed from a Christian standpoint, they are seen to be rational, because they have an intelligible place in the history of divine operations in general. The phenomena which are caused by the operations of a professional breeder of varieties in artificial selection constitute surprising innovations upon the previously established order; and they are distinctly supernatural to the

organisms affected, in so far at least as these organisms were not evolved into their new forms or varieties without the higher and intelligent action of the breeder.[1] When, therefore, Darwinians describe the evolution of species in general by the phrase "natural selection," they suggest the inference that a similar dependence upon supernatural and intelligent operation and control is involved; and they cannot exclude this inference so long as they employ the phenomena of artificial selection as evidence of natural selection. No doubt they substitute natural law for the personal breeder. But if the work done by natural law is correctly described in the terms of personal agency, we cannot reasonably escape the inference that such law is simply the method employed by an intelligent and supernatural Person.[2] No one who gets thus far can consistently limit the operations of this supernatural Person by the native capacities and resident forces of existing organisms. Supernatural involutions and miraculous interventions, so far as they are involved in progress and in the general plan of God, are obviously to be

[1] The varieties which are produced by artificial selection do not differ *in kind* from the species which are thus modified, and the possibility that the slower operations of nature might produce the same results is a real one. The supernatural factor appears in the rapidity and personal control of the change.

[2] The phrase "natural evolution" describes merely the sphere of the process — not its whole method, nor all of its factors. That of "survival of the fittest" describes only its result. "Natural selection" is the only phrase, generally employed, which can be taken as descriptive of the method of evolution; and when this phrase is scrutinized, it is seen to imply personal agency.

expected; and to refuse to consider the evidence of their occurrence is to dogmatize concerning a plan which confessedly is more comprehensive than can be exhibited by natural science.[1]

(*c*) This distinction between the natural and the supernatural is necessarily repudiated by pantheists. But my emphasis upon it at this point [2] has particular reference to another form of opposition to Christian doctrine. I refer to *naturalism*, the very name of which implies a refusal to allow for the supernatural factor in the history of the universe and of man. It is this form of opposition that demands especial consideration in connection with the subject-matter of these lectures. Briefly defined, naturalism maintains that all knowable realities are physical and mechanical, and are to be described and interpreted in exclusively mechanical terms. Formerly, Professor James Ward tells us, "naturalism tended dogmatically to deny the existence of things divine or spiritual, and dogmatically to assert that matter was the one absolute reality." That is, naturalism meant materialism pure and simple. But the materialistic position has become less and less tenable as the range of scientific inquiry has widened so as to include a more adequate study of the phenomena of life and of mind. The supporters of naturalism have accordingly somewhat shifted their

[1] The author's argument as to the supernatural is more largely given in *Introd. to Dog. Theol.*, ch. ii.

[2] An emphasis which will be necessary to repeat at later stages in the general argument of these lectures. See especially Lec. v. Pt. III.

ground, and have taken up an agnostic position towards everything superphysical. Quoting Professor Ward again, the philosophy which now controls the minds of many physical scientists contends that "so far as knowledge extends all is law, and law ultimately and most clearly to be formulated in terms of matter and motion. Knowledge, it is now said, can never transcend the phenomenal; concerning 'unknown and hypothetical' existences beyond and beneath the phenomenal, whether called Matter or Mind or God, science will not dogmatize either by affirming or denying. . . . The eternities safely left aside, the relativities become at once amenable to system." [1]

It can be seen that naturalism in our day combines agnosticism towards the superphysical with insistence upon a purely mechanical method of interpreting all knowable realities. It is desirable to reckon separately with these two aspects of the system under consideration.

The name "agnostic" was coined by the late Thomas Huxley. He says that agnosticism "is not a creed, but a method, the essence of which lies in the rigorous application of a single principle . . . it is the great principle of Descartes; it is the fundamental axiom of modern science. Positively the principle may be expressed: In matters of the intellect, follow your reason as far as it will take you, without regard to any

[1] Jas. Ward, *Naturalism and Agnosticism*, p. 20. This work is the most elaborate and important attack upon naturalism, and demands careful study. Balfour's *Foundations of Belief* attacks the philosophical basis of naturalism.

other consideration. And negatively: In matters of intellect, do not pretend that conclusions are certain which are not demonstrated or demonstrable. . . . The only negative fixed points will be those negations which flow from the demonstrable limitation of our faculties. And the only obligation accepted is to have the mind always open to conviction." [1]

If we consider Mr. Huxley's language closely, we shall see that three contentions are made. In the first place he insists that we must be guided in matters of intellect by pure reason; which means that we ought to exclude every influence of desire and will. This is bad psychology. The emotional, volitional, and intellectual functions of personality are not separable faculties, but are invariably exercised together, — in varying proportions, no doubt, but — as inseparable parts of personal functioning. In no department of truth-seeking can one exercise his reason to effect unless impelled by interest, disposition to learn, and will to attend. Moreover, one's conclusions are determined in the consideration of scientific problems, and in scientific inductions, by the proportionate degrees of attention that are given to particular data, that is by the will — the will in turn being influenced by personal preconceptions and predispositions. In brief, personality is as certainly a determining factor in the success of physical investigation as it is in that of spiritual truth-seeking; and when naturalism urges the

[1] *Nineteenth Century*, Feb., 1889, in an article entitled "Agnosticism."

presence of emotional and volitional factors in the attainment of spiritual knowledge as an argument for agnosticism towards such knowledge, it saws off the branch upon which it sits.[1]

Mr. Huxley's second contention is that no conclusions can be certain which are neither demonstrated nor demonstrable. Taking the word "demonstrable" to mean justifiable on grounds which can be reasonably regarded as sufficient, this is of course true. But Mr. Huxley did not regard any grounds of certainty as sufficient except naturalistic ones. That is, he was agnostic with reference to everything which is not subject to physical and mechanical interpretation.

This agnosticism is embodied in his third contention, that "the only negative fixed points will be those negations which flow from the demonstrable limitation of our faculties." Naturalism maintains that our faculties are incapable of knowing anything beyond the phenomenal contents of sensible experience — that is, beyond the physical and mechanical. This is what Mr. Huxley meant by "the demonstrable limitation of our faculties"; but neither could he, nor any one else, demonstrate what constitutes this limitation. Certainly it is impossible to demonstrate that the superphysical and non-mechanical is unknowable. The most complete and direct knowledge that we have is concerned with our own mental activities. Are these

[1] See the author's *Introd. to Dog. Theol.*, ch. iv. §§ 4, 5; Illingworth, *Divine Immanence*, pp. 59–73; Romanes, *Thoughts on Religion*, pp. 140–147.

physical? To assert that they are is pure dogmatism, and a dogmatism which contradicts the testimony of consciousness. We know our own personality, and that knowledge opens up the superphysical world just as really as the knowledge of sensible phenomena opens up the physical world. Having once gained access to the superphysical, the only way in which we can ascertain the limits of our possible knowledge thereof is by trying to know as much of it as we can.[1] This is true of every kind of knowledge. It is impossible to get a mental standpoint outside of knowledge, and only from such a standpoint is it possible to dogmatize in advance as to how much we can know in any sphere of realities that is accessible to our minds.[2]

Our knowledge of human personality is the gateway to knowledge of divine personality; and Christians claim to possess a real, although, of course, a very partial, knowledge of God. This knowledge is obtained by divine grace, and grace is the telescope, so to speak, by which we are enabled to explore the spiritual heavens. For those who will not employ this telescope to deny the rational validity of the knowledge which is gained by its use is a species of *a priori* dogmatism which cannot demonstrate its conclusion by any evidence

[1] Even Sir Wm. Hamilton says, "We know, and can know, nothing *a priori* of what is possible or impossible to mind, and it is only by observation and generalization *a posteriori* that we can ever hope to attain insight into the question." Cf. Schurman, *Belief in God*, pp. 27, 28.

[2] See the author's *Being and Attributes of God*, ch. ii. § 8, and *Introd. to Dog. Theol.*, ch. v. Pt. I.

whatsoever. Those who try to know spiritual realities, submitting to the conditions of such knowledge, and employing the spiritual methods by which alone they can successfully be examined, they are the only ones who are competent to judge concerning the knowability of spiritual things. Such people claim to know them.[1]

## III

We now come to the other aspect of naturalism — its insistence upon a purely mechanical method of interpreting all knowable realities. The fallacies which vitiate such a position are most clearly exhibited by the indirect method of positively defining for ourselves the proper function, range, and methods of sciences, and their real limitations.

Like any other primary conception of the human mind, the idea signified by the term "knowledge" escapes definition, because it is unique, and definition involves a comparison of what is defined with other things. Where there is no basis of comparison there can be no definition in the strict sense of that term. But we have no difficulty in identifying knowledge in practice, and it can be described with sufficient practical accuracy as the attainment of a rationally justifiable certainty concerning reality. Its content is never exhaustive, or adequate to reality, but if this content is, so far as it goes, in working accord with the real, it

[1] The philosophical form of agnosticism defended by Herbert Spencer has been considered in the author's *Being and Attributes of God*, ch. ii. Many references are there given.

constitutes what scientists mean by knowledge, and is the only knowledge which men can possess.

Knowledge may be concerned either with single particulars of experience, whether physical or superphysical, or with numerous particulars, viewed together and in their mutual relations. Now it is the function of sciences to develop the latter kind of knowledge, and scientific knowledge is generalized knowledge. In more specific terms, the function of a science is to investigate, generalize, co-ordinate, and reduce to intelligible unity all that can be ascertained concerning some department or aspect of reality. The subject-matter of every science is some department or aspect of the knowable, which in its totality is assumed to constitute a unity and to be susceptible of being to some extent understood in its unity. How far the knowable extends can be determined only by the results of practical efforts to gain knowledge — not by any preconceptions or speculative theories whatsoever. Our theories concerning knowledge depend for their validity upon what we already know, and when they are based upon ignorance they become mere intellectual gymnastics.

Wherever men have in fact made progress in knowledge of reality there is a place for science; and the claim of theology to be a science cannot be rejected except upon the supposition that its ostensible subject-matter is either wholly unknowable or, if knowable, entirely chaotic.[1] Science must assume that the uni-

[1] The author has treated of the scientific claim of theology in *Introd. to Dog. Theol.*, ch. i.

verse of reality contains no chaotic part; that all is coherent; that part is related to part and fact to fact; so that a correct knowledge of things means a knowledge of them as interrelated, and as capable of being described in terms of intelligible unity. Thus the phenomena of heat, light, and electricity are described in relation to those of energy and motion; organic matter must be described in relation to the phenomena of life; and physical and mental phenomena have to be described as parts of one system of reality, however diverse they may be in themselves. Unless all this is taken for granted, no rational basis exists for the undertaking of science to generalize, co-ordinate and unify. A chaos can never be the subject-matter of science.

No intelligent scientist denies this. But scientific specialists are often prevented by their exclusive devotion to limited aspects of reality from realizing that no department of reality can logically be excluded from the realm of order, unity, and rational intelligibility. Reality and intelligibility go together, and to repudiate the applicability of scientific methods to the spiritual realm cannot be justified except by a repudiation of the reality of the spiritual. The point to which I am coming is this: that the task of science can never fully be achieved until all departments of reality are co-ordinated and all knowledge, whether of the natural or of the supernatural, is brought into intelligible unity. Two important consequences follow. The first of these is generally granted; that is, that no theological knowl-

edge can make good its claim to be true knowledge if it can be demonstrated to be contradictory to genuine knowledge in the sphere of non-theological sciences. But it is equally to be maintained that no proposition advanced by natural scientists can rightly be regarded as final which contradicts genuine theological knowledge. In brief, the harmony which must exist between theological and non-theological knowledge is a mutual one, and neither theological nor non-theological science is in a position rightly to dictate terms to the other. And this contention is not in the least degree qualified when we acknowledge that theology, like physical science, is a progressive science, and makes progress by the correction of speculative errors as well as by a more complete knowledge of its divinely revealed and therefore indisputable data.[1]

All reality constitutes a unity; but the complexity and variety which is discernible in the totality of things is very great, so great that no one mind is capable of adequately investigating and generalizing all realities in one science. Consequently a division of labour is the first requirement of scientific method. The task which cannot successfully be undertaken in its compre-

[1] The data of revelation are analogous to those of physical science in so far as they consist of phenomena that *have been experienced;* and for this reason they constitute the fixed premises of theological speculation. When Christians insist that the faith was once for all delivered, and cannot be changed, they act on the principle which moves a modern scientist to insist upon his facts while modifying his theories. The insistence in both cases means that experience cannot be repudiated.

hensive totality has to be dealt with piecemeal. Accordingly there are many sciences, and each science represents specialization — a more or less exclusive consideration of limited departments or aspects of reality, each having its distinctive methods of investigation and interpretation. It is the fact that certain subject-matters can be successfully investigated by similar methods which causes them to be included within the purview of one science. This is so for the obvious reason that success in scientific work depends upon specialization in method. But such a principle of division causes a certain overlapping of sciences, which are often concerned with the same realities, although with diverse aspects of them, and from different points of view. Thus the natural sciences in their several ways deal with nature in its phenomenal and mechanical aspects. As Mr. W. C. D. Whetham says, "the object of Natural Science . . . is to fit together a consistent and harmonious model which shall represent to our minds the phenomena which act on our senses." [1] On the other hand theological science treats of nature in superphysical aspects, as exhibiting the handiwork of God and as having place in the divine plan, a determinative interpretation of which has been made possible by supernatural revelation. It is as if nature were cut through in various directions, the several intersecting sections thus laid bare being investigated in different sciences — the physical aspects

[1] *Recent Development of Physical Science*, p. 15. The whole chapter is valuable.

of nature being exhibited in certain sections, the theological in other sections.

It can be seen that no particular section completely exhibits the whole of nature; and, therefore, that no particular science ought to be regarded as self-sufficient. Every scientific hypothesis has this limitation, that it describes partial aspects only of reality; and its validity depends upon its harmony with correct descriptions of other aspects of the same reality.[1] To give an illustration suggested by the subject of these lectures, a physical scientist describes primitive man as he would have been if his condition had been determined exclusively by natural evolution from the lower species — a very legitimate line of investigation. A theologian describes man's primitive condition from the point of view of supernatural revelation, and as brought about, in part at least, by the coming in of supernatural grace. These two aspects of primitive man need not be regarded as mutually contradictory, for the supernatural is not the contra-natural; and they may not be so regarded if both are real. But the two descriptions are concerned with the same concrete matter, and therefore neither the evolutionary nor the theological description of primitive man can be regarded as beyond dispute, if it appears to be inconsistent with the data upon which the other is based. Let me anticipate at this point, and state my conviction that only on the untrue assumption that man's primitive state was exclusively due to natural development can any mutual contra-

[1] Cf. O. Lodge, *Life and Matter*, pp. 53–61, 74, 75, 140–143.

diction be established in this matter between catholic doctrine and the evolutionary hypothesis.[1] In saying this I shut out from consideration the inferences from this hypothesis which naturalistic philosophers make. These inferences are not scientific, but purely speculative.[2]

Particular sciences, we have seen, are limited in their possibilities by the fragmentariness of their respective subject-matters — as if we should investigate one side of a triangle, in utter isolation from the other sides, and expect thus to gain an adequate understanding of its place and value in the triangle. But sciences are also limited by the very partial nature of the knowledge that can be obtained even of the data with which they are especially concerned. It is impossible within the limited time at my disposal adequately to illustrate this statement, which is, however, quite indisputable. In every sphere of physical science the known is like the area of light produced by a camp fire in the midst of surrounding darkness. And, although the known continually becomes more extensive, the unknown remains ever an overwhelmingly vast *terra incognita*. My thought is justified at large by Professor James Ward's *Naturalism and Agnosticism*, a work which I commend most earnestly to your attention. He shows with abundant illustrations that, inasmuch as the physical sciences treat of phemonena in their mechanical aspects

[1] See pp. 108, 156, below.

[2] Illingworth points out, in *Reason and Revelation*, pp. 245, 246, that the alleged conflict between theology and natural science is really between theology and speculative philosophy.

only, their conclusions are largely of an abstract nature and more simple than are the concrete realities which they are thought to describe. Moreover the "laws" of natural science, in which its descriptions of nature are summarized, are approximate rather than exact. In the strictest sense of the phrase "exact" physical sciences do not exist.

Then too, scientific inductions, even in their own sphere, are based upon very incomplete data, and have to be regarded as provisional. They are subject to modification, and frequently are modified to agree with newly discovered facts. A good example of this is the atomic theory, which has been undergoing very important modification since the discovery of certain facts connected with radium — facts which appear to establish the existence of particles of matter much smaller than atoms, and which suggest new conceptions of matter and of its fundamental constitution.[1]

You will quite misunderstand the bearing of what I have been saying, however, if you infer that the work of physical scientists is valueless, and that the apparent theological bearings of their hypotheses may safely be either ignored or treated as unimportant. To revert to a figure of speech previously employed in this lecture, the sections of the model of nature which are examined by physical and theological sciences intersect each other at certain points, and the attempts to describe

[1] On the phenomena of radio-activity and the theories based upon them, see R. K. Duncan, *The New Knowledge;* and W. C. D. Whetham, *op. cit.*, chh. vi, vii.

reality at these points of intersection should be compared and harmonized, just because when considered separately each is inadequate to the full reality.

But the particular point which I am now emphasizing is the inadequate and provisional nature of the hypotheses which at any given moment exhibit the contents of physical knowledge. All sciences are progressive, that is, they are incomplete and to an important degree on trial. Their progress, however, is real, and they are bringing priceless benefits to mankind. The manner in which modern inventions have improved the conditions of civilization affords convincing evidence of this, for these inventions have depended for their possibility upon the discoveries of physical sciences. These discoveries have been brilliant, and they encourage us to hope for still more wonderful advances in the future.

We need, however, to remember that a scientific hypothesis does not derive its claim to acceptance from its finality, but from its working value, and from its being the best available generalization of the data with which it is concerned. As such it determines the proper point of view for fuller investigation and for wider generalizations — at least until further knowledge requires its modification.[1]

The proper attitude of theologians towards the hypotheses of physical science is one of discriminating appreciation, humble confidence in his own science, and

[1] Thos. Huxley, *Darwiniana*, pp. 374, 375; O. Lodge, *Life and Matter*, pp. 83–86.

patient waiting for fuller knowledge of all things. Theologians should appreciate and take into due account every increase of human knowledge, recognizing that each advance must ultimately prove helpful in interpreting the data of theological science.[1] But in order to do this they do not need either to disparage their own science or to lose their certainty as to the validity of its primary data — such data, I mean, as are summed up in "the faith which was once for all delivered unto the saints."[2] Depending as they must upon physical scientists for knowledge of the mechanical aspects of nature, they ought, none the less, to perceive the tentative nature of physical hypotheses, and of the theological inferences which are at first made from them. Time always works in the long run for the manifestation of truth, and this should encourage us to be patient when scientific hypotheses seem to contradict theological conclusions. In such case more mature thought may show that we have been too hasty in supposing that the contradiction is real. If it is real, and the physical hypothesis is able to stand the test of time, we may be sure that the theological proposition which requires modification will be found to be speculative, and capable of abandonment without prejudicing the genuine contents of supernatural revelation. The fact is that the abandonment of untenable theological opinions must always make for a clearer understanding of the fundamental verities of our religion.

[1] See Illingworth, *Reason and Revelation*, pp. 84–87.

[2] St. Jude 3.

An impatient temper is certain to reduce the value of scientific work in any department; and theologians who are over eager to get into line with the latest theories of natural scientists are likely to be led by their hasty inferences into the fogs of doubt instead of into the light of genuine scientific knowledge.

# LECTURE II

## THE EVOLUTIONARY THEORY

In my first lecture I endeavoured to clear the ground of some of the difficulties which interfere with an intelligent discussion of the bearing of the evolutionary theory upon Christian doctrine. If I succeeded in my purpose, I have justified your acceptance of the general presupposition that the alleged opposition between natural science and theology is in reality a conflict between speculative philosophies; and that it is the naturalistic philosophy of certain physical scientists, rather than the established results of their investigations, which is inconsistent with Christian doctrine. "Who would pay the slightest attention to naturalism," Mr. A. J. Balfour asks, "if it did not force itself into the retinue of science, assume her livery, and claim, as a kind of poor relation, in some sort to represent her authority and to speak with her voice?" [1]

In this and in my next lecture I ask you to consider the evolutionary hypothesis, its various forms, and the evidence by which it is supported. No doubt others have covered this ground with far greater claims to be heard than I can advance,[2] and some of you at

[1] *Foundations of Belief*, p. 35.

[2] The bibliography of the subject of organic evolution is large, and is constantly increasing. The following works are especially

least have, I suppose, become familiar with the evolutionary theory. But it will surely involve no waste of time on your part to reconsider the subject. At all events such reconsideration seems to be indispensable to a fulfilment of the purpose of these lectures.

## I

Strictly and properly speaking, the evolutionary theory is purely biological, and is concerned with the natural history of organic life. It does not profess to deal with the origin or ultimate cause of life, but presupposes the existence on this planet of some form or forms of living organisms. It can be stated very simply as the doctrine that all existing forms of life are derived by unbroken descent from a few primitive

to be recommended: R. H. Lock, *Recent Progress in the Study of Variation, Heredity, and Evolution;* A. R. Wallace, *Darwinism;* V. L. Kellogg, *Darwinism To-day;* Henry Calderwood, *Evolution and Man's Place in Nature;* Herbert Spencer, *First Principles; Prins. of Biology;* G. J. Romanes, *Darwin and After Darwin;* Baldwin, *Dic. of Philos., s. vv.* "Evolution"; "Lamarckism"; "Natural Selection"; "Organic Selection." Chas. Darwin's *Origin of Species* (6th ed.) and *Descent of Man* are of course of primary importance. The former is not easy to read. A. Weismann's *Evolution Theory* is of almost equal importance. A very clear and popular exposition of the Darwinian theory is given by Thos. Huxley, in *Darwiniana,* pp. 303–475. The bearings of the evolutionary theory are exhibited by V. F. Storr, *Development and Divine Purpose;* Jas. Ward, *Naturalism and Agnosticism,* Vol. I. Lecs. vii–x; A. Moore, *Science and the Faith; Essays Scientific and Philosophical;* J. Fiske, *Through Nature to God;* and F. B. Jevons, *Evolution.* The author's footnotes will sufficiently indicate the other treatises which he has found useful for his purpose.

types, perhaps from one, the present large number and diversity of species being due to progressive modifications of earlier species, brought about by natural forces and laws which still operate. This theory includes in its reference both the animal and vegetable kingdoms, and claims in particular to describe the production of the human organism. Some evolutionists hold that the development of species is fully accounted for by the operation of natural forces and laws. But others acknowledge that natural evolution has been attended by involution, that is, by superphysical causation, which has determined the upward direction and the results of the operation of natural forces. Those who deny the superphysical factors have obviously been controlled in their opinion by the philosophy which I discussed in my first lecture — the philosophy of naturalism. Physical data do not and cannot, of themselves, disprove the working of superphysical causation.

Such in general is the evolutionary theory. It should not be confused with particular explanations of the method of origin of new species, such as the theories of Lamarck and of Darwin; nor with wider theories which profess to explain the development of the inorganic world, and the progress of human history, thought, and religion, by an exclusively natural evolution.[1] The word "evolution" cannot be used to

[1] Prof. Le Conte, *Evolution in Relation to Religious Thought* (2d ed.), p. 8, defines evolution to be "a continuous progressive change according to certain laws, by means of resident forces," — a natural-

describe non-organic developments without a change in the meaning of that word from the sense in which it is employed in biology. And the evidence by which biological evolution is said to be established cannot logically be said to prove theories of development in the non-organic world. These theories use the word evolution in distinctive senses, and require other than biological evidences for their support.

In passing, something ought to be said at this point concerning what is called monism — especially the materialistic monism of Professor Ernst Haeckel. By clearly distinguishing monistic theories from the biological theory of evolution we may save ourselves from some confusion of thought.

The demand for unity in our conceptions of reality is imperative, and is not satisfied until every form of reality is co-ordinated and embraced in one coherent scheme. We cannot be said adequately to know any thing until we perceive the relations in which it stands to other things; and the assumption that all things are mutually related, whether immediately or remotely, is a fundamental postulate of scientific investigation. Now monism signifies a theory which aims to exhibit

istic definition. Herbert Spencer defines it in strangely elaborate terms as "an integration of matter and concomitant dissipation of motion; during which matter passes from a relatively indefinite, incoherent homogeneity to a relatively definite, coherent heterogeneity; and during which the retained motion undergoes a parallel transformation." *First Principles* (6th ed.), § 145. This extends the application of the theory beyond the organic sphere, and is monistic, as well as naturalistic.

the unity of all things, giving to each department of reality its true and rational place in the totality of things.

Without undertaking an elaborate discussion of monistic theories, we may group them all under the descriptive heads of idealistic, substantial, and teleological.[1] Idealistic monism tends to identify thought and reality, and reduces the objective world to subjective terms of consciousness. Such a view is too abstract and subtle to gain a permanent hold upon the general intelligence of mankind. Substantial monism reduces all reality to one homogeneous substance. The pantheistic Spinoza formulated such a conception of things, and his view has had immense influence in modern thought. Its most conspicuous weakness appears in its failure to do justice to the phenomena of personality, freedom, and morality.[2] Substantial monism may take either a spiritualistic or a materialistic form, and Professor Haeckel is a champion of materialistic monism.[3] Teleological monism acknowledges the substantial dualism of spirit and matter; and refuses to ignore either the essential difference between God and His creatures, or the mutually separate reality of

[1] Cf. Sir O. Lodge's subdivision, *Life and Matter*, pp. 6–8.

[2] Cf. pp. 16–21, above.

[3] Exhibited in his *Riddle of the Universe* and his other works. It is criticised from a theological point of view by J. Orr, *God's Image in Man*, pp. 67–78, 82–89; and from the point of view of modern science by O. Lodge, *Life and Matter*, who points out, on p. 42, that Haeckel's explanation of life and mind is equivalent to an assertion that matter possesses them. See p. 94, below.

finite persons. It discovers the unity of all things in God, and His creative purpose, by which all things other than Himself are caused to be and are developed and directed to the fulfilment of a plan which is at unity with itself. In its most perfect form this monism is nothing else than a philosophical formulation of Christian theism.

No doubt the term evolution may be appropriated by substantial monists to describe the process of development of universal and homogeneous substance into the forms and modes of our experience. But even if we could acknowledge the truth of such a theory, we would need to distinguish the monistic use of the term evolution from that of biologists. Materialists use it to describe purely mechanical changes in the arrangement and motions of matter. Biologists use it to describe organic changes, and they cannot be adequately described by purely mechanical terms. No doubt there are materialistic evolutionists, who refuse to acknowledge that any of the phenomena of organic life are superphysical. But their materialism does not constitute a part of the scientific theory of organic evolution. It is rather a philosophical point of view that determines the speculative inferences which materialists deduce from the scientific hypothesis. The point which we are emphasizing is that the biological theory of evolution which is now generally accepted in the scientific world is exclusively concerned with the development of forms of organic life. It is not to be confused with theories concerning the inorganic

world, or with materialistic conceptions of reality. These theories and conceptions are extra-scientific speculations, and we do not have to commit ourselves to any one of them in accepting the scientific hypothesis with which this lecture is concerned.

This conclusion relieves us from the necessity of dealing in these lectures with the arguments by which materialistic monism is said to be supported. That philosophy, it ought to be noticed, does not at the present time exercise the influence in the higher world of thought that it did in the last generation. The leaders of thought of to-day have largely abandoned it, and this fact is acknowledged and bewailed by its chief defender, Professor Haeckel.[1]

I ought to add, however, that the advanced thought of yesterday is usually the prevailing thought of to-day among untrained and unguided common folk. Materialism is still a foe to be reckoned with in the work of winning the multitude to Christ. Works which present materialistic objections to Christianity in popular forms are published in cheap editions, and have a much wider sale than any other type of literature bearing on religious questions. Our apologists and pastors are apt to be oblivious of this fact, and often yield to a mistaken optimism. The most dangerous effects of infidel systems of thought are produced after they have ceased to influence trained thinkers. This is so because it is only after some time has elapsed that new thought

[1] *Op. cit.*, pp. 100–103. He accounts for it by the naïve explanation of brain decay in old age.

can be appropriated by the million. It is said that half the world does not know what the other half thinks. It is certainly a fact that the ignorance of our clergy as to the thinking of our industrial classes has much to do with their inability to retain that class of people within the Church. It is of vital importance for your future success in this direction that you should discover what the people at large are reading; for by no other means can you gain adequate knowledge of their thinking. You will, perhaps, be tempted to underrate the influence of their reading because of its evident shallowness. If so, you will have need to remember that the mental training which enables you to perceive its shallowness is wanting to the popular mind, which is a prey to any form of error, however shallow, when it is insistently propagated by those who claim to be setting forth the latest results of scientific investigation and higher thinking, and who write in terms easily understood by untrained readers.

To return to our present subject, the theory of evolution with which we are concerned in these lectures has no necessary connection with monism, whether materialistic or spiritualistic. It is exclusively biological, and is accepted by theists and anti-theists alike, being regarded throughout the scientific world as the best available working hypothesis of the origin of species. The aspect of this theory which will demand our especial attention is its bearing upon the Christian doctrine concerning man's primitive state and fall.

## II

As a speculative conjecture the idea of a development of the world out of primordial matter is as ancient as is human philosophy.[1] Christianity has enriched human thought with the doctrine of the creation of matter by the will of God, and teaches the doctrine of divine immanence and of sovereign control by God of the course of nature. But the evolutionary form of thought was not prejudiced by the publication of these truths. On the contrary, the narrative of creation in Genesis, and the progressive nature of God's self-manifestation as recorded in the Scriptures, were commented on by certain patristic writers in terms that were favourable to evolutionary conceptions of history, whether natural or spiritual. Mediæval realists, starting with the doctrine of an original creation of matter *ex nihilo*, described its differentiation by an individualizing principle into specific forms in terms suggestive of evolution. This appears especially in Duns Scotus, who used the figure of a growing tree to illustrate his conception. Descartes was governed by the evolutionary conception of the universe, and Hume considered that generation and growth were preferable to the notion of

[1] For the history of evolutionary theories both monistic and organic, see R. H. Lock, *Recent Progress*, chh. ii, iii; H. F. Osborn, *From the Greeks to Darwin;* Ewd. Clodd, *Pioneers of Evolution from Thales to Huxley;* A. R. Wallace, *Darwinism*, ch. i; A. Weismann, *Evolution Theory*, chh. i, ii; Chas. Darwin, *Origin of Species* (6th ed.), pp. xiii–xxvi; Thos. Huxley, *Darwiniana*, pp. 204–239; Jas. Sully, in *Encyc. Brit.*, 9th ed., *s. v.* "Evolution."

sudden creations, as descriptive of the origin of things. The German philosopher, Immanuel Kant, broached the theory of a development of all things out of primitive *nebulæ* in obedience to physical forces and laws. Shelling regarded nature as vital rather than mechanical, and as a process of organic self-evolution. Hegel maintained that God realizes Himself in the evolution of the world through the three stages of mechanical, physical, and organic development. History, he said, begins with spirit, which determines subsequent evolution.

The early appearance of such forms of thought, and their wide prevalence, were the natural and inevitable result of men's observation of the phenomena of growth in individual organisms, and of the gradation of species in the animal and vegetable kingdoms. But previous to the development of modern biological science, evolutionary theories were necessarily conjectural; and they could not gain a serious foothold so long as no credible explanation of the method of evolution was forthcoming. Moreover, up to Paley's time, modern theologians and scientists alike believed in the fixity of species. With a very few exceptions the notion that species undergo mutation was confined to speculative philosophers.[1] The older allegorical interpretation of Genesis was without support, and theologians naturally read existing science into the biblical account of

[1] The author of the scientific doctrine of the fixity of species was John Ray, a younger contemporary of Milton. It was accepted by Linnæus and Cuvier and became a scientific postulate. See V. F. Storr, *Development*, pp. 36, 37.

creation, assuming that that account should be taken literally, and should be regarded because of its inspiration as scientifically accurate. The conclusion that the purpose of biblical inspiration did not include a revelation beforehand of the results of scientific investigation, although clearly expressed in the twelfth century by Peter Lombard,[1] did not emerge in modern thought until the unscientific nature of the opening chapters of Genesis had been established by the results of nineteenth-century scientific induction. Thus it was that theologians adopted the theory of special creations and of the fixity of existing species; and the idea of mutation of species, upon which the modern evolutionary hypothesis depends, was alien in the eighteenth century to the minds both of theologians and scientists.[2]

As early as 1761, however, Buffon had come to regard species as to some extent mutable, although he maintained a fixity of type among the larger animals. He sought to explain the mutations of species by the transmission to offspring of variations caused by environment. Charles Darwin's grandfather, Erasmus Darwin, who died in 1802, devoted some attention to the problem of evolution, as did also Treviranus; but Jean-Baptiste Lamarck (1744–1829) stood sponsor for the first seri-

[1] *Sentences*, Lib. II. Dist. 23. Given by Pusey, *Un-Science, not Science, Adverse to Faith*, pp. 6. 7, who also cites St. Augustine, *de Gen. ad Lit.* i. 39, upon the folly of supporting physical theories by an appeal to Scripture.

[2] It made very slow headway until after the publication of Darwin's theory, 1858–1859.

ous attempt scientifically to explain the mutation of species.[1] His explanation appeared in 1801 and was published in a more elaborate form in 1809. His theory is based upon the well-known fact that animal organs are strengthened and developed by habitual exercise, and suffer degeneration when not used. Without denying the influence of external environment upon the use or non-use of organs, he regarded use and non-use as the actual causes of variation, and maintained that the evolution of species is due to transmission to offspring of characters thus acquired. Among the more plausible illustrations which he advanced are those of snakes and giraffes. The constant striving of certain animals to pass through narrow crevices was thought by him to cause an attenuation of body, which was inherited and increased through a series of generations. Again, certain animals living in arid districts were forced to stretch their necks upward in order to feed on the leaves of trees. This gradually caused, by a similar process of variation, heredity, and accumulation of change, the peculiarity which most obviously distinguishes giraffes.

Before going on, two terms should be defined, viz., "factors" of evolution, and "characters." A "factor" of evolution is any cause or condition of variation which may produce or determine the course of organic evolution. Such a factor may be either directly cau-

[1] His theory is expounded by R. H. Lock, *Recent Progress*, pp. 33–37. He gives the arguments *pro* and *con*, pp. 59–72. Cf. V. L. Kellogg, *Darwinism To-day*, pp. 262–274, 290–309.

sative or merely a limiting and determining condition of evolution, the positive cause of which must be found elsewhere. The factor of environment belongs to the latter class, while the factor of use — called the Lamarckian factor — belongs to the causative category, as do also those of variation generally, reproduction and heredity. As will appear at a later stage in this lecture, natural selection is not a causative factor, but a limiting and directive condition.

A "character" is any organic or functional mark which serves to distinguish one organism from another. "Specific characters" serve to distinguish the species from each other, and "acquired characters" are those which are gained during a single lifetime by individual organisms, whatever may be the factor or factors that explain their acquisition. Lamarck's theory involved the assumption that acquired characters are transmitted to offspring; and this doctrine, as we shall see, has been rejected by the neo-Darwinians. The question is thought to have some bearing on the doctrine of original sin.

Lamarck's theory produced little impression upon the scientific world. It seemed obviously inadequate, since it was not shown to be applicable to the vegetable kingdom;[1] and other causes diverted scientists from any serious consideration of its claims. Biological science was in its infancy, and no sufficient body of

[1] Prof. G. Henslow, however, in *The Heredity of Acquired Characters*, 1908, finds evidence for the transmission of acquired characters in that direction.

evidence was yet available that warranted an abandonment of belief in the fixity of species. Moreover, so long as men continued to believe that organic life was of comparatively recent origin on this planet, the amount of time which was available seemed to be quite too brief for the accomplishment of a gradual evolution of existing species from a few protoplasmic forms of life. Catastrophism, or belief in a series of vast upheavals in the earth's surface, still occupied the field in geological science, and this doctrine also deprived the theory of a gradual evolution of species of plausibility.

The work of Sir Charles Lyell, who began to publish his *Principles of Geology* in 1830, had the effect of enlarging men's conceptions of time and of overthrowing the catastrophistic doctrine. He helped the scientific world to believe that all the geological changes of the past have been achieved by the slow working of causes that still operate, and that organic life is far more ancient than had previously been acknowledged. Thus he seemed to remove a difficulty which obviously would have seriously hindered scientists from accepting the Darwinian theory of evolution. The ground was also broken for Darwinism by the theory of Malthus, first published in 1798, but subsequently elaborated.[1] Malthus established the fact that human population tends to increase in a geometrical ratio, whereas there can be no such increase of the means of subsistence. The consequence is that sooner or later

[1] *Principles of Population*, revised in 1803.

the less capable members of a community must suffer from poverty; and this is only partly relieved by high infant mortality, famines, and other abnormal causes. These facts suggest the conclusion that the weak must go to the wall, and the fittest alone can survive in the struggle for existence.

Darwin's view was partially anticipated in a communication which was read in 1813 before the Royal Society in England by Dr. W. C. Wells, and which was an attempt to explain the differentiation and distribution of human races. Calling attention to the fact that no two human individuals are exactly alike, he urged that in every particular region some would be better fitted to resist the prevailing diseases than their fellows, who would gradually perish, leaving in possession of the field a race suited to climatic conditions. He thus explained the existence of dark races in warm countries.

In the meantime Lamarck's explanation of evolution by the inheritance of acquired characters was adopted with modifications by Herbert Spencer, in his *Principles of Psychology*, which was published in 1855, three years before Mr. Darwin first published his theory of natural selection. Mr. Spencer came ultimately to recognize the factor of natural selection, but continued to maintain that primary importance must be attributed to the Lamarckian factor in any adequate theory of evolution.

## III

The task of giving the evolutionary theory an established place in biological science was achieved principally by Charles Darwin, whose *Origin of Species* is one of the most epoch-making books that have ever been written. It put much of previous scientific literature out of date, and caused a revolution in thought which has not only extended its transforming influence into every department of natural science and philosophy, but has largely determined the lines and methods of subsequent speculative and apologetical theology. The ancient catholic faith is still valid, and must hold its own forever. But in 1859 a new world was born, thinking new thoughts and using new language. The result has been that Christian apologists have been compelled either to think the new thoughts, and use the new language, or to abandon hope of successfully propagating Christian doctrine among the intelligent. The need of re-translating its ancient terms is in no wise removed by the assumption that what needs to be translated is as valid in its original meaning as it could be thought to be, if Charles Darwin had never been born. But the world of to-day cannot understand that meaning, until it is exhibited in the terms which now to a large extent condition and mould human thinking and believing.

As I have already stated, Darwin's view had been partly anticipated by Dr. W. C. Wells in 1813. Credit ought also to be given to A. R. Wallace, who had inde-

pendently sketched the theory of natural selection before Darwin was ready to publish his own speculations. Mr. Wallace sent his sketch to Darwin for presentation to the Linnæan Society, not knowing that Darwin had been giving many years of labour to the development of the same theory, and had accumulated a vast amount of data for its illustration and support. What followed constitutes a pleasing chapter in scientific amenities. Darwin's first impulse was to present Wallace's sketch without publishing any account of his own work. He was rightly dissuaded by his friends from such a course, and the joint statements of Darwin and Wallace were published in 1858 in the Journal of the Linnæan Society. Mr. Wallace promptly acknowledged the priority of Darwin, and constituted himself thenceforth a champion of Darwinism.[1] Mr. Darwin now undertook at the earnest persuasion of his friends to prepare for publication what he called an abstract of the data which he had gathered, and this was published November 24, 1859, in a closely written volume of fifteen chapters and 824 sections. The book was entitled, *The Origin of Species by Means of Natural Selection.* The book is so closely packed with detail that it is hard to read, but the first edition was sold before the end of the year and a second edition appeared in January, 1860. It is the sixth edition which embodies the author's final corrections, and

[1] This is shown by the title which he has given to one of his works — *Darwinism.* He did not hesitate to confess his inability to write such a book as *The Origin of Species.*

this fact should be remembered in consulting the work. Several later works appeared containing further data, and in 1871 Darwin applied his theory to the human species in a work entitled, *The Descent of Man.*

The new theory at first called forth a most bitter opposition from physical scientists and theologians alike, and the controversy which followed was not edifying. Yet the alarm which Darwin's views caused need not surprise us. Their real bearing took time to determine. Darwin himself thought that his theory nullified the alleged evidences of design in nature, and it appeared at first blush to contradict the doctrine of creation and to be inconsistent with belief in the divine inspiration of Genesis. To this day many thoughtful writers consider that Darwinism cannot be reconciled with Christian doctrine as to man's primitive state and subsequent fall into the condition which is described by the phrase "original sin." We may think that such impressions were groundless, but they were very real. Physical scientists had not yet abandoned belief in the fixity of species, nor had they fully assimilated the somewhat revolutionary views of Sir Charles Lyell as to the amount of time available for such a process of organic evolution as Darwin hypothecated. Many of them, therefore, regarded Darwinism as a step backward, and as throwing scientific thought into confusion. The immense array of evidence which Darwin had accumulated had its effect, however, and the new theory rapidly won a recognized place among the working hypotheses of natural science. The late

Thomas Huxley, who called himself "Darwin's bull-dog," had much to do with giving it that place.

Darwinism still retains strong support among scientists. I do not mean that it has undergone no modification. Pure Darwinism has been abandoned by a majority of leading scientists, who acknowledge that natural selection was given too large a place among the factors of natural evolution by Darwin, and that the positive causation of variation and of the origin of species must be elsewhere discovered. The work of natural selection is acknowledged to be the elimination of species unfit to survive, rather than the causation of species. There is no warrant, however, for the contention embodied in the title of a recent work by Dr. E. Dinnert—*At the Death-bed of Darwinism.* And it should be remembered that the general theory of evolution of species by natural descent does not depend for its truth upon the correctness of Darwin's explanation of it. That explanation by its plausibility did indeed gain for the theory of natural evolution its first general acceptance by physical scientists; but the investigations which have followed have had the result of confirming such acceptance independently of their effect upon pure Darwinism.

What precisely is the Darwinian theory? Its author describes it briefly in the following terms. After stating his belief in the general theory of evolution, "that species have been modified, during a long course of descent," he adds, "This has been effected chiefly through the natural selection of numerous successive,

slight, favourable variations; aided in an important manner, that is, in relation to adaptive structures, whether past or present, by the direct action of external conditions, and by variations which seem to us in our ignorance to arise spontaneously." [1]

In this description, the phrase "natural selection" is of leading importance, and to understand Darwin's use of it is to understand the essence of Darwinism. It was suggested by the phenomena of artificial selection, in which desirable variations in the animal and vegetable world are perpetuated and improved by selecting for breeding and culture those animals and vegetables only that possess the variations which are desired. Many choice varieties of stock and of edible fruits and vegetables owe their existence to artificial selection. Now Darwin was led to believe that what man thus assists nature to achieve within a brief period of time is accomplished more slowly, but in an analogous manner, by unassisted nature. He therefore called the process "natural selection." The word "selection" implies intelligent choice, but Darwin

[1] *Origin of Species* (6th American ed.), Vol. II. p. 293. His general argument is summarized in ch. xv. Expositions of Darwin's theory can be found in A. R. Wallace's *Darwinism;* R. H. Lock's *Recent Progress*, ch. iii; V. L. Kellogg's *Darwinism To-day*, pp. 12–17; A. Weismann's *Evolution Theory*, Lecs. ii, iii; V. F. Storr's *Development*, ch. iii; M. M. Metcalf, *Outline of the Theory of Organic Evolution*, pp. 3–31. *Life and Letters of Chas. Darwin*, by his son, F. Darwin, 3 vols., is most valuable. A short life is given by Thos. Huxley, in *Darwiniana*, pp. 254–302. See also on Darwin's theory, Baldwin, *Dic. of Philos.*, *s. vv.* "Existence (Struggle for)"; "Selection"; "Variation"; and *Encyc. Brit.*, 9th ed., *s. v.* "Evolution."

declined to acknowledge any evidence of design in nature's working, so that his use of the word was in this respect metaphorical. The principle by which natural selection is guided is indeed adaptation to environment, and the utility of variations in what has been termed "struggle for existence." This adaptation, however, is not due in Darwin's opinion to design, but to the fact that among the multitude of variations which constantly occur none, from the nature of things, can hold their own which are not in harmony with environment and useful, whether directly or indirectly, for the preservation of existence. Natural selection means that Dame Nature destroys whatever is incapable of adjusting itself to the requirements of existence; and the prevalence of adaptation in nature is due, according to Darwin, to this elimination of the unfit, or, to use Herbert Spencer's phrase, to an inevitable and exclusive "survival of the fittest." [1]

Darwin's theory is based upon the facts of variation, heredity, and excessive multiplication of organisms. The fact of variation is a matter of common observation. No two organisms are alike in all particulars, and this variation appears between parents and offspring, and between the offspring of the same parents. Among these variations there occasionally appear large and abnormal mutations or sports, and such changes, by reason of their exceptional occurrence, are called "discontinuous" variations. But

[1] *Origin of Species*, chh. iii, iv. On the effect of Darwin's theory on the argument for design, see pp. 112–116, below.

Darwin based his theory upon the accumulation of the slight variations that are constantly occurring throughout the organic world, and are called "normal" and "continuous." [1] These are often very slight indeed, but Darwin believed that they afford a sufficient basis for the operation of the principle of natural selection. The slightest difference between organisms, he maintained, is often sufficient to determine a survival of one variety and an extinction of another.

The fact of heredity comes in at this point. Favourable variations are preserved in offspring, and become gradually accentuated, accumulating from generation to generation until the divergence from parental forms becomes sufficient to constitute a new and independent species. The obvious objection has been made that, under the conditions of unrestrained nature, this accumulation of variations is prevented by constant cross-breeding between the members of the same species. Accordingly Darwin hypothecated the incidental factor of isolation, as supplementing natural selection by helping to preserve the variations which afford the basis of the working of that principle. This isolation, or segregation as it is also called, is said to be geographical when caused by migration, and biologic when due to the deterring effect of variations upon miscellaneous inter-breeding.[2]

[1] On continuous and discontinuous variations, see R. H. Lock, *Recent Progress*, pp. 14–18. The mutations theory is based upon discontinuous variations.

[2] *Origin of Species*, Vol. I. pp. 127–132. Cf. M. M. Metcalf, *Organic Evolution*, pp. 60–67. Darwin also found it necessary to

The Malthusian doctrine, that the propagation of species is excessive and, if unrestrained, must result in a failure of food supply, was accepted by Darwin. A constant struggle for existence, he maintained, is going on in the organic world; and this struggle, through the operation of the principle of natural selection, inevitably results in the destruction of countless organisms that are incapable of winning out in the battle of life, and in the survival of the fittest.

Such in the rough is the Darwinian explanation of natural evolution of the species — summed up in the phrases, continuous slight variations; inheritance of the characters thus produced; isolation, whether geographic or biologic, of evolving varieties; gradual accumulation of variations until independent species are developed; and, as describing the whole process and determining at every stage its direction and results, the principle of natural selection, by which the unfit are eliminated and the fittest alone are permitted to survive.

supplement his hypothesis by the theories of sexual selection and pangenesis, neither of which commands undisputed support among biologists. He elaborated the former theory in his *Descent of Man*, Pts. II, III (cf. *Origin of Species*, Vol. I. pp. 107–110); on which also see Lock, *op. cit.*, pp. 56–59; A. R. Wallace, *Darwinism*, ch. x; V. L. Kellogg, *Darwinism To-day*, ch. v; A. Weismann, *Evolution Theory*, Lec. xi. Darwin introduced his pangenesis theory in *Variations of Animals and Plants*, Vol. II. p. 350. Neither of these theories require attention here. The latter is concisely defined in the *Century Dictionary*, *s. v.* "Pangenesis."

## IV

In the controversies which followed the publication of *The Origin of Species*, the distinction between the theory of natural evolution of species and Darwin's explanation of it, or the theory of natural selection, was not clearly made. The attack on Darwinism was really an attack on the general theory of evolution. The battle was fought out in the sixties, and after a few years natural evolution became the generally accepted working hypothesis of scientific investigation. There is not the slightest sign to-day of its ceasing to hold the field. But as time went by scientists came to see that Darwin had exaggerated the part of natural selection in evolution, and that his theory required supplementing and modifying. This change of attitude was purely scientific, and was not caused by any theological prejudice. Such prejudice gradually disappeared among those theologians who took pains calmly to consider the real purport and bearing of natural selection, and who came to realize that to anticipate the results of scientific investigation was not involved in the purpose of the divine inspiration of Genesis. Accordingly, the more intelligent thinkers ceased to feel anxious as to the consequences to theology of biological study; and scientists were left free to pursue their investigations without being influenced by confusing side issues. Under these circumstances many scientists came to realize that while Darwin's arguments were very effective to establish the belief in a natural evolution

of species, they were not so satisfactory when considdered as proofs of Darwinism. Attacks upon Darwin's theory began to be made from the evolutionary standpoint and the terms "Darwinist" and "evolutionist" ceased to be interchangeable.[1]

Even Thomas Huxley, vigorous champion as he was of Darwinism, saw at the outset that Darwin put too much emphasis upon the gradualness of evolution, and was inclined to the view that species might, in cases at least, be evolved suddenly by large and discontinuous variations.[2] Many felt the difficulty of regarding minute and fluctuating variations as affording a sufficient basis for the operation of natural selection, and geology failed to redeem its earlier promise of proving a sufficient antiquity of the conditions of organic life to afford time for so slow an evolution of species. Many specific characters, it was also noted, have no utility; and utility is an essential condition of natural selection, in which the survival of species is determined by the value of their specific characters for the struggle for existence. It is a branch of this diffi-

[1] The objections of evolutionists against Darwin's emphasis upon the natural selection of slight and continuous variations are very fully summarized by V. L. Kellogg, *Darwinism To-day*, chh. iii–v, who also indicates the answers made by Darwinians, chh. vi, vii. He gives many references. See also M. M. Metcalf, *Organic Evolution*, pp. 31–47; J. Orr, *God's Image in Man*, pp. 100–107. *Doubts about Darwinism*, by a semi-Darwinian, is a calm discussion of the inadequacy of Darwinism considered as a complete explanation of species, written in the interests of superphysical factors and theistic teleology.

[2] *Darwiniana*, pp. 77, 97.

culty that the utility of many variations does not appear until they have become somewhat pronounced, so that in their incipient and slighter beginnings they afford no apparent basis for natural selection.

Other difficulties attend the supposition that species are evolved by the selection of slight and continuous variations. One has been mentioned in another connection — the swamping effect of inter-breeding between new forms and other members of the parent stock. Isolation would indeed remove this difficulty, but the chances of such isolation are not sufficiently numerous to meet the requirements of natural evolution. Moreover, continuous variations fluctuate, and are limited in range. They show a tendency to slow down at certain stages, and reversion to type is a frequent phenomenon. They are also purely linear. That is, they constitute quantitative rather than qualitative changes, and cannot produce a difference in kind, such, for instance, as is represented by the evolution of an eye from a blind spot. At any rate continuous variations can produce a difference in kind only by a coincidence and co-ordination of several such variations, which can hardly be explained without supposing directive forces to be at work in the organism of which the theory of natural selection takes no account. To this should be added the necessity that similar variations, with all their complexity of co-ordination, should appear at once in a sufficient number of individuals, and with sufficient persistence for the process to be accomplished of propagating and estab-

lishing the new variety. Finally there is the objection that evolution by the selection of continuous variations ought to result in producing a continuous series of organisms; whereas it is found to produce independent species with intervening gaps. The missing links are as numerous as are the distinct species that have appeared on this planet.

Objections have been raised to the main contention of Darwin that natural selection is the chief factor of the evolution of species. It has become widely acknowledged that natural selection is not a positive cause of evolution at all. Its function is to eliminate unfit products of evolution, to clear its pathway of obstructions, and to determine what products shall persist. The cause or causes of variation and development are elsewhere to be sought.[1] The analogy alleged to exist between artificial and natural selection has been pressed too far. Intelligent control is an essential factor in artificial selection, a factor which Darwinists ignore. It depends also upon a completeness of isolation which nature does not often afford when needed for the operation of natural selection. It does not produce stable species, but varieties which usually revert to ancestral type when left uncontrolled, whereas the results of natural evolution persist. Other differences might be mentioned, the most important being that, whereas artificial selection has never produced indubitable species, mutually non-fertile, nature has done so in a multitude of instances. Obviously determinative fac-

[1] Darwin did not claim to explain variations, but survivals.

tors operate in the natural evolution of species which cannot rightly be described by the term selection. Nor is this all. It is urged that selection actually retards the development of new species, its effect being to preserve useful types at the expense of variants therefrom. Doubts have been expressed as to the alleged fierceness of the struggle for existence; and it has been maintained that new forms can originate only when the conditions are favourable, that is, when a struggle for existence is unnecessary.

I have given you only a very rapid and incomplete summary of the objections that have been raised against the Darwinian theory, and it would be foreign to the general purpose of these lectures either to discuss them or to estimate the value of the replies which have been made to them. They are obviously of unequal force, and a few of them may perhaps be looked upon as incidental problems for solution rather than as reasons for rejecting Darwin's theory.[1] But the real difficulties are sufficiently numerous and formidable to account for the reaction which has occurred against pure Darwinism — a reaction which has resulted from fuller biological investigation, and not from any theological influence. A close examination of these difficulties shows that they do not militate against belief in a natural evolution of species; and they have not caused any weakening of that belief. Nor have they brought

[1] In his *Origin of Species*, especially the later editions, Darwin discussed them, and his candour in acknowledging the force of some of them is admirable.

about an entire rejection of natural selection as a factor in evolution. The tendency has been to modify rather than to abandon Darwin's theory.

Important advances have been made in cytology, or the study of minute organic parts and cells by means of the microscope, and in biometry, or the statistics of organic changes. Many problems have been wholly or partly solved; and, while new problems have emerged, much progress has been achieved in accumulating data for a more adequate theory of natural evolution.[1]

Darwin did not wholly reject the Lamarckian factor, or the inheritance of characters acquired by the use and disuse of particular organs. But he gave it a minor place and influence.[2] Herbert Spencer, however, gave it the leading place,[3] although acknowledging that natural selection also has a part to perform; and those who have followed him in doing belated justice to Lamarck's theory are called neo-Lamarckians. The Lamarckian theory is certainly very plausible; and in spite of the lack of adequate evidence of the transmission of acquired characters, many have believed in the Lamarckian factor, which of course depends for its validity upon the fact of such transmission.

August Weismann gave a new turn to the course of speculation by a series of essays begun in 1881,[4] in

[1] Useful accounts of post-Darwinian studies can be found in R. H. Lock's *Recent Progress;* and V. L. Kellogg's *Darwinism To-day,* chh. viii–xii. [2] *Origin of Species,* Vol. I. pp. 167–173.

[3] In *First Principles;* and *Prins. of Biology.*

[4] Subsequently translated and published by Ewd. B. Poulton and others — *Essays upon Heredity,* etc., Oxford. His arguments are

which he assailed the doctrine of transmission of acquired characters, and gave carefully developed reasons for a new theory, that heredity depends upon the transmission of germ-plasm, originally derived from the remotest ancestry, and unaffected by the characters acquired by organisms during their individual lives. Organisms are made up of minute units called cells, and are developed from transmitted germ-cells by means of assimilation of food, subdivision and differentiation in function of the multiplying cells and organs which they combine to produce. Professor Weismann maintained that the original germ-plasm develops into two kinds of cells — the somatic cells and the germ-cells — and these are mutually isolated. The somatic cells build up the individual organism, and are subject to modification by the influence of environment and by use and disuse of organs. But as these cells are not transmitted to offspring, the characters which are thus acquired cannot be transmitted or inherited. The germ-cells alone constitute the material source of new organisms, and they are unaffected, because of their isolation, by the influences which modify the somatic cells and the individual organism during its lifetime. The arguments by which this theory was supported are too complicated to present adequately in these lectures,[1] but their

repeated in his *Evolution Theory*, 2 vols., translated by J. A. Thomson, 1904, Lecs. xxiii–xxv. Cf. R. H. Lock, *Recent Progress*, pp. 59–72; Baldwin, *Dic. of Philos.*, *s. v.* "Acquired Characters"; H. Calderwood, *Evolution*, pp. 40–42.

[1] Cf., however, pp. 204–207, below.

underlying premise is that the process of evolution and of propagation is purely mechanical, and can only be correctly explained in mechanical terms. The variations which appear in offspring are not due to the transmission of acquired characters, but to the diverse combinations and workings of the characters contained in the germ-cells of the male and female parents.

The new theory gained wide acceptance, and was thought to strengthen the Darwinian hypothesis and to establish the practically exclusive value of natural selection in evolution. Those who have taken this position are called neo-Darwinians. The controversy which followed was a vigorous one, and you will find it worth while to read the debate between Weismann and Spencer, which is found in several articles contributed by them to the *Contemporary Review* in 1893 and 1894. The result has been that, while belief in the inheritance of acquired characters has been much weakened, the correctness of the neo-Darwinian position has not been generally acknowledged. On the contrary, its supporters have been obliged to make compromising concessions. Professor Weismann felt forced to acknowledge that natural selection as previously set forth does not explain the earlier stages of development of useful variations; and in 1892 he broached the germ-plasm theory.[1] This theory treats the cells as made up of a multitude of smaller particles,

[1] Exhibited in his *Evolution Theory*, Lecs. xvii–xix, xxii. Cf. R. H. Lock, *op. cit.*, pp. 259–263; V. L. Kellogg, *Darwinism To-day*, pp. 193–201.

which he called biophors and which are combined into groups, named determinants because they are supposed to determine the characters of any cell in which they are found. Weismann contended that these biophors assimilate food, grow, and reproduce themselves by division; and that the determinants into which they are grouped are engaged in a competitive struggle for food. This struggle eliminates the weaker determinants from having part in determining the characters to be transmitted by the germ-cells to offspring. Thus the principle of selection is conceived to operate upon variations within the cell — variations too slight for observation even by means of a microscope. The fact that this theory represents an effort to solve the important and pressing problem as to how determinate variations originate has secured for it more serious attention than its evidence, or lack of evidence, warrants. It is purely conjectural, for it is based upon a description of the internal structure of cells which cannot be verified. If biophors exist, they escape detection by the most powerful microscope.

The experiments in cross-breeding of an Augustinian monk, Gregor Mendel, the results of which were published in 1865, but which attracted no particular notice until his facts were rediscovered by de Vries and others in 1899, have thrown important light upon the laws of transmission of characters to offspring. Mendel's law, as it is called, is that the sexual or germ-cells of an organism produced by cross-breeding bear the parental characters thus brought into one organ-

ism in complete mutual separation, and these separate characters, called "allelomorphs," are distributed in the germ-cells in such wise that all possible combinations of them are present in approximately equal numbers. To restate this in other terms, the germ-cells of opposite parents which are found in hybrid plants each contain one or other only of any pair of differentiating characters possessed by the parents; and each member of such a pair of characters is contained in an equal number of germ-cells of both sexes. By a pair of characters is meant two characters that can only be described by their mutual differences:— for instance, smooth seeds and wrinkled seeds. It should be added that the separate pairs of differentiating characters or allelomorphs obey Mendel's law in complete and mutual independence. This mutual separation, along with the numerical law of their combinations in germ-cells, determines the results of cross-breeding; and the practical application of Mendel's discovery enables cross-breeders to select desirable variations in such a manner as to produce varieties which breed true and hold their own.[1]

The facts upon which Mendel's law is based constitute an important part of the data by which Hugo de Vries was led to maintain the evolutionary theory of heterogenesis, commonly called the mutations theory. This theory had been enunciated by several earlier

[1] On Mendel's law, see R. H. Lock, *op. cit.*, chh. vii, viii; Bateson, *Mendel's Prins. of Heredity* (which gives translations of Mendel's own papers); Baldwin's *Dic. of Philos.*, *s. v.* "Evolution (Mendel)."

writers, but his elaborate experiments and careful arguments have for the first time given it a recognized place among scientific theories — one that threatens to destroy the influence of neo-Darwinism. You will remember that Darwin and the neo-Darwinians make slight, fluctuating, and continuous variations the basis of the process of natural selection, and maintain that a new species is formed by means of such selection, and by a gradual accentuation and accumulation of the variations selected. The new theory excludes natural selection from any part in species-forming. According to it a new species is produced by sudden and discontinuous variations. These variations may be slight in degree when severally considered, but a sufficient number of them coincide to produce immediately by their cumulative effect an independent species, sufficiently differentiated to escape the swamping effects of inter-breeding, and capable of perpetuating itself. Biologic isolation is complete, and the number of members of the new species which are thus produced is also sufficient for their self-propagation.

The new theory is thus directly opposed to Darwinism in its explanation of the formation of new species. But it leaves a place for natural selection in determining the general course of natural evolution. De Vries says: "Darwin discovered the great principle which rules the evolution of organisms. It is the principle of natural selection. It is the sifting out of all organisms of minor worth through the struggle for life. It is only a sieve, and not a force of nature, no direct

cause of improvement. . . . It is only a sieve, which decides which is to live, and what is to die. . . . It is the sieve that keeps evolution on the main line, killing all or nearly all that try to go in other directions. By this means natural selection is the one directing cause of the broad lines of evolution." [1] In brief, the mutations theory makes natural selection begin its work with species already formed, and restricts its operation to an elimination of unfit species and an exclusive preservation of such as are fitted to survive.

The mutations theory is free from some of the most troublesome difficulties attendant upon the view of Darwin, that new species arise from natural selection and an accumulation of continuous variations. Moreover, de Vries has been able to furnish direct evidence, for he has observed actual instances of sudden origin of new species by mutation of the discontinuous kind. It has been objected that these instances, while they establish the fact that species do at times thus originate, are altogether too few to warrant such a generalization as is represented by the mutations theory. It has been answered that, as the origin of new species is not an every-day event, the instances observed must necessarily be somewhat limited in number, and that further observation will probably afford additional evidence, now that investigators are looking in the right direction. Furthermore, it is urged that, if the

[1] *Species and Varieties, Their Origin by Mutation* (ed. by MacDougal, 1905), p. 6. On the mutations theory, see R. H. Lock, *op. cit.*, ch. v; V. L. Kellogg, *op. cit.*, ch. xi. The facts upon which the theory is chiefly based are given below, pp. 87–88.

number of instances of mutation which have been observed is small, no indisputable instances whatever have been perceived of the origin of new species by the selection of accumulating continuous variations. The evidence by which Darwin's theory is thought to be established is wholly indirect — being either conjectural or, at least, circumstantial. The battle has not been entirely fought through, and it is too early at present to come to final conclusions as to the outcome. But the new theory has brought the difficulties which attend neo-Darwinism into bold relief, and we are not likely to see any permanent return to pure Darwinism.

I have ignored other theories of species forming, of which several have appeared during the past two or three decades,[1] because none of them have seemed to gain the attention of scientists that has been paid to Weismannism and the mutations theory. But I ought not to omit mention of the fact that there is an increasing realization among scientists of the part played in evolution by what are called "unknown factors." The problem as to the causes of variation, and as to the laws which determine their direction and limits, has become more and more pressing. The fact that natural selection does not positively cause variation, but merely eliminates unsuitable results thereof, is now well established. Many scientists have escaped the hampering influence of naturalism, and perceive

[1] A general account of them, with numerous references, is given by V. L. Kellogg, *op. cit.*, chh. viii–x.

that the unknown factors which cause and limit the variations of organic life transcend mechanical explanation, and operate in a manner that suggests intelligent direction.[1] Others reject such views as unscientific,[2] by which they mean that teleology cannot be described in mechanical terms. That is, they forget the limitations of the mechanical method of interpretation, and refuse to be influenced in their views by evidence of the presence in nature of superphysical causation. Such an attitude is not really scientific, but is the result of mistaking a section of the model of nature for the whole model, and of the one-sided and defective philosophy called naturalism.

I believe that the scientific outlook is most encouraging to those who believe in the unity of all things, in the reality of the superphysical and supernatural, and in the possibility of acquiring such knowledge of the universe as will forever vindicate our assurance that a beneficent divine ordering and purpose explains and controls natural evolution.

I hope in these lectures to show also that neither the evolutionary theory in general nor any explanation of evolution that can rightly be called scientific militates against the truth of genuinely catholic doctrine, — in particular against the doctrine of man's primitive state and fall. But before undertaking this task it is desirable to exhibit the evidence which has been advanced

[1] For example, Nägeli, Korschinsky, and R. Otto.

[2] V. L. Kellogg rejects them, *op. cit.*, p. 278, as do all believers in naturalism.

in support of the general theory of a natural evolution of species, and to consider whether, and how far, that theory explains man's origin and distinctive mental and moral characteristics. To do so will be the aim of my next lecture.

# LECTURE III

## EVIDENCES AND LIMITATIONS

THE purpose of this lecture is to exhibit within brief compass the evidences which are thought to support the theory of a natural evolution of species, and to consider whether, and to what extent, we can rightly regard the human species as a product of such evolution. At the outset permit me to remind you again of the distinction between the general theory that existing species have somehow been naturally developed from earlier and simpler ones and the various explanations of this development which Darwin and others have advanced. One may become convinced of the futility of any one, or of all, of these explanations, and yet regard the evidence for natural evolution as conclusive. It is this evidence for natural evolution that I now ask you to consider.

In estimating the evidence of a scientific hypothesis we ought not to expect mathematical demonstration. From the nature of things no demonstrative evidence can be had, and its absence will not deter an intelligent thinker from accepting a scientific hypothesis which appears to be the best available explanation of the observed facts, and works well. He may indeed accept it provisionally only, while waiting for the results of

wider investigation; but to accept the best available working hypothesis because of its present working value is a truly scientific procedure, and upon such acceptance depends to a large degree the possibility of scientific progress.[1]

The method by which a scientific hypothesis is arrived at and established is inductive. That is, facts are industriously collected and co-ordinated in their apparent relations, and speculative imagination is exercised to devise a theory which will fit in with and, to some extent at least, explain the facts that have been accumulated. The process involves an element of conjecture and guesswork, followed, to borrow a figure from the tailor's work, by trying the new garment on to nature's model in order to discover how it fits. If it fits well, it is accepted; if imperfectly, it is modified; if not at all, it is rejected and another theory is devised. We must accept this method, and be controlled in our views of nature by its results, or else abandon hope of acquiring a scientific knowledge of nature.

## I

The evolutionary hypothesis has been arrived at by induction. A very great mass of biological data has been gradually accumulated by the labours of successive generations of scientific investigators; and the thought that the origin of species can best be explained in its physical aspects by the supposition that existing

[1] Cf. pp. 33–34, above.

species of life have originated by natural evolution from one or more primitive types has come to be accepted by the scientific world as best agreeing with and explaining the known facts of biology and of related spheres of investigation. The evidence by which the evolutionary hypothesis is supported consists, therefore, of innumerable facts, which, when considered together, suggest such a theory, and do not appear to be susceptible of any other physical explanation that is so satisfactory and so free from difficulties. These facts are gathered from a wide variety of sources, but especially from results of investigations in morphology, embryology, the geological succession of organisms, their geographical distribution, and the observed production of new varieties and species by artificial selection and by natural mutation.[1]

1. The universal occurrence in the organic world of variation, and of the perpetuation of its results by inheritance, has led scientific observers to abandon belief in the fixity of species, and to look for some other explanation of their origin than the ancient belief in a separate creation of each by divine fiat. Moreover, so far as we can imagine, there are but two alternatives to this view — their spontaneous but separate origin, one by one, out of lifeless matter, and their natural evolution by means of variation and inheritance. Of

[1] The evidences of natural evolution are given in most all the works mentioned on p. 37, note 2, above. But note especially A. R. Wallace, *Darwinism;* Chas. Darwin, *Origin of Species*, ch. xv; A. Weismann, *Evolution Theory*, Lecs. ii, iii; Thos. Huxley, *Darwiniana*, pp. 205–225; M. M. Metcalf, *Organic Evolution*, pp. 87–163.

spontaneous generation there is no trace in nature; and carefully conducted experiments have compelled scientists to reject that theory,—commonly called abiogenesis.[1] The theory of natural evolution is the only remaining alternative that has thus far been discovered; and if it agrees with the facts, it ought to be accepted until a better explanation is forthcoming. It should be remembered that our acceptance of it neither militates against belief in creation by the will of God nor commits us to a mechanical explanation of the origin of life, mind, and moral sense. The theory of evolution merely describes the physical history of organic life, and in its scientific form does not profess to account for what is superphysical.

2. From the facts of variation and heredity we turn to the similarity of structure and organic functioning which is found to characterize the species in each general group of species in the organic world. These groups are not numerous, and if there has been a natural evolution of species this fact seems to indicate that such evolution originated in a very few primitive types, each corresponding to one of the larger groups of

[1] See F. R. Tennant, in *Expository Times*, May, 1908, pp. 352–355, for an account of attempts to prove abiogenesis. Also O. Lodge, *Life and Matter*, esp. ch. x; the author's *Being and Attributes of God*, pp. 267, 268, where other references are given. If abiogenesis were proved, this would not disprove a divine creation of life, but would show a different method of the creation than the existing state of evidence establishes. A. Weismann, *Evolution Theory*, Lec. xxxvi, urges that abiogenesis cannot be disproved because, if it does occur, the minuteness of its results makes them lie beyond observation by the most powerful microscope.

existing species. This similarity of structure appears the more remarkable the more closely morphological study of organisms is conducted. To use an obvious illustration given by R. H. Lock, it is found that "in the hand of a man, the paw of a dog, the wing of a bat, and the paddle of a whale, almost identically the same series of bones can be traced." The uses to which these several members are put differ widely, but, as Lock adds, "An obvious explanation is to be found in the supposition that these parts have arisen by a divergent modification of parts which were originally identical." [1] Throughout each group of species certain corresponding organs have been discovered which appear to be built in accordance with one general plan. Nor is this all. Amid much divergence of organic functioning the general laws of assimilation of food, of propagation, and even of disease, are essentially the same; as is illustrated by the success with which experiments upon lower animals are employed as the basis of medical and surgical treatment of human disorders.

3. A third group of facts which suggests and confirms the evolutionary theory is found in the gradation of organisms which appears within the several chief groups of species. In each case a hierarchy of organic forms appears, stretching all the way from seemingly undifferentiated organisms up to the most highly organized species. It is a reasonable inference from this that the higher forms are most recent in origin, and have been produced by a progressive differentiation of earlier and

[1] *Recent Progress*, p. 31.

simpler organisms. This supposition is confirmed by the evidence bearing upon the comparative antiquity of species which has been obtained by other lines of investigation.

4. Another argument for the natural evolution of species is derived from embryology, or the study of immature and unborn offspring. A remarkable similarity is found in their manner of development in different species of the same general group. The similarity is most complete in the earliest stages, so complete indeed that, prior to a certain stage of development, the embryos of the different species are indistinguishable from each other. It is also noticed that the higher organisms to an observable extent recapitulate in their embryonic growth the phases of development of their several species which the evolutionary theory hypothecates. These phenomena are most readily interpreted and accounted for from the evolutionary standpoint. The parallelism between the growth of individual organisms and the development of species is not indeed complete, but this is easily accounted for by the supposition that the variations which result in the divergence of species may to some extent modify the embryonic stage of growth. The more or less defective but recognizable résumé of earlier natural history which is still discoverable seems to declare an ancient pedigree, and a common ancestry for the species which are thus shown to be mutually related.

5. Somewhat connected with this argument is the inference made from the presence of rudimentary and

useless organs in members of higher species. The vermiform appendix of our own bodies affords a critical instance, one that obtrudes itself upon our attention with painful insistence in the disease known as appendicitis. This and other organs of the same apparently useless nature bear the appearance of being survivals of a previous stage of evolution, for they are found in lower species and there discharge useful functions. Mr. A. R. Wallace gives interesting examples.[1] He says, "All the higher animals present rudiments of organs which, though useless to them, are useful in some allied group, and are believed to have descended from a common ancester in which they were useful." [2] Some of these rudiments appear only in exceptional individuals. Thus certain persons carry a projecting point on the outer fold of the ear, corresponding faintly to the pointed ear of numerous species of lower animals — an earmark of ancestry.

6. We come next to the teaching of geology and paleontology as to the comparative antiquity of species, and as to the time-order of their origin. This teaching is derived from the distribution of ancient fossils, found in various strata of the earth's crust, the relative antiquity of which has been estimated by the methods of geological science. This testimony of the rocks is, of course, far from complete. Many organisms are too soft and jelly-like to be preserved in this manner, unless petrified — a comparatively rare event. Then in order that an organism should be preserved after

[1] *Darwinism*, ch. xv. [2] Page 448.

its life is extinct, it should be buried in time and in a manner to escape entire distintegration either by the action of the atmosphere or by other destructive causes. Only a small fraction of the organisms of by-gone ages can have left their traces in the deposits that have since accumulated. Finally, only a very limited portion of the earth's crust has been sufficiently examined to lay bare the secrets which it contains.[1]

Yet, in spite of these limitations, the science of paleontology, which is concerned with the study of fossil remains whether animal or vegetable, has thrown much light upon the past history of organic life on this planet. The time measures which here have to be employed are purely geological, and cannot be translated accurately into such terms as years and centuries. But the strata of the earth's crust have been distributed with approximate accuracy into a series of successive periods; and paleontologists by means of this distribution have been enabled to ascertain the relative antiquity of a large number of existing species as well as of species now extinct, the fossil remains of which have been discovered in various geological strata. The results have been in accord with the requirements of the evolutionary theory. The lower and simpler species are most ancient, and in certain instances long series of ancestral forms have been discovered which seem to indicate the evolution of living species, through many intervening stages, from remote and widely different forms of life.

[1] Darwin discusses this incompleteness in *op. cit.*, ch. x.

7. The argument from the distribution of organisms in time is corroborated by their distribution in space — their geographical distribution. If the evolutionary theory is true, we may expect to find that closely related species are frequently located near each other; and that when they are widely separated — for example, by seas or oceans — facts are available which point to the possibility and even the likelihood of their early migration from a common centre. We may also expect to find that when the fauna and flora of two territories have always been effectually isolated from each other, whether by insurmountable mountain ranges or by geologically permanent bodies of water, their species differ widely. The facts agree with this expectation to a marked degree. It is true that apparent exceptions exist. Closely allied species are found on opposite sides of the globe; and the fauna and flora of certain islands — for example, Madagascar and New Zealand — differ widely from those of neighbouring continents and islands. But these anomalies can usually be accounted for by geological investigation. North America and the continent of Europe were in former ages connected by land. The comparative similarity which has been discovered between the species of Great Britain and Japan is accounted for by the absence of any permanent barriers between them, whether of climate or of geological nature. On the other hand the depth of water which now separates Madagascar and New Zealand from the nearest land seems to prove that the present isolation of their fauna

and flora has existed without break from the earliest geological period. Some apparent anomalies remain to be explained, but the facts in general of geographical distribution point to a common origin of species of the same order, and no other explanation appears to be available.[1]

The evidence which I have thus far summarized is circumstantial and indirect; although its quantity and diversity is very great, and it is regarded by those who are most competent to estimate its value as very convincing. The question remains to be faced, is there any direct evidence? Has anyone ever observed the origin of species by means of variation and descent from older species? If so, have the instances observed been of sufficient number and diversity to justify such an extensive generalization as the evolutionary hypothesis? That direct evidence ought to be demanded for such an important theory as this, if the nature of the facts and processes involved permits their discovery, is not to be denied. But if, from the nature of things, little or no direct evidence can be expected to be forthcoming, whether favourable or unfavourable to the doctrine of evolution, and if the available indirect evidence seems to be abundant and convincing, we ought to be determined in our views by such evidence. This is especially the case when such an attitude of mind is entirely consistent with loyalty to revealed truth and to the fundamental principles of supernatural religion.

[1] A. R. Wallace treats clearly and adequately of this subject, in *Darwinism*, ch. xii. See also Darwin, *op. cit.*, chh. xii, xiii.

Now the natural development of species is either a long-drawn-out process or a comparatively rare event, whatever may be the true description of the method of evolution. If the Darwinian description is correct, the development of one independent species from another must consume a much longer period of time than has elapsed since men have begun to investigate the process. If, on the other hand, the mutations theory of de Vries is to be accepted, the origin of a new species, sudden though it be, must occur at rare intervals — too rare for the observance of many instances within the brief time that has gone by since men have taken intelligent notice of biological phenomena. The conclusion to which we are driven is that we ought not to expect to obtain much or conclusive direct evidence of the natural evolution of species. This being the case, we ought not to permit the comparative inadequacy of such evidence to blind our minds to the large amount and convincing quality of the indirect evidence which I have been briefly explaining. With such preliminary cautions in mind, I now ask you to consider what direct evidence has in fact been obtained. Such as it is, this evidence is favourable to the evolutionary hypothesis. No direct evidence has been advanced to the contrary — at least none which appears to be incapable of being answered and explained on evolutionary grounds.

8. The alleged direct evidences are those of domestication or artificial selection and of the natural mutations which have been investigated by de Vries and others. The facts observed in domestication and

artificial breeding appear to be numerous and significant.[1] But their number and value is much reduced by the doubts which are felt as to the independence and permanence of the species which are said to be originated by such means. Moreover it has to be remembered that many of the mutations which are attributed to domestication have been too ancient to come within scientific observation. They cannot, therefore, be employed as direct evidence. The only instances, if any, that can thus be used, are the varieties which modern breeders have produced by careful selection and cross-breeding. Whether any of these varieties constitute independent species is still a debatable question; and the fact that artificially produced varieties show a tendency to revert to type when abandoned to the conditions of pure nature has to be faced. These limitations, however, do not deprive the phenomena of artificial selection of value as indirect evidence of natural evolution. If it is not possible to assert without fear of contradiction that the breeder can produce new species, it is at least certain that his new varieties appear like species in the making — varieties which will become fixed, independent, and permanent species when their culture has been continued long enough. The forces and laws which account for the possibilities of domestic culture are, of course, natural ones, for men cannot change such forces and laws, but can only manipulate them and facilitate their working. If, therefore, the breeder seems to be

[1] On this subject, see Darwin, *op. cit.*, chh. i, ii.

producing new species by a manipulation of nature, it seems reasonable to believe that such results will occur when nature is left to itself, provided sufficient time is given.

9. The most unmistakable direct evidence of natural evolution comes from observed instances of natural mutation — from the facts, that is, which have been employed in support of the mutations theory of the origin of species by discontinuous variation. Whatever may be their value as evidences of this explanation of species forming, they certainly constitute actual instances of the origin of species by natural evolution. These instances are indeed few, and Hugo de Vries' explanation of this is that species are not in a mutable state except for brief periods, recurring at rare intervals. In order, therefore, to bring mutations under scientific observation, species must be found that have reached a mutable stage. Some years since de Vries discovered that certain plants of the evening primrose, *Oenothera lamarckiana*, growing in Holland, were throwing off new varieties. Taking these plants under careful observation he found that some of them gave birth to new species which remained constant and bred true without the assistance of artificial selection or cross-breeding. His observations were verified by T. H. Morgan, and by Professor MacDougal, and have had considerable influence upon scientific opinion. De Vries maintains that the permanent new breeds which are supposed to be produced by artificial selection really owe their origin to natural mutation or

discontinuous variation, taken advantage of by breeders. If he is right, the phenomena of artificial selection afford no support to Darwin's belief that natural selection is the chief factor in species forming; but they do appear to furnish direct evidence of natural evolution.[1] Whether he is right or not remains for further investigation finally to determine; but in any case the fact that new species have been actually observed to originate by natural evolution is clear. No doubt the instances observed are too narrow in range to afford a basis for conclusive generalization, but they are in line with the evolutionary hypothesis, and are not offset by contrary evidence.

My summary of the evidence by which the theory of natural evolution is supported has necessarily been brief and inadequate. But I trust that it will enable those among you who have not previously studied the subject to perceive that the evolutionary hypothesis, considered as a description of the physical aspects of species forming, holds the field. That theory is in harmony with the facts which have hitherto been observed, and works well as a means of interpreting phenomena which are otherwise unintelligible. It has no rival in scientific thought. It ought, therefore, to be accepted as the best physical description of the origin of species that is now available.[2]

[1] On the observations of de Vries and Morgan, see T. H. Morgan, *Evolution and Adaptation;* V. L. Kellogg, *Darwinism To-day*, pp. 341–348 (cf. pp. 362–373); R. H. Lock, *Recent Progress*, pp. 128–147. Cf. pp. 69–72, above.

[2] This does not mean a dogmatic assertion that natural evolution

## II

It does not follow that, because the theory of natural evolution is to be accepted, it is therefore to be regarded as capable of accounting for all the characteristics of organic life. The theory has certain very definite limitations, and I wish to draw your attention to them.

I have called the evolutionary theory a "physical description." It describes rather than accounts for the process of species forming, and is concerned with its physical aspects, its evidence being drawn from physical phenomena. Such evidence affords absolutely no warrant for the inference that the evolutionary theory explains the origin of anything superphysical. If, therefore, a species is found to possess superphysical characteristics, the development of that species can be but partially explained by a physical evolution theory.

Those who accept the naturalistic philosophy will of course reject my argument, because they assume that all knowable realities are capable of being interpreted in physical and mechanical terms. Naturalism, however, is not science, but an indefensible outcome of one-sided speculation. Many leading natural scientists recognize this, and realize that certain phenomena of organic life are not susceptible of exclusively mechanical explanation, but require superphysical

is the final word of science. The possibility remains that wider knowledge may hereafter require a modification, or even an abandonment, of the theory in question. But natural evolution is the existing scientific doctrine, and as such we have to reckon with it.

causation fully to account for them. Accordingly they acknowledge that physical evolution does not entirely explain the origin of species, but merely describes their physical antecedents and the physical conditions of their origin. That unknown factors have part in species forming is confessed, and the possibility that these factors are partly at least superphysical may be, and has been, conceded without doing violence to physical science.

It is not a postulate of physical science that such science should be able to solve all problems raised by scientific experience. Its theories are limited in application, and leave many questions unanswered. Thus the evolutionary theory postulates the existence of life, and therefore cannot rightly be understood to be concerned with the problem of its origin. That theory simply describes the development of the physical organisms in which life is found. This development is attended by the appearance of certain specific characters which purely physical antecedents and conditions do not and cannot explain:—such, for instance as instinct, reason, and moral sense. The inference to be drawn from this is that these characters are not wholly accounted for by natural evolution, but require for their development what is called involution — that is, the coming in of higher factors than can be regarded as belonging to the purely physical order.

No possible mechanical adjustment or rearrangement of physical conditions can of itself produce a superphysical effect. Such an effect requires super-

physical causation. To convert a given nature into a higher nature, where the difference is one of kind and not of mere degree, or linear variation as it is called, is, from the point of view of the lower nature, a supernatural operation, requiring a supernatural cause. An ape cannot by its own power evolve into a human being, nor can this limitation be overcome by lengthening the process through a succession of generations. To think so is as illogical as to suppose that a man can lift himself by his bootstraps if he will only do it gradually. The reply may be made that the evolutionary hypothesis does not teach that a species elevates itself in isolation, or independently of the forces and laws at work in nature at large. Such an answer merely shifts the battle-ground without changing the issue, for the principle I have been stating applies to a universe as well as to a species. It is impossible for nature as a whole, originally containing no mind, no personalities, and no purposive elements, to produce these things and operate teleologically, without a causation being involved which is distinctly supernatural to the original cosmos: — as impossible as it is for a non-rational species acting by itself to become rational. Nothing can be evolved which has not previously been involved. Mere nature cannot produce except "after its kind." Mechanical variation may develop things after their kind, but this constitutes the necessary limit of a purely natural evolution.[1]

[1] Such variation is called "linear." Thus the brain may become more complicated in its convolutions, and may increase in size; but

No doubt the Power whose activity alone accounts for the appearance of life, reason, and moral purpose in a world previously lifeless, non-rational, and non-moral, operates after the manner of an immanent Cause. But to confuse such a Cause with the nature in which it operates is pantheistic; and pantheism is not science, but a speculative philosophy which is in conflict with some of the most vital elements of human experience.[1] The immanent Cause of evolving life transcends the natures which are made to rise in the scale of being for the obvious reason that every cause must be adequate to its effects, and the effects in question transcend their physical antecedents.

In thus insisting upon the limitations of the evolutionary hypothesis, considered as an explanation of the origin of life, instinct, reason, and moral sense, I might rest the case upon the obvious principles of common sense to which I have made reference, and pass on. But it seems to be worth while to mention some recent developments in scientific opinion that make for the acceptance of the position which I have been defining.

mere brain cannot evolve into mind, which requires an intelligent source and cause. Weismann, a champion of mechanical interpretation of all things, says, *Evolution Theory*, Vol. II, p. 392, "How the activity of certain brain-elements can give rise to a thought which cannot be compared with anything material, which is nevertheless able to react upon the material parts of our body, and, as Will, to give rise to movement — that we attempt in vain to understand." Cf. the author's *Being and Attributes of God*, pp. 172–174; W. C. D. Whetham, *Recent Development of Phys. Science*, pp. 16–20; V. F. Storr, *Development*, pp. 168–186; Aubrey Moore, *Science and the Faith*, p. 38.

[1] Cf. pp. 16–21, above.

I have already referred to the fact that the operation of what are called "unknown factors in evolution" is increasingly realized by biological investigators. Thus V. L. Kellogg, whose antipathy to any teleological interpretation of evolution is openly expressed, says, "Let no ambitious student hesitate to take up the search for truth about evolution from the notion that biology is a read book. The 'Origin of Species' was the first opening of the book — that the world recognized at least; poor Lamarck opened the book but could not make the world read in it — and that time when it shall be closed because read through is too far away even to speculate about. With Osborn let us join the believers in the 'unknown factors in evolution.'" [1] A few pages further on in the same chapter, he states that "by no means all biologists find in natural selection a sufficient explanation of adaptation"; [2] and makes this acknowledgment in spite of his own predilection for that explanation.

These unknown factors are apparently to be identified with directive forces working either within the developing organisms, or in nature at large, or in both. It is because they lie beyond direct observation that their nature escapes scientific description, and no particular attempt to describe them has gained general acceptance. Such attempts are represented in several orthogenetic theories, thus called because they assume

[1] *Darwinism To-day*, p. 377 (cf. note 4, pp. 390, 391, where a significant quotation from H. F. Osborn is given).

[2] Page 380.

that organic variations are not wholly indefinite or uncontrolled, but subject to organic law which makes for determinate lines of progress.[1] The supporters of orthogenesis limit the range of natural selection, and emphasize its purely eliminative function, excluding it from part in positive species-forming. Several of these writers consider orthogenesis to be definitely teleological and to be directed toward an ideal goal.

Ernst Haeckel, whose materialistic monism was discussed in my second lecture, discovers the unknown factors of evolution in primitive matter.[2] Sir Oliver Lodge, in his valuable book entitled *Life and Matter*, says, "Thus, then, in order to explain life and mind and consciousness by means of matter, all that is done is to assume that matter possesses these unexplained attributes." [3] The higher world of thought has abandoned materialism, and a long array of scientific writers might be quoted in behalf of belief in the dualism of matter and mind. As Sir Oliver Lodge again says, speaking of Darwin's work, "It is familiar that he explained how variations once arisen would be clinched, if favourable in the struggle, by the action of heredity and survival; but the source or origin of the variations themselves he did not explain." [4]

I do not think that we need to feel ashamed, or to reckon ourselves to be belated in our ideas, if we conclude that the theistic position affords the best stand-

[1] Kellogg describes some of them, *op. cit.*, pp. 274–290, 319–326.

[2] See pp. 40–41, above.

[3] Page 42.

[4] Page 46.

point from which to regard the unknown factors in evolution. The late Thomas Huxley's words will not frighten us when he says, "A phænomenon is explained when it is shown to be a case of some general law of Nature; but the supernatural interposition of the Creator can, by the nature of the case, exemplify no law, and if species have really arisen in this way, it is absurd to attempt to discuss their origin." [1] Our reply is simple. Belief in supernatural causation does not in the least interfere with belief that the fact of such causation reveals itself in the working of uninterrupted natural law. Such causation need not subvert natural law, but may account for effects which natural law is employed to bring about, but which none the less transcend the powers of nature alone to achieve. The task of physical science is to describe the physical laws which the Creator employs; and the importance and profitableness of this task is in nowise reduced by the discovery that facts and problems emerge which purely physical theories do not account for or explain.[2]

## III

It is in the light of the necessary limitations of a purely physical explanation of the developments of organic life that we ought to consider its applicability to the human species. I believe that the evidence by which the evolutionary theory is supported, in so far as

[1] *Darwiniana*, p. 57.

[2] On the theistic aspects of natural evolution, see pp. 112–116, below.

it establishes that theory, also justifies the conclusion that man's physical organism is related by unbroken descent to lower and more primitive organisms.[1] But much scientific opinion will bear me out in the further conviction that the human species possesses characters which physical evolution alone cannot explain. Human nature being what we observe it to be, superphysical factors are required to account for man's origin; and the evolutionary theory does not fully determine what we ought to believe as to his primitive state, and as to the beginnings of human sinfulness. What I am saying constitutes a vital part of the general argument of these lectures. Natural evolution, in the present state of scientific knowledge, must be confessed to be a real factor in bringing about man's past and present moral state; but it cannot be regarded as the sole cause of our sinful inclinations, without disregarding the superphysical aspects of human nature and man's origin, and without failing to do justice to the testimony of conscience as to the reality and fulness of our responsibility for sin. In saying this I am anticipating a stage in my argument which I intend to develop more fully in subsequent lectures.

[1] On the evolution of man, see Chas. Darwin, *Descent of Man;* Thos. Huxley, *Man's Place in Nature;* A. R. Wallace, *Darwinism,* ch. xv; H. Calderwood, *Evolution and Man's Place in Nature.* What can be said against any evolutionary origin of man can be found in John Thein's *Christian Anthropology.* A less radical position is taken by Jas. Orr, *God's Image,* pp. 121–136. A sane discussion of the subject is given by Aubrey Moore, *Science and the Faith,* pp. 200 *et seq.*

Darwin and many of his supporters, Herbert Spencer and his followers, and materialists like Haeckel, have with more or less absoluteness adopted the view that man's mental and moral characteristics are to be accounted for by natural evolution. They have not been able to secure the acceptance of this view as an established scientific doctrine. In Darwin's own argument indications appear that he is conscious of unsolved difficulties, and that he did not face the materialistic implications of his somewhat tentative position. His pioneer co-worker and admirer, A. R. Wallace, definitely rejects his conclusion in this particular, and other convinced evolutionists of high scientific repute do the same. Among the more thorough arguments in behalf of the conclusion that man's mental and moral characteristics cannot be explained by physical evolution are those of Mr. Wallace, in the last chapter of his work on *Darwinism*,[1] and of Henry Calderwood, in his volume entitled, *Evolution and Man's Place in Nature.*

The rest of this lecture will be devoted to a brief summary of the chief reasons which these and other writers have advanced for the position which I have taken, that something more than mere animal heredity and natural evolution is required to explain man's origin and nature. These reasons are to a large extent specific branches and applications of the general argument which I have been presenting, that superphysical products and effects cannot be accounted for by

[1] Ch. xv, 3d ed. corrected, 1905.

purely physical antecedents and causes, but require the coming in of superphysical factors and of supernatural causation. If man belongs to the superphysical as well as to the physical order, his physical evolution must have been attended by superphysical involution. He must have owed his distinctive and higher attributes to other sources than his animal ancestry.

That human nature is partly superphysical is a necessary premise of the whole argument. It is a premise that none but materialists can consistently repudiate. Even an agnostic naturalist like the late Professor Huxley, in the midst of an assertion of his belief that physical and mental phenomena are capable of being expressed by each other, honestly says, "I really know nothing whatever, and never hope to know anything, of the steps by which the passage from molecular movement to states of consciousness is effected." [1] His conviction that such a passage actually occurs by means of purely physical processes is therefore nothing more than a purely conjectural inference from the correlation of brain action and mental phenomena, expressed in the form of dogmatic assertion. This correlation is a mysterious result of the union of body and soul in man. It in no sense constitutes proof that these two are the same, or of the same order of being; nor does it require us to infer that psychical functions are functions of man's physical organism, and results of its natural evolution.[2]

[1] *Darwiniana*, p. 162.

[2] See O. Lodge, *Life and Matter*, pp. 93–101; J. Orr, *Christian*

Probably the reluctance of certain scientists to acknowledge the possibility of supernatural factors in man's evolution is chiefly due to the assumption that the operation of such factors would constitute a breach in the continuity of natural causation. But this assumption is absolutely unwarranted. The working of various factors to produce a common result does not stultify or interrupt the working of any of the several causes which are thus combined. If it did, the law of gravitation, to give an illustration, would be nullified every time one lifted a heavy body from the ground. Gravitation alone could not do the lifting, but the fact that one has to lift at all proves the unbroken continuity of the law of gravitation. The physical laws which are involved in natural evolution do not cease to operate because other and higher laws co-operate. "Order is heaven's first law," and all possible factors, whether physical or superphysical, operate and co-operate in "a wonderful order," wherein no breach of continuity is possible, but evolution and involution are made to fulfil the one plan of the immanent and transcendent Creator. The continuity of the physical can be understood only in the continuity and progress of the larger and higher drama to which it is made to afford a stage and sensible factors. And if the scenery is changed from time to time by invisible hands, this is not to stultify the scenery, but is to employ it for the signifi-

*View of God*, pp. 146–150; *Cath. Encyc.*, *s. v.* "Energy, the Law of the Conservation of"; H. Calderwood, *Evolution*, ch. x. Cf. the author's *Being and Attributes of God*, p. 173, note 3, for further references.

cant and orderly purposes for which it was made. The fact that the scenery of the world-drama is partly organic shows the vital immanence of its Maker and transcendent Stage-manager. It does not displace Him, but makes more apparent His resourcefulness and omnipresent power.[1]

I must proceed to mention some of the more specific indications that physical evolution alone cannot explain the origin of the human species. Mr. Wallace, writing from the Darwinian standpoint, dwells upon two of them.

1. He shows in the first place that man possesses certain faculties — he mentions the mathematical, musical, and artistic faculties — which are not found in the lower species, but which appear to have no utility whatever for natural selection and survival of the fittest. As he says, the essential features of Darwin's theory are, "the preservation of useful variations in the struggle for life; that no creature can be improved beyond its necessities for the time being; that the law acts by life and death, and by the survival of the fittest." But these faculties constitute variations in the human species which are neither needful nor useful for the struggle for life, and cannot, therefore, have owed their development to natural selection.[2]

2. His second argument is this. In its working the law of natural selection requires that the specific char-

[1] The principle of continuity in relation to supernatural factors in the world-drama is discussed at length in Lec. v. Pts. II, III, below.

[2] *Darwinism*, pp. 264–269.

acters which it causes to survive in the struggle for existence shall be maintained at a fairly general level of efficiency. This is so because excessive variation from the common standard must result either in deficiency or in disturbance of organic balance; and either of these results will cause non-survival in the struggle. This law holds good in the lower species, the vigorous members of which do not vary in their characters more than one-sixth to one-fifth from a common standard. But the case is quite otherwise with human beings. Men are found to vary to an astonishing degree, both in the positive and in the negative direction, in their possession of the higher faculties; and this excessive variation usually has no visible effect upon the persistent vitality of either the individual members of the species or of the species as a whole. These higher faculties, therefore, seem to be independent of the law of natural selection in their origin and development.[1] The force of these two arguments depends to some extent, of course, upon the Darwinian supposition that in natural evolution species are chiefly formed by natural selection. The arguments which I am about to mention are valid in relation to any purely physical theory of evolution.

In passing, however, permit me to state Mr. Wallace's general conclusion. He discovers three stages in evolution, at which variations occur that are too great and too sudden to be accounted for by the accumulation of slight and continuous variations and the working of

[1] *Op. cit.*, pp. 269–272.

natural selection upon them. These stages are the transitions respectively from the inorganic to the organic, from the non-intelligent to the sensitive and conscious, and from unreflective animal intelligence to the self-conscious, abstract, moral, and religious reason and aspirations of mankind.[1] Enlarging his conclusion, we maintain that the origin of life, of animal intelligence and instinct, and of man's distinctive mental, moral, and religious faculties, constitute superphysical changes which no theory of purely physical evolution can account for or explain.

3. In particular, the differences between human and brute intelligence are differences in kind, and constitute a gap which, from the nature of things, cannot be crossed by purely natural evolution. There is no need to dwell at length upon this. A bare list of the chief differences observable is sufficient to convince those who are not hopelessly entangled in the mire of naturalism. Animals possess perceptive and concrete reason, sometimes to a high degree — especially under domestication. But man alone is able to generalize, to engage in abstract thought, to acquire opinions, to express his thoughts, opinions, and knowledge in conceptual terms, and to hand on the results of mental progress to posterity. Many animals possess consciousness; but man alone reflects, and attains to self-consciousness.[2]

[1] *Op. cit.*, pp. 474–476.

[2] H. Calderwood, *Evolution*, chh. vii, viii. Thos. Huxley denied that the differenee between human and brute intelligence is one of kind, *Darwiniana*, pp. 152–179. John Fiske acknowledges that the psychological divergence of man from brute requires us to

If contrary to all principles of likelihood, and for the purpose of argument, we concede that these differences might result from the concurrence and accumulation of natural variations, we merely push the difficulty further back. The question remains, How did intelligence of any kind originate? A question which we shall soon consider. The differences between man and brute which I have mentioned gain deeper significance when it is noted that man alone possesses a moral sense, capable of distinguishing between right and wrong. He alone deliberates, and arrives at moral purposes, which he fulfils by a voluntary direction and control of propensities that are left unrestrained in the lower species. No brute possesses real moral character.[1] There is also the rationally controlled imagination; the æsthetic sense; the sense of humour; and, highest of all, the religious instinct, accompanied by capacity to enter into communion with the unseen, by apprehension of the Infinite and the Eternal, and by belief in spiritual immortality.[2] All these are new effects for which previous developments afford no precedents. Obviously they require a new cause, an involution from above.

4. Another particular in our argument brings us back to the question which was raised a moment ago,

"dichotomise the universe, putting man on one side and all things else on the other." *Through Nature to God*, p. 82.

[1] H. Calderwood, *op. cit.*, ch. xii; O. Lodge, *Life and Matter*, pp. 103 *et seq.* Haeckel, in *Riddle of the Universe*, pp. 128–131, tries to explain will on materialistic lines.

[2] John Fiske brings out the significance of the religious instinct in the concluding chapters of *Through Nature to God.*

How did intelligence of any kind originate? The particular referred to is the impossibility of describing mental phenomena in physical or mechanical terms. If we concede that human intelligence is but a natural evolution of animal sense, we are as far as ever from accounting for the origin of intelligence by physical evolution. If animal sense is nothing more than a selected variation of the physical, it should be describable in physical terms, which it certainly is not. The wave motion of ether could never produce the sensation of light upon a blind spot, and blind matter is not made sensitive to light or perceptive by mere mechanics. Molecular action is one thing, sensation is another, and the two differ in kind. No identical proposition can be constructed in which the subject is sensation and the predicate mere matter and motion, or *vice versa*, for the two terms cannot be thought of as equivalent in meaning. And if this is true of sensation at its lowest stage, it is *a fortiori* and emphatically true of reflective reason, of moral intuition, and of religious aspiration. As I have already stated, the late Professor Huxley was convinced that "consciousness and molecular action are capable of being expressed by one another." But he frankly said, "Whether we shall ever be able to express consciousness in foot-pounds, or not, is more than I will venture to say." [1] A possibility which he sees no prospect of being realized need not worry us. In his later years he came to realize the utter unlike-

[1] *Darwiniana*, p. 163. On this whole argument, see H. Calderwood, *Evolution*, ch. xi.

ness of the physical and the ethical, and asserted that "social progress means a checking of the cosmic process at every step, and the substitution for it [note the word substitution] of another, which may be called the ethical process." [1] Obviously, that which is substituted for the cosmic process of physical evolution cannot be regarded as its product.

5. The dualism of mind and of the physical organism which conditions its external manifestation, and therefore the impossibility of regarding mind as the product of a merely physical process, are also shown by applying the law of the conservation of energy to the physical action of the human organism. This law is defined by Clerk Maxwell as follows: "The total energy of any body or system of bodies is a quantity which can neither be increased nor diminished by any mutual action of these bodies, though it may be transformed into any of the forms of which energy is susceptible." [2] Now when this law is applied to the human organism, it is discovered that that organism constitutes a closed circle, a complete system of acting and reacting energies, without reckoning at all with either the mystery of life or man's mental and spiritual activity. These lie outside the system of mechanical forces of the body. As Sir Oliver Lodge shows,[3] life, mind, and will, while

[1] *Evolution and Ethics*, p. 33.

[2] *Theory of Heat*, p. 93, as quoted by Michael Maher, in *Cath. Ency.*, *s. v.* "Energy, the Law of the Conservation of" — an article worth reading.

[3] O. Lodge, *Life and Matter*, ch. ix. Cf. J. Orr, *Christian View of God*, pp. 146, 147; S. Harris, *Phil. Basis of Theism*, pp. 439–442.

they direct and determine the lines of bodily activity, are not to be classed with mechanical energies, and do not enter into their equation in the human organism. "It is intelligence which directs; it is physical energy which is directed and controlled and produces the result in time and space." The sequence of mechanical processes is temporal and spatial, whereas the sequence of psychical processes, conditioned by time though these are, is in its own nature logical, and mechanics cannot evolve logic. Mechanical energy is to be described in terms of quantity, and of quantity of which its guidance by human thought and will constitutes no part.

6. Another particular, which appears to contradict the supposition that man's higher faculties can be fully accounted for by organic development, is the fact that the gap between the human and the brute intelligence is very excessive indeed when compared with the variations of nervous organization and of brain by which it has to be explained, if man is wholly a product of physical evolution. No doubt slight changes are often seen to precipitate large results. But in such cases we can usually discover an accumulation of conditions preparing the way. Not so here. The brain did not originate with man, but the human use of it is something new under the sun. Except in size and elaboration there is no difference of importance between the brains of apes and of men. But the late John Fiske, an ardent evolutionist, said, "While for zoological man you can hardly erect a distinct family from that of the chimpanzee and the orang; on the other hand, for

psychological man you must erect a distinct kingdom; nay you must even dichotomise the universe, putting man on one side and all things else on the other." [1]

Now it is obvious that this disparity, so far from being explainable by any future discovery of missing links between the other primates and man, will be accentuated thereby; for the closer the resemblance is between man's physical organism and that of his brute ancestors, the more unaccountable on purely evolutionary grounds is the innovation which is apparent in the origin of man's mental and spiritual capacities.

I think that the considerations which I have given in this lecture, while they forbid our rejection, in the present state of scientific knowledge, of the hypothesis that man has derived his physical organism from brute-ancestors, are fatal to the supposition that his distinctive mental, moral, and religious faculties are thus derived. The difficulty of explaining such derivation is confessed either directly or impliedly by many evolutionists. The famous originator of neo-Darwinism, August Weismann, says, " How the activity of certain brain-elements can give rise to a thought which cannot be compared with anything material, which is nevertheless able to react upon the material parts of our body, and, as Will, to give rise to movement—that we attempt in vain to understand." [2] In these words is logically involved the whole difficulty. Mechanical

[1] *Through Nature to God*, p. 82. This argument is given by H. Calderwood, *Evolution*, ch. xvi, esp. pp. 280–293.

[2] *Evolution Theory*, Vol. II. p. 392.

evolution produces mechanical results, and if higher results emerge we must hypothecate higher causation.

The inference which ought to be made in relation to the subject-matter of these lectures has already been hinted at,[1] but I wish again to define its nature. It is this: If man's origin cannot be entirely accounted for by a process of purely natural evolution, neither can man's primitive state and moral history be wholly explained by considerations drawn from his animal inheritance. Man is more than the highest brute below him, and what that more was when man began to be cannot be determined by purely biological considerations. Superphysical factors — factors distinctly supernatural to his progenitors — were at work in originating human nature and in establishing its original state. Therefore other lines of inquiry, as well as the biological, are necessary, if we would deal intelligently with the subject before us.

I trust that we have reached a point in our discussions at which we can intelligently examine the theological implications of the evolutionary hypothesis. I expect to devote my attention to them in the next lecture.

[1] See pp. 31–22, above; and p. 156, below.

# LECTURE IV

## THEOLOGICAL IMPLICATIONS

We have come to the chief turning-point in our discussions. During the previous three lectures we have been considering the physical aspects of our subject, whereas in the remaining three lectures we shall be concerned primarily with its theological aspects. Before proceeding further, therefore, it seems worth while to enunciate the chief conclusions which have been reached, the theological implications of which are yet to be reckoned with. They may be summarized in the following propositions:

1. The concrete subject-matters of theological and physical sciences intersect at certain points. Thus both alike are concerned with the origin, nature, and primitive state of the human species. But, whereas theology investigates the superphysical and spiritual aspects of these matters, physical science is concerned with their physical and mechanical aspects.

2. It follows that neither theological nor physical science by itself is scientifically complete, and neither one is in a position to dictate terms to the other. Each science has its certainties, and in the interests of truth must maintain them. But theologians and physical scientists are under a like necessity of having regard for each other's established conclusions, partial though

these be, if they desire to arrive at a tenable philosophy of the totality of being and life. All truly scientific conclusions pertain to one harmonious realm of truth, and, therefore, in their ultimate explanation, they are mutually related.

3. Among existing certainties of physical science the present state of knowledge compels us to reckon the doctrine that, so far as physical antecedents and factors are concerned, the origin of the human species is due to a natural process of variation in lower species, the results of which have been transmitted, fixed, and perpetuated in offspring. Man is declared to have a brute ancestry, and to possess characters which have been inherited through such ancestry. The more precise explanations of this physical evolution which have been advanced by Lamarck, Darwin, Weismann, de Vries, and others stand on a lower level, and are not to be regarded as scientific certainties.

4. The course of biological investigation has accentuated rather than militated against the conclusion that the origin of life, of intelligence, and of the distinctive mental, moral, and spiritual characteristics of mankind, require superphysical causation to account for them; and the inference is justifiable that the theory of physical evolution does not wholly explain or determine man's primitive state and moral history.

In every science two kinds of conclusions are discoverable, including on the one hand those that appear to be well established and are generally accepted, and, on the other hand, those that are of speculative nature

and are liable either to be modified or to be abandoned. This is as true of the science of theology as of other sciences. Every science has its assured dogmas and its tentative hypotheses as well. In theology the former derive their certainty from permanent catholic consent as to what has been supernaturally revealed. The latter are called *dubia* or pious opinions, being the fruits of speculation in fields wherein the knowledge which can be acquired in this life is too fragmentary to warrant what is called the certainty of faith, or the assurance of spiritual knowledge.[1] But a tendency always exists, especially when the peculiar intellectual conditions of the age make particular opinions of this kind appear highly credible, to confuse them with really catholic dogmas. The consequences are sometimes deplorable. All speculative views in theology are liable to become untenable through the increase of knowledge in other departments of investigation. When this happens in relation to opinions that have become mixed up with catholic certainties, a panic inevitably occurs in the religious world; and, until sufficient time has elapsed for a readjustment of fundamental perspectives to be achieved, multitudes regard the new knowledge as subversive of Christian doctrine. Such was the case, as I have shown you in my second lecture,[2] when Darwin secured a scientific place for the evolutionary hypothesis. The storm still

[1] The writer has more fully explained the distinction between dogma and pious opinion in *Authority, Eccles. and Biblical*, ch. viii. §§ 7, 8.

[2] See pp. 52, 54.

mutters to some extent upon the horizon, and occasional flashes of polemical lightning accentuate the importance of carefully distinguishing in our discussions between catholic doctrines and purely scholastic opinions touching the subject with which we are concerned. I am endeavouring to deal with the bearing of the evolutionary theory upon certain catholic doctrines. I am not concerned to defend speculative views or to vindicate any particular school in theology.

## I

The chief doctrines which have been thought to be affected by the evolutionary hypothesis are those of theistic teleology, creation, biblical infallibility, and man's primitive state and fall. These lectures have reference primarily to man's primitive state and fall; but I do not think that I shall be guilty of an unwarranted digression if I devote part of this lecture to a brief consideration of the bearing of the evolutionary hypothesis upon the other doctrines which I have mentioned.

(*a*) Christian theism, in fact every form of belief in a personal God, is closely bound up with the evidences of design which are apparent in the visible universe. St. Paul declares the implicit conviction of righteous men of every age when he says that the invisible things of God, "since the creation of the world are clearly seen, being perceived through the things that are made, even His everlasting power and divinity."[1] It is true that passing modes of thought often

[1] Rom. i. 20.

disturb the mental perspectives of sincere seekers after truth, and we may not treat particular instances of theistic doubt as proofs of unrighteousness. But it is clear that St. Paul truly describes a very general cause of unbelief when he says that men "hold down the truth in unrighteousness; because that which may be known of God is manifest in them." [1] As the Psalmist says, "The heavens declare the glory of God; And the firmament sheweth His handiwork. Day unto day uttereth speech, And night unto night sheweth knowledge." Of the intelligible nature of this self-manifestation of God, he further says, and general experience confirms his assertion, that, although "There is no speech nor language," and "Their voice cannot be heard," yet "Their line is gone out through all the earth, And their words to the end of the world." [2] As has often been noticed, the whole order of nature is hieroglyphic, for all its elements, arrangements, and movements signify something; and if men were not convinced of their ability to decipher to some extent the meaning of nature, there would be no science and no evolutionary hypothesis. That nature conveys a meaning for minds to consider is the fundamental postulate of scientific inquiry. But meanings have no existence except as proceeding from mind to mind. To speak of meaning when there is no intelligent source of what is signified is to utter nonsense.[3] This

[1] Rom. i. 18, 19. Cf. verses 21, 22. [2] Psa. xix. 1–4.

[3] See Fairbairn, *Philos. of the Christ. Relig.*, pp. 27–38; S. Harris, *Self-Revelation of God*, pp. 256–266.

is the real essence of the teleological argument for the existence of a divine intelligence, of a personal God. It needs, however, for completeness of argument, to be connected with other considerations, such, for instance, as are formulated in the cosmological, moral and ontological arguments of theistic treatises; but the intelligibility of nature cannot be explained except by the supposition that its Author is intelligent.

The sign language of nature is very rich in its vocabulary, and its signification is exceedingly manifold and complex. One result of this is that, although the theistic implication of the whole is very evident to those who do not miss the woods in considering the trees, the attempts to formulate this implication in a theistic argument have taken various lines; and have been determined, and limited in value as well, by the existing state of scientific knowledge. Thus when Darwin published his theory of evolution, theistic writers were apt to rest their argument for design somewhat exclusively upon particular instances of adaptation of means to ends. These adaptations are multitudinous and are especially striking in the organic world, although discoverable in the other parts of the physical order. This form of argument in Paley's hands was made cumulative by his emphasis upon the vast number of adaptations which nature exhibits; but its defect lay in a failure to bring out the teleological significance of nature as a whole. Induction from particular instances is open to challenge so long as it is not universal; and the objection was sure to be raised

that many of nature's arrangements do not appear to be useful or adapted to intelligible ends. Nature is more than a mere collection of mechanical contrivances; and a more adequate conception of its general meaning and unity is required before men can appreciate the force of the rejoinder to this objection, that every part of nature should be interpreted in relation to the developing whole; and that, if our knowledge were sufficient, we could perceive how even the most mysterious arrangements have meaning, and either now subserve or have subserved the master-purpose of the whole.

The evolutionary hypothesis has done much to enlarge and unify our conception of nature, and as a consequence has enabled Christian writers to formulate a more convincing teleological argument. But Darwin's theory of natural selection at first seemed to nullify the evidences of design by giving another explanation of the phenomena of adaptation. Darwin indeed emphasized the part which utility plays in natural evolution; but, whereas Paley had appealed to the utility of organs to prove design, Darwin accounted for their utility by the law that useless organs must disable their possessors and cause them to perish in the struggle for existence. As only the fittest can win out in the struggle for life, the existing organic forms must be those the organs of which are highly adapted for the preservation of life. Post-Darwinian investigation has tended to limit the part of natural selection in the evolution of species, and thus to reduce its seem-

ing sufficiency to account for organic adaptations. But riper thought has done more. It has come to be realized that, in any case, natural selection does not account for adaptation. Its function is wholly eliminative. It destroys the less fit, but does not cause the fitness of what it permits to survive. The causes of adaptation are to be looked for in the positive factors of variation and inheritance; and, as I endeavoured to show you in my last lecture, these appear to be under direction. Variations are not purely fortuitous, nor are they indefinite in range. There is a teleological trend in the mutations of nature, and the argument for design which the Darwinian hypothesis appeared to strip naked and to kick out of doors has been readmitted and reclothed, and is now established at the fireside more comfortably than ever. It would carry me too far afield to present the argument for design in its improved form. It is exhibited in many recent treatises, and I have myself devoted a chapter to it in my latest volume, on *The Being and Attributes of God.*[1]

(*b*) The story has often been repeated of a certain interview between M. Laplace and Napoleon Bonaparte.[2] The former was presenting a copy of one of

[1] Ch. vi. Cf. V. F. Storr, *Development and Divine Purpose;* Fredk. Temple, *Bampton Lectures*, Lec. iii; A. Moore, *Science and the Faith*, pp. 186–200; F. B. Jevons, *Evolution*, chh. xii, xiii; Profeit, *Creation of Matter;* Illingworth, *Personality*, pp. 94–99; Semi-Darwinian, *Doubts about Darwinism.*

[2] For instance, by Jas. Ward, *Naturalism and Agnosticism*, Vol. I. p. 4, who refers to W. W. Rouse Ball, *Short Hist. of Mathematics*, p. 388.

his scientific works to Napoleon, who remarked, "M. Laplace, they tell me you have written this large book on the system of the universe and have never even mentioned its Creator." Laplace's terse reply was, "Sire, I had no need of any such hypothesis." Such an attitude of mind was then less usual than it has since become. That it should become a very ordinary one was inevitable, however, when natural scientists began to specialize more carefully than was formerly the practice, and confined their attention more exclusively to the task of investigating and describing the mechanical and physical aspects of nature. Rigid specialization is one of the conditions of success in this kind of labour; but it is apt to bring the penalty of narrow-mindedness, and of inability to understand things in their larger relations. We go to the mechanic when we wish to acquire accurate information as to the working of a machine, but his very expertness has often been gained at the cost of permanent failure to acquire such larger knowledge as would enable him to help us in appreciating all that lies behind, and accounts for, machinery. Our dependence upon specialists for knowledge of the physical processes of nature should not blind us to the truth that this knowledge pertains to the surface of things, and does not afford that larger and truer view of being and life which is both possible and desirable for human enlightenment and progress. A description of nature's processes and physical sequences can never do duty for an adequate account of things, of their deeper

implications, of their ultimate Cause, and of their general purpose. And the fact that man is conscious of being superphysical, as well as physical, teaches that he can never rest content with merely physical knowledge, without incurring atrophy of his higher faculties and failure of self-realization.

As Laplace rightly enough implied, the subject of creation lies outside the sphere of physical science. Such science limits itself to describing the processes of existing things. The evolutionary theory, for instance, is on its own showing simply a description of what happens to organic life when once brought into being. The problem of its origin remains exactly where it was before the modern evolutionist changed the face of descriptive science.[1] Yet to grapple with that problem is a task which mankind cannot evade. It will not allow itself to be ignored. And its solution must be had in one of two contrary views: — either that the universe is its own basis of existence and eternal; or that all things therein have ultimately originated by creation. The former alternative is formulated in pantheism and in materialistic monism, — systems of thought which derive what plausibility they possess

[1] In a chapter contributed to F. Darwin's *Life and Letters of Chas. Darwin*, Vol. II. pp. 202, 203, Thomas Huxley says: "There is a great deal of talk and not a little lamentation about the so-called religious difficulties which physical science has created. In theological science, as a matter of fact, it has created none. Not a solitary problem presents itself to the philosophical theist at the present day which has not existed from the time philosophers began to think out the logical grounds and the logical consequences of theism."

from a refusal to give adequate consideration to the phenomena of life, mind, and moral responsibility. The other solution does justice to these phenomena, and most adequately accounts for the diverse forms of being and life. It indeed raises a baffling problem. If God created all things, and this excludes the pantheistic idea that they are substantial parts of His own essence, He must have created them without the use of pre-existing materials, or *ex nihilo*, as it is somewhat misleadingly expressed. How can this act have been achieved? We cannot answer; for such an event lies wholly outside of human experience and is unique. Therefore it lies beyond the sphere of imagination. But an eternal past for the universe is equally unimaginable and equally unexperienced. The mystery, therefore, since it clings to either solution, leaves unimpaired the superiority of belief in creation over an acceptance of pantheistic or materialistic monism. The Christian doctrine of creation is to-day as valid for higher thought as it ever has been.[1]

(*c*) We come next to the question of biblical infallibility.[2] If, as historical Christianity has maintained from primitive days, the Bible is the veritable Word of

[1] In saying this, I do not concern myself with the questions raised by disputable exegesis, and by the view that the writer of Genesis was inspired to give a scientific account of the *method* of creation. Cf. the author's *Being and Attributes of God*, ch. v. §§ 7, 10, and the references there given — especially Profeit, *Creation of Matter;* Flint, *Theism*, pp. 101–118.

[2] Cf. the writer's *Authority, Eccles. and Biblical*, ch. vii. §§ 5, 6. Also pp. 13–16, above.

God, there is, of course, no escape from the conclusion that it is in that capacity infallible; and this is catholic doctrine. The manner in which the Scriptures were produced, and given their unique value and authority, is for men to discover, so far as it is discoverable, by critical study of the Scriptures themselves; and the results of such study are found in theories of inspiration. These theories, whether verbal or other, are not parts of catholic doctrine.

The facts plainly show, however, that biblical inspiration left the sacred composers free to write in their own manner; and the context of divine teaching which was thus appropriated and employed by the Holy Spirit is obviously such as was suited to ancient times and to the then state of natural knowledge. The purpose of inspiration was spiritual and religious, but the literary vehicle which was manipulated, so to speak, for that purpose was human, and such as was intelligible to its immediate recipients. Their knowledge, even in spiritual matters, was corrected and enlarged only so far as men's previous spiritual progress enabled them to assimilate and profit by new lessons from God. Many inveterate errors and defective moral ideals seemed, in the meantime, to be sanctioned by the written Word, at least until later progress in revelation and knowledge showed that they were merely left untouched until their correction had become practically possible.[1]

[1] See the author's *Authority, Eccles. and Biblical*, ch. vii. § 7; Mozley, *Ruling Ideas of Early Ages;* Orr, *Problem of the Old Test.*, ch. xii. Pt. III.; Watson, *Inspiration*, ch. iii. Cf. Heb. ix. 10.

The progressive nature of the revelations contained in Holy Scripture, and the defective and erroneous nature of certain beliefs and ideals that gain uncorrected expression in the Old Testament, are very generally acknowledged. They are indeed too evident to be denied by intelligent students.

But if spiritual errors were left uncorrected, we may readily believe that mistaken views of natural history were also left as they stood, and only so far modified as was necessary in order that they might be employed as suitable vehicles and contexts of divine teaching. The authority of the context in each case lies in its being thus divinely employed, and its biblical meaning lies in the manner and connection of its use by the Holy Spirit. I am distinguishing here between the biblical or inspired purpose and meaning, and the merely human content of the narratives in question, considered apart from their relation to divine revelation. We do not need to believe that the human writers were enabled to anticipate in their historical narratives the results of modern discovery in order to believe that these narratives are divinely inspired contexts of spiritual teaching.[1] But just as it required the acquisition of fuller spiritual knowledge to enable men to detect the spiritual errors which had been left uncorrected in the earlier Scriptures, so it has taken modern scientific discovery to compel men fully to realize that the Bible was not inspired for the purpose of affording accurate scientific information as to the natural order.

[1] Cf. p. 141, below.

Wherein lies the infallibility of the Word of God? Surely in its being suited in each stage of its production for correctly fulfilling the purpose of its inspiration. An infallible marksman is called infallible by reason of his accurate shooting, but this infallibility does not of itself make him a trustworthy authority in Zoölogy. Nor is the spiritual value of a sermon or book necessarily reduced by subsequent discovery that its narratives and illustrative descriptions are scientifically inaccurate. The Bible is infallible for its inspired purpose; but if we insist upon connecting it with other purposes, the error lies rather with ourselves than with the Bible, properly employed.

The evolutionary theory does not permit us to suppose that man is of such recent origin as the narratives of Genesis seem to imply; and the evolutionary order of the origin of species differs from the biblical order. These and other deviations of the narratives of Genesis from the accepted results of scientific investigation have to be acknowledged, if we obey the requirements of modern intelligence. And why should we fear to obey them? The narratives which are found to be unsuited for certain non-biblical purposes do not, for this reason, cease to be divinely chosen vehicles of eternal truth, and unassailable when thus regarded. Their scientific limitations are as useful to modern biblical readers as they were necessary when the narratives in question were first published in Israel. This is so because, apart from just such an exhibition of the general ideas of ancient peoples, we should be

unable rightly to understand and interpret the inadequacies of Old Testament spiritual teaching. The context and the text — I mean the human narratives and the divine teaching — may not be separated. All is inspired; but these two elements, and their respective relations to the purpose of inspiration, must be distinguished, if we would understand either the Holy Scripture itself or the real bearing of modern scientific criticism upon the limits of its authority.

## II

We have come to the subject which will consume our attention during the remainder of this course of lectures — the bearing of the evolutionary hypothesis on the catholic doctrine of man's primitive state and fall. The rest of this lecture will be devoted to a description of the contents and evidence of its two main particulars — (*a*) the primitive state and (*b*) the fall.

In ascertaining catholic doctrine the rule of faith has to be observed.[1] Stated briefly, this rule is that we ought to believe what is taught and defined by the Church, and confirmed and illustrated by the Scriptures. Such a rule requires us to assume, and many centuries of spiritual investigation confirm the assumption, that the inspired teachings of Holy Scripture and the ecumenical doctrines of the Spirit-guided Catholic Church are in accord. But this harmony does not always appear on the immediate surface. The details

[1] On the rule of faith see the author's *Authority, Eccles. and Biblical*, ch. viii.

of exegesis by which ecclesiastical writers seek to establish catholic doctrine may often be mistaken, and the detection of such errors is apt to shake men's confidence in the doctrines which are thus erroneously defended. The Spirit which guides the Church into the fundamental truths of divine revelation at large obviously has not endowed her writers with exegetical infallibility. Yet the mind of the Church is an authoritative indication of the mind of the Spirit who inspired the Scriptures; and the prevailing might of truth guarantees that in the long run scriptural exegesis will vindicate ecumenical ecclesiastical teaching. But we shall not be enabled to see this until we realize that the mind of the Spirit in Holy Scripture is to be ascertained by general induction from the varied phenomena of the centuries of progress in revelation which the Bible records, rather than from an exclusive consideration, however careful it may be, of detached "proof-texts." Revealed doctrines are rarely given full or systematic definition in single passages of Scripture, and biblical teaching must be investigated in its organic continuity, if it is to be studied successfully.[1]

A parallel principle is to be observed in discovering the mind of the Church. That mind is indeed Spirit-guided; and, in its ecumenical aspects, has a finality which no other authority in this world can claim. But it may easily be misunderstood and misrepresented by school theology and by provincial bodies. It is for this reason that, while the ecclesiastical authority of

[1] I return to this. See pp. 139, 140, below.

provincial formularies is very real, so far as the discipline of particular portions of the Church is concerned, we need to verify the catholicity of provincial doctrine if we would remove all doubt as to its correctly representing the mind of the universal Church. This is, of course, a task for theologians rather than for untrained believers, who must necessarily assume that the provincial teaching which they receive is substantially sound and catholic, unless they abandon themselves to the confusion of unintelligent individualism. The method by which theologians verify the catholicity of provincial teaching is formulated in the well-known Vincentian rule, *quod ubique, quod semper, quod ab omnibus.* This means that the presumptive catholicity of local doctrine is established when it is sufficiently shown to be held by all existing catholic churches, to have been held from primitive days, and by the generality of representative catholic writers. In some instances we may be unable to apply this rule with exhaustive completeness. It is a rule of induction, and the data for a universal induction may be unavailable. But we may be certain that we can always make a sufficient induction for safe assurance in really vital doctrine.

To reduce what I have said to a brief conclusion: The catholic doctrines of man's primitive state and fall with which we are concerned contain such truths, and such only, as are expressly or impliedly contained in the teaching of every part of the Catholic Church from the beginning, and have commanded the general

support of catholic doctors both East and West; — these truths depending for their confirmation and more adequate understanding upon their inductive verification by the manifold data which become available when all the Sacred Scriptures are searched and discriminatingly compared.

The time which I can give in these lectures to establishing the catholicity and scripturalness of the doctrines which I am seeking to test by the evolutionary theory is necessarily very brief. But I trust that what I have said will make it clear to you that what I am concerned to defend is not a new and emasculated theology, developed in order to meet modern difficulties, but is what I have by proper methods convinced myself to be the ancient teaching of the Church and of Holy Scripture.

The acknowledgment that the present moral state and conduct of mankind is not what it ought to be, that no man is able perfectly to conform his conduct to the standard which conscience and his sense of responsibility places before him, and that this universal moral limitation is inherited, is not peculiar to Christian believers, but is very general among those who seriously concern themselves with moral problems. What is distinctive in later Jewish and in Christian thought is the belief that man was originally free from sin and from the power of sinful inclinations; and that his present weakness is due to an unnecessary and wilful violation of righteousness by his first human parents. Distinctive though this doctrine be, it is

still held by all who can seriously be regarded as seeking to be loyal to apostolic doctrine, whether they are Catholics or Protestants. This commonly received doctrine has, however, undergone development; and certain accretions, some of them dating back at least to the close of the fourth century, have divided the schools and, in the Calvinistic system at least, have given the doctrine of man's primitive state and fall a scholastic form which makes it appear to the modern mind and conscience peculiarly repellent and incredible. Certain elements of Calvinistic theology on this subject can be found in St. Augustine's writings, and have been retained by particular catholic schools of later centuries. But the fact that such views are very generally described as Augustinian bears witness that they do not inhere in catholic doctrine, but are provincial. In brief, we do not have to maintain the distinctive elements of Augustinianism in order to retain our hold upon catholic doctrine. It is indispensable to the purpose of these lectures that this should be borne in mind.

We are concerned with two doctrines: that of man's primitive state, and that of his fall and its consequences to our race. Let me now expound more particularly the catholic belief concerning man's primitive state.[1] The mind of the Anglican communion, so

[1] On man's primitive state, see Bishop Bull, *Discourses*, v; J. B. Mozley, *Predestination* (8vo edition), pp. 90–97, 109–112, in chh. iii, iv.; Moehler, *Symbolism*, Bk. I. §§ i–iii.; Wilhelm and Scannell, *Manual of Cath. Theol.*, Pt. II. ch. iii; St. Thomas, *Summa Theol.*, I. xciii–cii; A. P. Forbes, *XXXIX Arts.*, ix.

far as it has been officially expressed, is to be discovered in the *Book of Common Prayer* and in the *Articles of Religion.* We shall not find in these documents any full or separate description of man's original condition; but when it is declared in the ninth Article that "man is far gone from original righteousness," there is a clear implication that righteousness was included in that condition; and the undeveloped nature of original righteousness is indicated when, in the opening words of the Marriage Office, Holy Matrimony is said to have been instituted "in the time of man's innocency." For any further knowledge of Anglican teaching as to man's primitive state we must study those authors who appear to be in most complete accord with Anglican doctrine at large. In such study we must remember that the American Church declares herself to be "far from intending to depart from the Church of England in any essential point of doctrine;"[1] and therefore, as is also implied in one of the prayers at the close of the Office for Visitation of the Sick, seeks to adhere to "the communion of the Catholic Church;" and to include in her necessary doctrine, as required by the canon adopted by Convocation in 1571, what "the catholic fathers and ancient Bishops have collected" out of Holy Scripture.[2]

[1] Preface of *The Book of Common Prayer.*

[2] "Imprimis vero videbunt, ne quid unquam doceant pro concione, quod a populo religiose teneri et credi velint, nisi quod consentaneum fit doctrinae Veteris aut Novi Testamenti, *quodque ex illa ipsa doctrina catholici patres, et veteres episcopi collegerint.*" *Concilia Magnae Brit. et Hibern.*, Vol. IV. p. 267.

The chief Anglican classic on the subject now before us is Bishop Bull's discourse *Concerning the First Covenant, and the State of Man Before the Fall.*[1] This discourse undoubtedly contains speculative and doubtful propositions.[2] But its main contentions are independent of them, and are shown to be both scriptural and catholic by sufficiently adequate quotations and references. The doctrine which he thus elaborates and defends may be reduced to the following particulars: 1. Before our primitive parents had sinned they were brought into conscious communion with God, and placed under probation, the terms of which were contained in a divine covenant. 2. The keeping of this covenant was to insure immortality, but its violation was to be punished with reversion to the mortality of man's natural condition. 3. Previously to their fall, our first parents were able to keep their animal propensities in subjection to the spirit, and wholly to avoid sin. 4. The cause of this capacity for sinlessness, and of this prospective immunity from physical

[1] *The Works of George Bull, D.D., Lord Bishop of St. Davids,* Collected and Revised by the Rev. Edward Burton, M.A., Oxford, 1827, Vol. II, Discourse V.

[2] For example, his belief, shared in by other writers of his day, that Adam possessed a marvellous degree of intelligence. It is well-nigh impossible to find an adequate treatment of any doctrine which does not incidentally exhibit opinions that are supported neither by accurate exegesis nor by catholic consent. The presence of such elements in a theological treatise does not necessarily rob the treatise of value in relation to its maintenance of catholic doctrine. It is possible to distinguish between the speculative and the catholic elements, and to ignore the former.

death, was supernatural. Our first parents were endowed with gifts of the Holy Spirit, in lack of which their unique privileges, and their ability to escape sin and death, would have been non-existent.

That these propositions contain the catholic doctrine of man's primitive state, I am convinced. This doctrine contains an element which has been repudiated by protestants; viz., the assertion that man's primitive state was one of grace, and supernatural. On the other hand, it does not contain certain very precise views which have been popularly confused with ecumenical doctrine. For instance, it is not a catholic doctrine that Adam was possessed of such forms of virtue and sanctity as are acquired by experience with, and successful resistance of, manifold temptations. How long he remained sinless we are not told, but all indications show that innocence is the correct term to describe his condition. He was potentially perfect, but actualized perfection had yet to be acquired. Again, it is not a catholic doctrine that Adam possessed a wide range of physical and spiritual knowledge, was, in short, highly civilized.[1] He seems rather to have been an undeveloped child, possessed of capacity to advance, but with much to learn. Finally, catholic doctrine leaves the boundary line between fact and symbol in the narrative of Genesis undetermined. It does not require us to decide whether the Garden of

[1] Bishop South's terse sentence, "An Aristotle was but the rubbish of an Adam, and Athens but the rudiments of Paradise," has been quoted as if representing catholic consent, which it certainly does not.

Eden, as therein described in geographical terms, ever existed; as to whether the tree of life, and the tree of knowledge ought to be interpreted literally; as to whether Eve was really built up from one of Adam's ribs; and as to whether the bringing of animals to Adam to be named by him is genuine history. Some of the ancients interpreted the whole narrative as historical, others as symbolical, and St. Augustine appears to have thought it to be partly historical and partly symbolical. Perhaps we shall not be far from the truth if we think — remembering, of course, that the opinion binds no one — that the sacred writer described man's primitive state in terms derived from fallible tradition, his narrative, none the less, being made by divine inspiration to exhibit a true spiritual picture of the state from which mankind has fallen. Whether this opinion is correct or not, we cannot reject the spiritual implications of the narrative without impugning the catholic doctrine of biblical inspiration.[1]

[1] In reply to the criticism that he assumes "that the doctrines of the Fall and Original Sin are shown to be invalid by a critical examination of their origin and growth," F. R. Tennant says, *Origin of Sin*, Pref. to the 2d ed., p. xvi., that his argument "does not make 'genesis the determinant of validity,' but it implies that proven validity is not established by genesis in fiction." It must be granted that proven validity is not established by genesis in *mere* fiction, but fiction that is found in divinely inspired Scripture, and obviously has didactic meaning, is more than mere fiction; moreover, the doctrine of man's primitive state and fall has its genesis, not in the Eden narrative considered alone, but in a progressive revelation, inductively regarded, of which that narrative constitutes an early stage. It is in the light of redemption that the story in Genesis is perceived to embody a spiritual description of man's primitive state

The story of Eden, when stripped of its non-spiritual aspects, certainly retains the spiritual teaching that man was originally placed under some kind of probationary covenant, under which he was afforded the opportunity and means of subjecting his animal propensities and of escaping the consequences of his natural mortality. In brief, his primitive state was one of supernatural privileges and possibilities, secured by divine but conditional guarantees. These implications constitute important data for putting the catholic doctrine to the test of scriptural induction. But they cannot be regarded as sufficient by themselves. Certainly they did not enable the Israelites before the publication of the Gospel to deduce from them the determinate doctrine which we are considering.[1]

As Dr. J. A. Moehler says in his valuable treatise on *Symbolism*,[2] In determining man's original state, "we must especially direct our view to the renewal of the fallen creature in Christ Jesus; because, as regeneration consists in the re-establishment of our primeval condition, . . . the insight into what Christ hath given

and fall. As Tennant shows, the Christian doctrine on this subject gains no clear expression prior to St. Paul's exposition of it; and St. Paul wrote in the light of Christian redemption and by divine inspiration.

[1] This is Tennant's contention. See *Sources*, pp. 90–96.

[2] Bk. I. § 1. This work was written by a German Roman Catholic of unusual breadth of view. There exists no better aid for studying the differences between catholic and sixteenth-century protestant theology on anthropological subjects. Abundant references are given.

us back affords us the desired knowledge of what in the origin was imparted to us." It is of course true that in Christ we are enabled to reach a higher condition than Adam had attained before his advance was interrupted by sin; but the assertion that the state of grace, and its final results in relation to sin and death, constitute a restoration, as well as a basis of advance upon Adam's condition, is borne out by various statements and hints in the New Testament. Inasmuch as all divine revelation is of a piece, the teaching of the New Testament makes clear the meaning which is latent in Old Testament figures;[1] and when we find that the catholic doctrine of man's primitive state brings into line Old Testament symbolism and New Testament teaching, we become convinced that such doctrine exhibits the meaning of both.

## III

We now come to the doctrine of the fall of our first parents, and of the inheritance of certain natural consequences of this fall by their posterity.[2] This inheritance of consequences is the subject-matter of the doctrine of original sin. In order to emancipate

[1] St. Augustine says that "the New Testament is latent in the Old, and the Old is patent in the New." *Quaest. in Exod.*, 73. Cf. the author's *Authority, Eccles. and Biblical*, pp. 246, 247.

[2] On the doctrine of the fall and original sin, see A. P. Forbes, Bishop Gibson and Bishop Brown on the *XXXIX Arts.*, Art. ix.; Mozley, *Predestination*, pp. 33–37 and ch. iv; *Lecs. and Other Theol. Papers*, ix, x.; Moehler, *Symbolism*, Bk. I, ch. ii; A. Moore *Essays Scientific and Phil.*, pp. 60–66.

the beginnings of our consideration of this doctrine from the influence of a very common misconception, it is desirable to notice at the outset that the word "sin" in the phrase "original sin" does not signify either actual sin or personal guilt, but is employed in a secondary sense to describe an inherited defect of nature.[1]

Our formularies contain no separate description of Adam's fall; but that he did fall, and that he incurred a loss of grace and the fault and corruption of nature with which his descendants are said to be born, is made sufficiently clear in the ninth of our *Articles of Religion.* That article contains the chief Anglican definition of original or birth-sin. "Original sin," it

[1] Dr. Tennnant insists that the word sin should not be used except for acts of the will, contrary to the individual's conscience and his knowledge of the moral law or the will of God. Pref. to 2d ed. of *Origin of Sin*, pp. xxiii–xxvii; and note B, pp. 163–176, on "The Ambiguous Use of the Term 'Sin' and Its Derivatives in Theology." We sympathize with his wish that the words in question were free from ambiguity in theology, and that the secondary use could be eliminated from technical definitions of doctrine. But we cannot undo the usage of ages, and our efforts should be directed to ascertaining the actual meaning of the phrase "original sin" in catholic doctrine. The meaning which I have given is the only one that is borne out by catholic consent. If many writers have imported more meaning, such developments do not determine the correct definition of catholic doctrine on the subject. The question is not the fitness of the terminology that has been employed, but the truth of the catholic doctrine thereby signified. By failing to distinguish between catholic doctrine and Augustinian developments, Dr. Tennant has robbed his arguments of much of their relevance. Arguments which have weight as against Augustinian views may be — I think they are — found to be lacking in weight when catholic doctrine alone is considered, purged of provincial accretions.

declares, "standeth not in the following of Adam, . . . but it is the fault and corruption of the nature of every man, that naturally is engendered of the offspring of Adam; whereby man is very far gone from original righteousness, and is of his own nature inclined to evil, so that the flesh lusteth always contrary to the spirit; and therefore in every person born into this world, it deserveth God's wrath and damnation." This completes the main substance of the definition. The rest of the article gives supplementary explanations of the effects of original sin. It declares that the "infection of nature" which we inherit is not abolished by baptismal regeneration, but that even in the regenerate the lust of the flesh "is not subject to the law of God. And although there is no condemnation for them that believe and are baptized; yet the Apostle doth confess, that concupiscence and lust hath of itself the nature of sin." In the tenth article it is added that because of original sin man "cannot turn and prepare himself, by his own natural strength and good works, to faith, and calling upon God. Wherefore we have no power to do good works pleasant and acceptable to God, without the grace of God by Christ preventing us, that we may have a good will, and working with us, when we have that good will."

So far as the main definition is concerned the language which I have quoted is clear enough, and expresses the consensus of both catholic and sixteenth-century protestant theologians. Original sin is the natural moral disorder and handicap which Adam's

sin has engendered in all his offspring, by reason of which we are all inclined to sin and unable, apart from saving grace, to turn to God and to please Him. It is not so easy to come at the precise meaning of certain incidental phrases. But close scrutiny enables us to see that in the partly figurative phrase, "in every person born into this world it deserveth God's wrath and damnation," the word "it" refers to the inherited defect of nature. This is what is said to displease God. It is not said that new-born infants are treated by God as personally guilty. That the tendency to sin is not abolished at once by baptismal regeneration is a fact which universal Christian experience confirms. Catholic doctrine teaches that the effect of Baptism is to impart the grace of Christ, the operation of which is sanctifying but gradual, and dependent upon moral conditions of lifelong necessity. God receives the regenerate into His favour because they are in a state which, if persevered in, will finally remove lust and concupiscence and bring their sins to an end. Concupiscence and lust are said to have the nature of sin simply because their power in us is caused by Adam's sin, and is a cause of our sin. As the Council of Trent expressed it, the inherited evil propensity of our nature is called sin because "it comes from sin and inclines to sin." [1] Much confusing controversy has occurred in relation to good works. But so far as the meaning

[1] "Sancta Synodus declarat, Ecclesiam Catholicam nunquam intellexisse peccatum appellari, quod vere et proprie in renatis peccatum sit, sed quia ex peccato est, et ad peccatum inclinat." *Trid. Sess.*, V. § 5.

of the tenth article is concerned, we need only to remember that the good works referred to are such as pertain to everlasting life. These are made possible for us only by the grace of Christ, and without them we do not fulfil the chief end for which we are made. That the unregenerate do works which in their motives and immediate results are good, need not be thought to be denied. But these works are defective in being dissociated from the chief purpose and the supernatural destiny for which God created us.

Such I take to be the teaching of our articles on man's fall and on original sin. It is impossible here to argue at length for the correctness of my interpretation. The point to be insisted on is that our articles omit certain very explicit and objectionable speculative corollaries of the doctrine of the fall which are found in other sixteenth-century documents [1] and in many modern treatises.[2] It is also to be maintained that what these articles positively and unmistakably assert and define agrees with the catholic doctrine on the subject. This doctrine is found in a wide range of patristic literature, both East and West;[3] is imbedded in the elaborate and partly speculative theology of St. Augustine and his mediæval successors; [4]

[1] Some of them are collected by Dr. Tennant, *Origin of Sin*, note A.

[2] Especially of the "evangelical" type.

[3] Patristic teaching is given by J. B. Mozley, *Predestination*, ch. iv; and by F. R. Tennant, *Sources*, chh. xii, xiii.

[4] St. Augustine's position is best expounded by J. B. Mozley, *Predestination;* and W. Bright, *Lessons from the Lives of Three Great Fathers*, pp. 157–180; *Age of the Fathers*, Vol. II., chh. xxxiii, xxxiv.

is found even in protestant formularies, although there obscured and practically caricatured by emphasis upon superadded and uncatholic propositions.

It is not catholic doctrine that fallen man is totally depraved, so as to possess no good in him and no real freedom, and that the virtues of the unregenerate are splendid vices. The Catholic Church does not teach that original sin is sin in the literal sense of that word, as if the distinction between original and actual had no meaning; or that the personal guilt of Adam is imputed to his offspring by God — previously to their having committed sins of their own; or that God consigns to everlasting punishment all who die unregenerate, including unbaptized infants. The five points of Calvinism, in particular absolute predestination of certain to glory and of the rest to damnation irrespectively of foreknowledge of their deservings, and irresistible grace — are not catholic doctrines, and ought not to be allowed to complicate the doctrine of the fall. The Church's dogmatic teaching is confined to what is revealed; and God has not seen fit to reveal more of the consequences of the fall than concern the actual recipients of that revelation in working out their own salvation. What is revealed suggests many questions, and when we are more anxious to solve problems than to assimilate what is revealed for our salvation, the insolubility of these questions causes

Cf. also J. F. Bethune-Baker, *Early Hist. of Christ. Doctrine*, ch. xvii; and Hagenbach. The position of St. Thomas, *Summa Theol.*, I. xciii–cii., best represents the mediæval period.

difficulties of faith. The Church does not pretend to solve such problems. She teaches what she has been taught by the Spirit of truth, and her teaching on the subject of man's fall cannot be shown to include more than the following particulars: 1. Our first parents by sin lost the supernatural state in which they had been divinely established, and its advantages; 2. As a result, their animal propensities gained the upper hand, sinful inclinations ruled, divine favour was forfeited, and by way of punishment they were made to revert to their natural liability to physical death; 3. The supernatural advantages which they had lost could not be transmitted to their offspring. We have therefore inherited from them the natural tendencies which are described by the terms concupiscence and lust, and cannot, except by the saving grace of Christ, subject the flesh to the spirit so as to fulfil the supernatural end for which our race was created. Such in substance is the catholic doctrine of the fall — the doctrine on that subject with which these lectures are properly concerned.

This doctrine has often been based by theological writers upon separate proof-texts; and these texts have had more meaning read into them, and more independent proving value attributed to them, than exact and critical exegesis warrants. The impression has naturally gained ground, even among intelligent writers, that the doctrines in question cannot be verified by the Scriptures. I believe that the difficulty is due to the exclusive attention paid to the proof-text method.

The Bible was not written under circumstances, or for purposes, which permit it to be treated successfully in that manner. It contains many data by which catholic doctrines can be illustrated and confirmed; but, as I have already said in another connection, their value for proving purposes depends to a large extent upon inductive treatment — that is, upon treating them as phenomena which, in their totality and in their mutual and historical connections, can best be explained by the hypotheses which are afforded by catholic doctrine.[1]

The data in Scripture which are most reasonably explained by the catholic doctrine of the fall may be arranged in four groups: (*a*) the spiritual implications of the Eden narrative; (*b*) the gradual revelation during Old Testament times of the several ideas which are contained in the doctrine in question; (*c*) the implications of New Testament teaching concerning the effects of redemption and baptismal grace; (*d*) the inspired teachings of St. Paul as to the first and second Adam. In considering these data the catholic doctrine of biblical inspiration requires us to assume that the spiritual teachings of the Scriptures, although very unequal in maturity and definiteness of expression,

[1] See pp. 123, 124, above. Cf. the author's *Authority, Eccles. and Biblical*, ch. vii. § 9.

The appearance of strength in Dr. Tennant's attack upon the biblical argument for the doctrine of original sin is chiefly due to his giving a negative turn to the proof-text method. He rests his case in this direction upon what the proof-texts do not prove, that is, when *separately considered*. He ought to have reckoned with the contention that catholic doctrine affords an explanation of all the relevant phenomena of revelation, *inductively considered*.

proceed from one divine mind; and, when correctly generalized, cohere together in an intelligible and significant unity.

(*a*) Remembering that the Eden narrative cannot be regarded as demonstrably historical in its details, we ought not to rest any argument upon the assumption that it must be interpreted as history in the strict sense of that word. If, however, we believe in its inspiration, we must assume that, whether derived, humanly speaking, from exact knowledge of facts, or from inaccurate traditions, or from pious fancy, or even from mythical material, the narrative referred to is an authoritative medium of divine teaching, so that its spiritual implications constitute trustworthy data for our purpose.[1] I believe it to be clear that the narrative implies the non-necessity of man's first transgression, its conscious wilfulness, and its being followed by loss of certain spiritual and supernatural advantages previously enjoyed — including communion with God, and divine favour, immunity from shame and sorrow, and the possibility of physical immortality. The narrative nowhere indicates the effect of this disaster upon posterity. But the subsequent chapters of Genesis seem to be intended to exhibit man's moral degradation as connected with his being left to battle unaided with the natural imaginations and impulses of his heart. He is described, in brief, as fallen from the original spiritual state of his first parents. The inference that

[1] On the infallibility of Scripture and its relation to the historical value of biblical narratives, see pp. 119–123, above.

his degradation is somehow connected with Adam's sin, if not capable of demonstration, is at least naturally made, and cannot be shown to be inconsistent with the sequence of ideas in Genesis.

(*b*) The Old Testament at large indicates that the Israelites were slow in attaining definite conceptions of sin; and at no time prior to the publication of the Gospel were they able to combine their conceptions into coherent doctrine.[1] But the Old Testament also shows that their growth in the knowledge of sin was divinely guided; and the positive ideas which they acquired are either contained in, or harmonize with, the fuller, clearer, and more coherent teaching of Christian doctrine. The elements of Christian teaching which are wanting in the Old Testament are just those particulars which could not be understood prior to the revelation of Jesus Christ, and the fulfilment of His redemptive work on earth.[2] The particulars which do emerge in the Old Testament include the following: (1) the universal prevalence of sin among men;[3] (2) the natural incapacity of men to avoid sinning;[4] (3) an association of this incapacity with birth

[1] F. R. Tennant, *Sources*, ch. iv; Canon Bernard, in Hastings, *Dic. of the Bible*, *s. v.* "Sin"; A. B. Davidson, *Theol. of the Old Test.*, ch. vii.

[2] What redemption was to restore needed to be learned before the blinded spiritual intelligence of fallen man could acquire a definite conception of what had been lost.

[3] Cf. Gen. vi. 5; viii. 21; 1 Kings viii. 46; Job xxv. 4–6; Psa. cxxx. 3; cxliii. 2; Prov. xx. 9; Eccles. vii. 20.

[4] This is implied in several of the passages cited above. Tennant seems to reckon this as opposed to the doctrine of original sin,

and inborn propensities;[1] (4) the prevalence, after the time of Ezekiel at least, of the antithetic beliefs in human solidarity as to sin, and in the exclusive responsibility of individual sinners for their own transgressions — this mysterious antithesis of revealed truths also being discoverable in Christian doctrine.[2]

(*c*) Believers in plenary inspiration, whatever their theory of its method may be, have to assume that biblical doctrines harmonize with each other. Accordingly, when the New Testament is found to teach clearly the need for all the race of redemption from sin, and the necessity that all who are born of the flesh should be re-born of the Spirit, the inference is inevitable that our individual sins do not constitute the sole basis of our need of redemption. We are led, therefore, to emphasize the spiritual implications of the Eden narrative, and the teaching of the Old Testament

*Sources*, pp. 102, 103. It certainly is not contrary to the catholic doctrine which treats the fall as a loss of grace and reversion to unassisted natural weakness.

[1] Psa. li. 5; Job. xv. 14, 15.

[2] See Tennant, *op. cit.*, pp. 97–105. On human solidarity, and the solidarity of families and tribes in sin, cf. Gen. ix. 25; xx. 9; Exod. xx. 5; xxxiv. 7; Deut. v. 9; 2 Sam. iii. 29; xxi. 5 *et seq.*; 1 Kings ii. 33; Isa. vii. 17; Jerem. xiv. 20; xv. 4; xxii. 28–30; xxvi. 15; xxxii. 18; Lam. v. 4; Hos. i. 4. The frequency with which the principle of inherited liability for the sins of previous generations is set forth is noticeable. On the counter truth that each soul is responsible for its own sins, and for those only, see Jerem. xxxi. 29, 30; Ezek. xviii. Catholic doctrine leaves place for both of these truths, teaching inherited consequences of Adam's sin, but limiting personal guilt to those who commit actual sin. Cf. pp. 147, 148, below, on the readiness of ancient writers to emphasize either of these doctrines, as occasion seemed to demand.

as to the solidarity of mankind in relation to sin; and we find in them incipient revelations of the Christian doctrine of original sin.

(*d*) St. Paul's teaching on this subject appears most prominently, although not exclusively, in the fifth chapter of his *Epistle to the Romans*;[1] but he nowhere attempts to give a complete or formal definition of revealed doctrine. Such a definition cannot be found in any part of Scripture. His attention is given especially to the parallel existing between our relations to the first and to the second Adam. His language shows traces of his having assimilated Rabbinic ideas. For a believer in St. Paul's inspiration this fact does not deprive his teaching of authority, but affords one of many instances of the Holy Spirit's method in appropriating and improving existing forms of thought and language for the revelation of divine truth.[2] St. Paul's

[1] Esp. ch. v. 12 *et seq.* This passage does not stand by itself, however, as seems to be thought by modern writers. It follows logically upon the previous chapters, giving a Christian explanation of the universal prevalence of sin which he has been emphasizing; and it is followed by an analysis of the struggle between the inherited carnal propensities of our nature and the higher law of the regenerate Christian mind.

[2] Rabbinic forms of thought, defective though they were, constituted factors in the mental preparation of Israel for Christ. St. Paul's newly acquired Christian standpoint enabled him to supply what was needed, and it is his *Christian use* of these forms of thought — based upon the personal claim and redemptive work of the second Adam — that determines their meaning in his treatment of the doctrine of sin. He was an inspired prophet who transcended his Jewish training, and had been emancipated from Rabbinic limitations. Dr. Tennant's refusal to allow for his inspiration reduces

message serves to complete the biblical data by which the catholic doctrine can be illustrated and confirmed. He clearly teaches that Adam's sin is the cause of our sinfulness, although sin is not imputed to us until we ourselves transgress the divine law; and that mortality is an inheritance from Adam, and an effect of his sin. He uses the word sin to describe the effect of Adam's sin upon us, but this use of the word is plainly secondary, for if he had meant that we inherit sin in the literal sense of that term, he would not have denied its imputation to men prior to their knowledge of the law and their disobedience.[1] If his language in the *Epistle to the Ephesians*, describing the unregenerate as "by nature children of wrath," is to be understood as referring to the effect of Adam's sin upon his posterity, it affords another instance of the same symbolical use of language.[2]

the value of his own treatment of St. Paul's teaching. *Sources*, ch. xi.

[1] Sanday and Headlam, in their commentary on this Epistle, p. 147, say, "He uses the only kind of language available to his own intelligence and that of his contemporaries. But if the language which he uses is from that point of view abundantly justified, then the application which St. Paul makes of it is equally justified. He, too, expresses truth through symbols, and in the days when men can dispense with symbols his teaching may be obsolete, but not before." This applies to his implied dependence upon the Eden narrative, the value of which does not depend upon its all-round historical validity.

[2] Ephes. ii. 3. It has been taken to mean no more than that men are by nature unable wholly to avoid sin. Other interpretations are also advanced. See Tennant, *Sources*, p. 271; *Origin of Sin*, pp. 227, 228; and T. K. Abbott and J. A. Robinson, *in loc.* The teaching of 1 Cor. xv. 45–50 should not be overlooked.

No doubt it was reverence for Holy Scripture that led St. Augustine to appropriate St. Paul's terminology in technically defining the effect of Adam's fall upon mankind; and the phrase "original sin" derives its theological currency from him. But in giving technical force to terms which St. Paul employed symbolically and with untechnical freedom, St. Augustine gave birth to one-sided views and to an interpretation of St. Paul which has given an unfortunate twist to much later theology. His one-sidedness was also due to reaction from the Pelagian denial of inherited spiritual incapacity and of our dependence for salvation upon supernatural grace. This reaction led St. Augustine to deduce from the occasional references of Holy Scripture to the mystery of divine predestination and election a very definite doctrine of absolute predestination and irresistible grace. This doctrine isolates, exaggerates, and caricatures the biblical teaching upon which it is based, and nullifies the Scriptural counter-truths of human freedom and personal responsibility.[1] St. Augustine himself and his catholic successors were prevented from drifting into positive heresy by their docile attitude towards the Church and by their belief in the catholic doctrine of sacramental grace. But the sixteenth-century protestants and reformers, who broke away from the Church and abandoned her sacramental doctrine, pressed the logic

[1] Cf. J. B. Mozley, *Predestination*, chh. v–viii. The results of St. Augustine's influence upon scholastic theology are exhibited by the same writer, chh. ix, x.

of St. Augustine's inadequate and one-sided premises with thorough-going consistency. Thus Calvinism was born, and to the popular identification of catholic doctrine concerning sin with Calvinism is largely due the modern conviction that that doctrine is immoral and inconsistent with modern scientific knowledge.

Before dismissing the subject of St. Augustine's influence in provincializing Western theology as to sin, I ought to call your attention to the seeming connection between his theory of irresistible grace and the later protestant denial that man's primitive state was supernatural. If divine grace is really irresistible, the fact that Adam fell establishes his non-possession of it.

The ancient fathers, previously to the time of St. Augustine, were too much absorbed in vindicating the truths connected with the doctrines of the Trinity and of Christ's Person to undertake the labour of formulating anthropological doctrine. The consequence was twofold. In the first place they wrote with untrammelled freedom — a freedom which is justifiable before the rise of determinate heresies causes technical precision of language to be necessary. In the exercise of this freedom they asserted baldly and without qualification whichever of the opposite aspects of the double mystery of inherited incapacity and personal freedom and responsibility that happened to be under consideration.[1] Moreover, historical study shows that, in the East at least, occasions for an assertion of indi-

[1] See J. B. Mozley, *op. cit.*, ch. iv, *init.* He gives illustrations in note xv. Cf. p. 143, above.

vidual freedom and responsibility occurred more frequently than those which demanded emphasis upon man's inherited propensity to sin.[1] But, in the second place, these partial statements were not developed into theological systems, and both aspects of the truth held their own in general patristic teaching. In particular, with all their tendency to take an optimistic view of human capacity, representative Eastern writers were as free to acknowledge and assert what came to be described as the doctrine of original sin as were their Western contemporaries.[2] It was only by evasion that Pelagius escaped condemnation when he appeared before the Orientals at Jerusalem and Diospolis; and the Letter of Pope Zosimus, asserting the catholic doctrine of original sin as against Pelagianism, was signed by the Eastern as well as by the Western episcopate.[3]

The conclusion of the matter is that the doctrine concerning man's primitive state and fall which I have endeavoured to define and to distinguish from Augus-

[1] Examples are included in Tennant's survey of patristic teaching before the time of St. Augustine: *Sources*, pp. 275 *et seq.*

[2] Dr. Tennant says, *Sources*, p. 328, "And we have seen that, in spite of the tendency, natural to the Eastern mind, to emphasize individual responsibility and free-will, nevertheless the belief in the race's solidarity and unity with its first parent, in the one hand, and in the heredity of moral taint derived from fallen Adam, on the other, was discoverable in most of the Greek Fathers from Origen onwards."

[3] An account of these proceedings is given by W. Bright, *Age of the Fathers*, Vol. II., pp. 182–190, 205–215. Cf. J. F. Bethune-Baker, *Early Hist. of Christian Doctrine*, pp. 316–320.

tinian and Calvinistic accretions is both catholic and scriptural; but it ceases to preserve its catholic and scriptural meaning when it is isolated from, and pressed at the expense of, the equally catholic and scriptural doctrine of man's individual freedom and responsibility.

# LECTURE V

## MAN'S PRIMITIVE STATE

At the close of my last lecture I referred to the combination in catholic doctrine of the antithetic truths of inherited moral incapacity, on the one hand, and of individual freedom and responsibility on the other hand; also to the fact that the one is to be held without prejudice to the other, if we would hold either in its catholic meaning. This illustrates a principle of vital importance — one of which I made use in my first lecture,[1] but which demands especial emphasis during the rest of our discussions. I shall therefore make a few remarks upon it before undertaking the task of this lecture, which is to compare the evolutionary theory with the catholic doctrine of man's primitive state.

The principle referred to is this: that, owing to the complexity of truth and the multiplicity of its aspects, no single proposition concerning fundamental relations can be regarded as capable of describing adequately the realities with which it is concerned. Every such proposition, whether theological or physical, describes a partial aspect of reality, and its inadequacy must be assumed in maintaining its truth. It may be

[1] See pp. 27–33, above.

true, and even final, as a description of a partial aspect; but it becomes a caricature of truth, and false, when interpreted as sufficient by itself for an adequate philosophy. The truest conclusions of induction, whether in physical or in theological science, are what the late J. B. Mozley called incipient truths.[1] That is, they define a knowledge which is true so far as it goes, but which ends in mystery, and is therefore true only when the larger mystery is tacitly recognized as limiting the sufficiency of our conclusions. This is not to nullify them, nor is it to reduce them to a purely subjective or relative value. The knowledge which they define is objective knowledge, but it is partial and incipient. If treated otherwise, and used as the basis of absolute systems of philosophy, it becomes one-sided, in the invidious sense of that term, and misleading. The best physical scientists recognize that their conclusions run into mystery, and that the mystery which surrounds the very fragmentary propositions of natural science is fully as great as that which envelops the doctrines of Christianity.[2]

Now the unknown is much more extensive than the known. It is so extensive, indeed, that we are often quite baffled in our attempts to harmonize proposi-

[1] *Predestination*, ch. ii., *init.* Cf. the author's *Introd. to Dog. Theol.*, pp. 170–179, on catholic balance.

[2] "But beyond the bright search-lights of science,
Out of sight of the windows of sense,
Old riddles still bid us defiance,
Old questions of why and whence."
W. C. D. Whetham, *Recent Devel. of Phys. Science*, p. 10.

tions which are separately seen to be true. It is as if we stood in the arc of an infinite circle — which is by definition a straight line — and found ourselves, as we certainly should, utterly unable to verify the fact that the lines which we see to run straight away from each other really constitute an arc, and meet on the other side of the infinite circle to which they pertain. The fact is that we are everywhere confronted by antitheses of truth. Two propositions, severally established by proper lines of investigation, become in their formal statement apparently opposed to each other. What are we to do? To reject either is to stultify knowledge, and also the process by which alone knowledge can be acquired. To discover the larger realm of truth in which their harmony, as fragmentary aspects of the whole, can be explained, exceeds our capacity. Plainly we ought to acquiesce in the actual conditions. We should confess the presence of insoluble mystery; and we should hold each established proposition in a manner which leaves us free to do justice to other propositions which are equally valid, although equally fragmentary. This conclusion is not merely academic, but describes a duty. I say "a duty," because these antithetic propositions, separately inadequate, have to be accepted together, if we are to avoid one-sided caricature and acquire trustworthy knowledge; and our ideals of life and duty depend very largely upon our knowledge of truth.

To apply this principle theologically, we are confronted on the one hand by conclusive evidence that

we are free agents, and individually and exclusively responsible for our own conduct. On the other hand, we have sufficient reasons, both natural and spiritual, to acknowledge that mysterious laws of heredity, and an omnipotent will, are at work behind our wills, and prior to our birth, which to an important degree determine our personal characters and moral dispositions. This mystery stands over against the mystery — and it is a mystery — of free will and responsibility. We need to realize that what we call respectively freedom and inherited propensity, responsibility and predestination, are incipient truths. Their separate evidence requires our acceptance of each as true. But their fragmentariness warns us against making either one absolute, as if complete by itself.

The same principle needs to be borne in mind when we compare the conclusions — I mean, of course, sufficiently established conclusions — of theologians and physical scientists. Separately examined, they may be seen to be equally valid; but the lines of thought which they initiate lead us into insoluble mystery. This accounts for the fact that we cannot adequately explain the antitheses which convince one-sided thinkers that a contradiction exists between theological and physical doctrines. We need to perceive that the physical and the superphysical are both real, and that their antitheses are caused by gaps in our knowledge, not by any discontinuity between the physical and the superphysical.

Breadth of view is generally acknowledged to be

important. But we may easily forget that genuine breadth requires us to acknowledge, and reckon with, all established conclusions which come within our intelligence. And if any two of them defy our efforts adequately to explain their unity, we should none the less hold to the one without abandoning hold on the other.[1] This is breadth, and it also constitutes an essential qualification of a catholic temper.

The propositions which we are to compare in this lecture are contained in the theory of the natural evolution of species and in the catholic doctrine of man's primitive state. In making this comparison I do not undertake to expound the hidden mysteries which, if we understood them, would enable us to explain the precise manner in which physical evolution and man's original state of grace are made to constitute an unbroken continuity of divine working. What I shall endeavour to show is that to accept both of the propositions in question is possible without either stultification of mind or provable violation of the principle of continuity upon which physical scientists rightly insist.

The premise upon which my argument depends is that the physical and the superphysical are equally genuine but distinct factors in the history of this uni-

[1] Dr. Tennant, in *Origin of Sin*, pp. 18–20, quite fails to do justice to Dr. Mozley's argument to this effect. It is not meant that we can escape real contradiction by an appeal to mystery; but that *when two truths are severally seen to be established*, our inability to explain their harmony does not require us to reject one of them.

verse, so that the knowledge of both is required before we can dogmatize as to the fundamental principles which in their working explain the continuity of things. This premise, to which I shall return at a later stage in this lecture, is opposed to the philosophy of naturalism, but is entirely consistent with physical science, properly so called. It is, indeed, frankly accepted by some of the most eminent physical scientists of our day.

Before proceeding further, let me define side by side the two propositions with which we are concerned. They are in substance as follows:

1. Catholic doctrine teaches that man's primitive state was such that he was able to avoid both sin and physical death, this ability being due to supernatural endowments and conditions.

2. Modern biological science teaches that man's physical organism is a product of natural evolution, and that its specific characters are determined by such origin. Among these characters our purpose requires us to notice brutish impulses and physical mortality.

These two propositions are thought by certain theological writers, as well as by many physical scientists, to be irreconcilable; and the view which is taken by those who prefer to be guided by biological science rather than by theological doctrine is substantially as follows: We can "find the ground of the possibility and occasion for sin in our natural constitution regarded as the perfectly normal result of a process of development through which the race has passed previously to

the acquisition of full moral responsibility"; and we can "assign the rise of evil itself simply to the difficulty of the task which has been countered by every individual person alike, the task of enforcing his inherited organic nature to obey a moral law which he has only gradually been enabled to discern." I have stated this view in terms employed by Dr. F. R. Tennant, its most important champion.[1] He rejects the doctrine of an original righteousness and primitive state of grace, as involving a breach of continuity in human development.

It is maintained in these lectures that scientific investigation confirms rather than disproves the presence of superphysical factors in man's evolution, so that we need not feel constrained to regard man's primitive state as wholly determined by the physical factors of his origin.[2] And when the presence of superphysical factors is once acknowledged it is perceived that we cannot determine their results by the data which are now available for biological investigation.

## I

An important question should be faced at this point. Assuming the truth of the evolutionary hypothesis, what does it involve and prove in relation to our subject? This question ought to be answered with due regard for other accepted postulates and conclusions of modern science. In fact, it may well be enlarged

[1] *Origin of Sin*, p. 81. [2] Cf. pp. 31, 32, 108, above.

in its scope so as to read, What, in view of the assumed truth of the evolutionary hypothesis, can modern science at large be rightly said to prove in relation to man's primitive state? In answering this question, it is unnecessary for me to "go behind the returns"; and I shall not undertake to criticise the premises and arguments which capable judges regard as sufficient to establish the conclusions to which I refer. I shall, for the purpose of my argument, accept them at their face value. On the other hand, I shall somewhat ignore alleged scientific results that have failed to secure general and unqualified acceptance by those who are competent to estimate their validity; for it is obvious that, until they secure such acceptance, they are rightly to be regarded as doubtful.

1. From the point of view which I have defined we must consider it to be established that, so far as natural science throws light upon man's origin, primitive man was produced by the natural evolution of species. To put this in another way, man owes his physical nature to physical antecedents, and to natural and inherited variations of brute-ancestors. The investigations of natural science do not establish the contention that, in his primitive state, man possessed other and higher advantages than could be afforded by the natural evolution of species.

2. It must also be regarded as established that the only human conditions which can have been produced by such evolution are such as are found in fact to be natural to man. These conditions include an inherit-

ance of animal propensities which in man's brute-ancestors were morally innocent in their gratification, but which in men ought to be, and yet never are, perfectly regulated and restrained by moral considerations and motives. The moral capacity of mankind is not sufficiently developed, in other words, to enable any man completely to control his inherited and long-established animal instincts and impulses. In brief, the conditions in man which his natural evolution appears to explain are precisely those which theologians seek to account for by the doctrine of a fall from original righteousness. Moreover, man is found to possess no natural capacity to escape physical death. He is by nature mortal. If, therefore, our conclusions with regard to man's primitive state are to be determined exclusively by the established results of natural investigation, — an important if, — we must surrender belief in the catholic doctrine. The possibility remains, of course, that other than purely evolutionary factors had to do with man's original condition; and their presence can be accepted without stultifying the validity of the scientific conclusions which I have been defining.

3. A third result of scientific investigation can be expressed as follows. Broadly speaking, the study of prehistoric remains, of archæology, of comparative religion and of related departments of inquiry, establishes the contention that the moral depravity [1] of human

[1] That is, as estimated by Christian standards and externally considered. The subjective culpability of ancient races is, of course,

beings and the approximation of their manner of life to that of their beastly ancestors is somewhat proportionate to their antiquity. In whatever part of the world man's early state is investigated, and whatever race of men is considered, this law of development from ancient savagery is said to hold good. Seeming exceptions have been discovered, and the existing savage races are thought by many to show signs of degeneration from higher conditions and beliefs. Some authorities in comparative religion think that evidence exists of a primitive monotheism; and many ancient peoples possessed traditions of a better age. Yet the general conclusion that the nearer we come in our study of man's past to the time when he was evolved from a lower species, the more closely do his habits resemble those of his beastly progenitors — this conclusion is too widely accepted either to be ignored in our inquiry or to be denied with convincing effect by non-experts in anthropological science. I certainly do not class myself among anthropological experts; and it is not my intention in this discussion to combat the contention that natural investigation, exclusively considered, appears to show that man's moral depravity, broadly speaking, is proportionate to his antiquity.[1]

to be estimated from the point of view which these races were capable of taking.

[1] Lest I be misunderstood at this point, I ought to remind the reader that I am summarizing the prevailing view of anthropologists. That it requires some modification, I believe. But the argument of these lectures does not require me to show this, and I am seeking to meet the modern attack as far as possible on its own ground.

4. Finally, the doctrine that there is a continuity in the history of things which cannot be broken, and that any alleged event which would necessarily interfere with this continuity is for that reason incredible, is too well established to be disputed by any one who desires to be thought intelligent. The application of this doctrine to our inquiry is not difficult to perceive. There appears to be a very obvious continuity between the development and habits of man's immediate brute-ancestors and the subsequent moral development of mankind. And natural investigation brings to light no facts which can be seriously regarded as evidence that this continuity has been broken by such a primitive state of our race as is described by catholic doctrine.

The conclusions which I have defined — that physical evolution accounts for the origin of the physical man; that the only characteristics of human nature known to modern science are those which man exhibits in what theologians call his fallen state; that the dominance of animal propensities in man is in proportion to his antiquity; and that the habits of ancient races seem to be connected with those of his brute-ancestors by a continuity of development which leaves no place for such a primitive state as is taught by catholic doctrine — these conclusions hang together and, when viewed from a purely naturalistic standpoint, certainly seem to prove that the catholic doctrine which we are considering is absolutely incredible. Even among those who do not accept pure naturalism the habits

of thought which modern science has caused to prevail give these conclusions an impressiveness that is apt to be lacking to the arguments by which catholic doctrine is supported. The fact is that theological arguments have ceased to be interesting. The success of modern science in laying bare the secrets of nature, and the seeming sufficiency of scientific hypotheses, have dazzled the modern mind, and have put theological considerations out of court — especially when they appear to go counter to the cosmological and anthropological theories of experts in natural science.

Under such circumstances we ought not to be surprised to find that belief in the doctrine of man's primitive state of righteousness and grace has been seriously weakened among professing Christians, and that Christian apologists do not in this direction always succeed in avoiding fatal compromise. This is partly a result of their commendable efforts to get into sympathetic touch with the modern mind, which bring them more than they realize under the insidious influence of naturalistic forms of thought. But it is also due in part, I believe, to the embarrassing effect of the protestant's insistence upon the purely natural quality of man's primitive state, and of repellent scholastic opinions which are still thought by many apologists to be involved in the doctrine of man's primitive state and fall. If man's primitive state was purely natural, it is difficult to avoid the naturalistic inferences which bring it into line with the ancestral conditions of lower species, on the one hand, and ancient human sinful-

ness, on the other hand. I do not say that it is impossible; but it is certainly very difficult.[1] I emphasize all this because I believe it to be important that you should understand the great plausibility of the views which have caused a rejection of the doctrine which I am concerned to defend; and that you should take note of the conditions, both scientific and speculative, which appear to account for the fact that many Christian writers consider the doctrine of man's primitive state to be a weak point in traditional theology. We cannot successfully meet attacks on Christian doctrine without appreciating the causes which make them dangerous; and they must be met, if Christian doctrine is to retain its hold upon those who have been unsettled by them.

## II

In reckoning with the scientific conclusions which I have been formulating in this lecture, I shall devote especial attention to the principle of continuity — the principal, that is, that nothing can happen which is not rationally connected in causation with what has previously happened, and with what will occur in the future.[2] I shall consider this principle at some length, because upon the use that is made of it largely depends

[1] How difficult, is apparent in Jas. Orr's *God's Image*, the ablest defence of the protestant view as against the attacks of evolutionists. Dr. Orr is forced to minimize the scientific claim of the evolutionary theory, and does not seem adequately to face the issues which its possible validity raises.

[2] Some anticipatory remarks have been given in pp. 99–100, above.

the plausibility of the reasons advanced in the name of science for rejecting the doctrine of man's primitive righteousness and grace.

We must believe that nothing happens capriciously, but that the whole sequence of events is rationally determined by laws which cannot be broken. There are no real violations of this principle. Every event is the result of causal antecedents; and if the sequence of causation ever seems to be broken, we feel compelled to assume that the seeming is to be disregarded, and that unknown factors have operated, rather than that the principle of continuity has been violated. This principle is postulated in all scientific inquiry; for, if events occur in a haphazard and disconnected manner, there is obviously no intelligible basis for scientific induction. Nature, under such circumstances, would consist of nothing but an unintelligible stream of phenomena. To reject, or even to neglect, the principle of continuity in our argument is to plead guilty of unintelligence, of irrationality. The last person in the world who can consistently make such a blunder is the Christian believer in God. If the course of things is controlled by infinite wisdom, and with reference to one ultimate purpose and event, as Christians maintain, then the principle of continuity is as fundamental to theology as it is to physical science. This being so, we are logically constrained to confess that, whenever a theological proposition is proved to be inconsistent with the continuity of events, it is also shown to be irrational and incredible. There is no

escape from this conclusion — at least none for rational thinkers.

We need, however, feel no anxiety on this account as to the validity of catholic doctrine. But we do need to realize that no defence of the doctrine of man's primitive state will appear adequate and convincing under the existing conditions of thought which does not establish in men's minds a rational place in the sequence of things for original righteousness. Can this requirement be met? It certainly cannot be met on the philosophical basis of naturalism. But naturalism is not science; and a failure to fulfil its demands signifies nothing to those who attend to the real teachings of science. Proper requirements can be met by vindicating a larger and truer conception of continuity than naturalism permits men to attain. This is the method that I intend to pursue.

I start with the indisputable premise that the continuity with which we ought to be called upon to reckon is the continuity of all things taken together. "Order is Heaven's first law," and that law controls everything. The sequences of the universe constitute moments in the working out of one divine plan; but the factors which operate and co-operate in the drama are more various and, in determinative particulars, higher than those which can either be described by the terms or be discovered by the methods of physical science. What is called the physical order does not of itself constitute the whole order of things; nor are its developments and continuities so independ-

ent and self-sufficient that they can be adequately rationalized and philosophically explained without resort to the higher mind and superphysical operations and factors that lie behind and determine their place and significance in the whole order. Nature is orderly, and reveals the principle of continuity, because it is part of a larger order in which that principle holds sway. But when nature is regarded in isolation from the higher order which it subserves, and dealt with as if complete in itself, gaps appear, and the very principle of continuity which it teaches is made more difficult to understand.

Some of these gaps have been noted in my discussion of the evolutionary theory. The advance from the inorganic to the organic and living constitutes an example, as does also the appearance of mind in a universe previously non-intelligent. The materialistic Professor Tyndall, in an address to the Physical Section of the British Association at Norwich, in 1868, said: "Granted that a definite thought and a definite molecular action in the brain occur simultaneously; we do not possess the intelligent organ, nor apparently any rudiment of the organ, which would enable us to pass, by a process of reasoning, from the one to the other." It is clear that physical scientists cannot successfully reduce all the phenomena by which they are confronted in nature to purely physical categories. The presence of superphysical factors is not intelligently to be denied, and these factors modify physical sequences in manners that have very important significance in

relation to the principle of continuity. Let me repeat an illustration previously employed. No physical law is more completely established by science than that of gravitation, and yet its effects are constantly reversed by voluntary agency. This happens, for instance, whenever a ball is thrown into the air by a human hand. But such an occurrence is not considered by anyone either to violate the law of gravitation or to subvert the principle of continuity. The reason is simple. Men assume, whether they are willing to acknowledge the fact in terms or not, that the working of continuity is determined by a larger scheme than can be described by purely physical terms.

Many factors are working together in nature, and some of them are superphysical. The superphysical includes and finds explanation in personality, and the limits of personality cannot be determined by physical science. But the intelligibility of the physical order can be explained only when we assume that a supreme Person exists, and that His comprehensive plan affords the true and ultimate explanation of the continuities which are discovered in the physical universe.

The question which has to be met in determining the credibility of catholic doctrine as to man's primitive state is not whether the principle of continuity can be broken, for there is no division of opinion on that question. It concerns the scope of the plan that accounts for continuity. Consequently the issue is not between continuity and discontinuity, but between rival cosmical philosophies — the naturalistic and the

theistic. It is between two conceptions of history, one excluding the sovereign mind, the other asserting its control of all things in a drama wherein all realities, all spheres, and all the ages are intelligibly connected in one orderly march of events. It is, in brief, between acknowledgment and repudiation of the supernatural. I do not mean, in saying this, to imply that all who reject the catholic doctrine under discussion repudiate the supernatural. I mean that the plausibility of the arguments against that doctrine which are advanced on evolutionary grounds is due to the assumption that a merely natural evolution affords an adequate explanation of things which are otherwise explained by those who do justice to the supernatural.

## III

What does the word supernatural mean? It is a relative term, although it signifies objective factors in history. It does not mean the unnatural, for every thing is natural from its own standpoint, and all is orderly in ultimate meaning and effect. It means a higher natural than can be explained by the particular nature or natures which determine our standpoint in using the word. Its meaning, therefore, depends upon what natures are assumed to be transcended by what we call supernatural. Thus human intelligence is supernatural to the merely physical, and volitional action is supernatural to undirected force. In its theological use the point of view is that visible order of natures which reaches its highest level in man. It

includes human nature and all inferior natures, along with the forces and capacities that are resident in them and native to them. The supernatural is superhuman as well as superphysical. Thus defined, the supernatural depends for its reality upon the existence of higher natures, higher forces and higher laws than are discoverable or explainable by physical, animal, and human forms of being, life, and capacity. No doubt the word supernatural has other uses, and such uses are allowable, although they are modern, and ought carefully to be distinguished from this the historical and theological use of the term.[1]

You can perceive that the reality of the supernatural is involved in discussing the catholic doctrine of man's primitive state, because that doctrine implies the working of factors which transcend the resident forces and capacities that go to make human nature what it is in itself. In asserting the reality and operation of these higher factors we assume that man's nature is not the highest nature, and that its resident capacities are transcended in the divine ordering of human history.

Men can and do repudiate the doctrine that the supernatural, in the sense I have defined, is required to account for the miracles of sacred history, but not on purely scientific grounds. Physical science is

[1] The author has treated more fully of the supernatural in his *Introd. to Dog. Theol.*, ch. ii, where numerous references are given. Among suggestive treatments of the subject may be mentioned, Chas. Gore, *Incarnation*, Lec. ii; Illingworth, *Divine Immanence*, pp. 100–145; Geo. Fisher, *Supernatural Origin of Christianity*, Ess. xi.

driven by the necessities of specialization to ignore the supernatural in its inductions, but when physical scientists deny the reality of the supernatural they forsake their chosen specialty, and make speculative dogmatism do duty for ascertained facts. It is fully as irrational for a natural scientist to deny that the supernatural operates in history, as it is for the utilitarian to deny that beauty exists. The issue is philosophical, and is joined between naturalism and theism. It is unscience, not science, that is opposed to belief in the supernatural.

Which is the most rational view of history, that which discovers a sovereign mind ordering all things according to a plan that cannot be defeated, or that which interprets the higher by the lower, and accounts for the evolution of things by a self-caused development of non-intelligent things into intelligent makers of history? That is the question at issue. The world was viewed by ancient Greek thought as a mechanical cosmos, but by Hebrew writers as a drama or age. No doubt an adequate philosophy will regard both views as partial truths. There is a vast mechanism in which uniformity is in evidence; but, as Professor Huxley frankly confesses, the mechanical aspect of things does not of itself exclude the teleological.[1] The world is also a drama. Evolutionary thought requires emphasis upon this aspect. There is progress in things, and progress means innovation. An endless cycle continually returns upon itself. It reaches no goal and

[1] *Darwiniana*, pp. 109–114.

fulfils no purpose. It reduces all things to vanity, and this thought is the explicit basis of the pessimism of the writer of Ecclesiastes. But progress in things demands the presence of forces working for progress; and when the progress requires a transcending of existing natures, these forces must also transcend. They must be supernatural to the things which are made to transcend their kind.

The Christian view of history is in fuller accord with these necessities of evolution and progress than any other. It also enables us to do full justice to the physical and mechanical aspects of the cosmos; and to account for the gaps which appear in the continuity of things, when they are regarded from an exclusively physical point of view. But it must be accepted in its entirety, for its particulars hang together in one coherent scheme. In this scheme physical evolution can find a reasonable place, and by means of its mysterious processes the human organism may be thought to be created.

But this new creature was designed for righteousness, and he possessed moral instincts, and a dawning sense of responsibility, of which his animal progenitors knew nothing. Every previous order of life had been able to fulfil the law of its being, and every ancestral precedent suggests that man was also to be enabled to do this. But if he had been left to the condition of a merely moralized animal, he would have been unable to fulfil what had become the most important law of his being. His inherited animal instincts were

strongly intrenched, and called for unrestrained gratification whenever occasion should arise. His dawning sense of obligation to restrain himself in obedience to a higher law and purpose was necessarily undeveloped, and doomed to defeat by the beast in him. To permit this anomaly, this unprecedented "missing the mark" [1] in the functioning of the new species, would seem to violate not only the resourceful wisdom of the Creator, but also His infinite justice and righteousness.[2]

The problem of moral evil is too great for us to explain adequately, but to suppose that God created man in such wise that he unavoidably became in ever so small a degree responsible for the impossible appears to make the problem absolutely fatal to belief in divine righteousness. The possibility of sinning appears to be necessary for a development of human righteousness; and we perceive that sin, when it takes place, is likely to prove contagious; but to believe that God Himself constituted what would be in effect the necessity of sinning appears to be the climax of immorality in belief. And the difficulty is not lessened by describing the process by which man was made in evolutionary terms. Man is the predetermined goal of the process which built up his organism and constituted his original condition; and a process which

[1] One of the Old Testament words for sin, חטא, means literally, missing the mark. See E. R. Bernard, in Hastings, *Dic. of the Bible*, *s. v.* "Sin," i. 5.

[2] It will be neçessary to recur to this difficulty, and in some measure to repeat myself, in discussing the doctrine of original sin. See pp. 219–222, below.

was to produce a helpless sinner — held responsible for being incapable of fulfilling what had become the primary law of his being, can hardly have been left to work out its immoral logic by Him who is the source of all justice and goodness.[1]

[1] See J. Orr, *God's Image*, pp. 187 *et seq.* Dr. Tennant says, *Origin of Sin*, p. 122, "that responsibility for the *possibility* of moral evil and for the opportunities for its realization lies with God: that responsibility for the actuality of moral evil lies with man." On p. 127 he adds, "In asserting the real independence of the human will we remove the responsibility for actual evil from God." He does not correctly state the problem, and the proof that he does not is to be found in his own Preface to the 2d ed., p. xxii, *b* and *c*. He there says, "*b*. . . . There has been a period in the history of both race and individual [he would probably be willing to add, "in the history of man's evolution from brute-ancestors." The purely evolutionary view of the origin of sin, at least, so postulates], in which even volitional conduct has been innocent, however far such conduct differs from that later prescribed by moral sanctions and the conscience. So far, sin has not emerged at all. *c*. A period is reached during which moral sentiment is gradually evoked and moral sanctions are gradually constructed. Acts knowing no law now begin to be regarded as wrong. The performance of them henceforth constitutes sin."

This means that when man emerged into consciousness of moral responsibility he had already become habituated to modes of action which now became sinful for him. Apart from the supernatural assistance hypothecated in the catholic doctrine of man's primitive state, under such a handicap sin was more than possible. It was inevitable. His adoption of the evolutionary view of the origin of sin requires, therefore, that he should consider God to be responsible for the *inevitableness* of human sin.

On page 142 of the same work he urges an argument of Dr. Bruce (Providential Order, pp. 165–167), saying, "divine holiness has been no barrier to intimate relations between God and man throughout our sinful history; why then should we postulate either sinlessness or moral completeness to begin with?"

It may be urged by way of reply that my argument does not allow for differences of degree in human guilt and responsibility. The guilt of an undeveloped child is not equal to that of a full-grown man in committing the same sins, and we must not estimate the moral quality of primitive savagery by the standards of civilized life. If primitive man did wrong, he did so with a very slight sense of the wrong doing, of its consequences, and of his moral responsibility.[1] Such a reply does not meet the difficulty at all, but obscures its real nature. The fact that sin is something that ought not to be does not depend upon the degree of man's guilt in committing it. There can be no sin without some degree of consciousness of wrong-doing on the part of the sinner, and where such consciousness exists at all, there we find what ought not to be. At some moment this consciousness of wrong-doing appeared in man's history. If sin is sin, this ought not to have happened. The "ought not" constitutes the problem — not the degree of guilt which was at first attendant upon it. If naturalism is true, then what ought not to be had to be. Man had to sin. This means to a believer in God that the almighty

The real difficulty is not met by such an argument. God does indeed enter into saving relations with fallen men, having mercy upon those who are morally helpless; and this is consistent with divine holiness, which does not condone sin in providing its remedy. But the purely evolutionary view of the origin of sin requires us to believe that our moral helplessness is *itself caused by God*, instead of being the effect of creaturely wilfulness.

[1] See Tennant, *Origin of Sin*, pp. 91 *et seq. et passim.*

Source of righteousness made unrighteousness an unavoidable necessity for his creatures,[1] and holds them responsible for their helplessness.

Again, it may be urged that our argument disregards the progressiveness of moral development, and the law prevailing everywhere that sin is a necessary stage in men's advance towards perfect righteousness. Sin, it is said, constitutes enlightening experience — a missing the mark which is inevitable in learning to hit the mark, and a necessary condition of moral progress. This is summed up when the fall of man is described as a fall upward.[2] That earnest moralists should be deceived by such a view of sin constitutes one of the miracles of modern thinking. Sin is something more than missing the mark, for it does not exist

[1] Tennant says, *op. cit.*, p. 113, that if the evolutionary account of sin "sees in it something empirically inevitable for every man, . . . it by no means implies that sin is theoretically, or on *a priori* grounds, an absolute necessity." It is difficult to see how we reduce the responsibility of the author of our moral helplessness by such a description of it. If our sinning is "inevitable," whoever caused its inevitableness becomes responsible for it. If Tennant's view is correct, God has made us morally helpless.

[2] Tennant says, *op. cit.*, p. 118, "What introspection really discovers is an internal conflict between nature and nurture, natural desire and moral end; and this is the inevitable condition of human life and the expression of God's purpose." Canon Wilson, addressing the Church Congress of 1896, said, "But this fall from innocence was in another sense a rise to a higher grade of being. It is in this sense that the theory of evolution teaches us to interpret the story of the fall" — *The Guardian*, Oct. 7, 1896. Sir O. Lodge says, *Life and Matter*, p. 79, "A fall it might seem, just as a vicious man sometimes seems degraded below the beasts, but in promise and potency, a rise it really was."

except when one is morally culpable for the missing. Sin is not immaturity of moral effort, but wilful violation of conscience. So far from being a phase of upward struggle, it is a refusal to struggle upward — a turning back which ought not to occur. The "ought not" remains unexplained and contrary to divine righteousness, so long as we describe it as the unavoidable result of divine arrangements. Christian doctrine accounts for the unavoidableness of sin by teaching it to be a consequence of human sin, originally avoidable and wilful.[1] This explanation is indeed partial only, and the ethical problems which are involved in the moral solidarity of mankind cannot fully be solved. But such teaching at least relieves us of the monstrous notion that God originated the inevitableness of sin, and holds man responsible for the result of His own arrangements.

If such a notion subverts our belief in the resourceful wisdom and righteousness of God, it also goes counter to every precedent that an evolutionary view of man's origin affords. As has been eloquently argued by the late John Fiske, in his *Through Nature to God*,[2] the course of natural evolution previous to man's appearance has been by true steps, each surviving form

[1] See Aubrey Moore, *Essays Scientific and Philosophical*, pp. 61–66. He says that, "in spite of all the physical and intellectual advance which man has made, he is always and everywhere the worse for the Fall. However great his development has been, it is still a retarded development, a development slower than it need have been, less regular and less sure than God meant it to be." See also J. Orr, *God's Image*, pp. 201–212.

[2] Pp. 177 *et seq.*

of life being suited to its environment and to its specific functioning. Now to suppose that the latest and highest product of this hitherto successful process of adaptation to the requirements of existence should prove to be a missing of the mark, a being incapable of fulfilling its characteristic function, is to suppose that evolution became unsuccessful when it became most intelligent and significant. Yet it must apparently have done so, if no superadded endowments were imparted to man to offset the long-intrenched and deeply ingrained habits and propensities of his brute-inheritance. Man is constituted for righteousness, and this law of his being is not a result of later developments, but characterizes his original nature as human. Yet the history of his efforts to obey this law is a history of universal and lifelong failure. An evolution which we are told has for its law the development and survival of what is most useful is consummated by the development of a species whose chief and distinguishing mark is defeat. Unless the evolutionary theory is supplemented by the doctrine that man was originally afforded supernatural aid, and thus given power to realize himself in accordance with his natural instincts, and that the continual missing the mark which has followed is due to his own avoidable sin and consequent alienation of grace, — unless, in brief, the superphysical and supernatural is taken into account, — human history exhibits a unique and baffling enigma, the one stultifying exception to the continuity of things.

As I have previously noted, Professor Huxley main-

tained that "Social progress means a checking of the cosmic process at every step, and the substitution of another, which may be called the ethical process." [1] But what is to be thought of creatures whose progress depends upon setting aside the laws of development which are said to account for their origin and nature, if no higher powers are imparted to them than those which these laws of development have evolved? Does not such an outcome mean an utter subversion of continuity, unless the philosophy of history is enlarged by allowing for supernatural factors in the drama? So far from belief in the supernatural quality of man's primitive state being inconsistent with an acceptance of the principle of continuity, it is just such belief that enables the Christian philosopher to accept that principle in its most difficult application.

The method of argument which I have been employing with regard to human righteousness applies to the problem of immortality. Physical mortality is obviously a specific character of man as he is constituted by natural evolution. Yet both natural investigation and supernatural revelation teach that the desire for, and belief in, his immortality is natural to man. Is this natural aspiration another useless character — another product of evolution which must miss the mark obviously aimed at? It is, if human nature is afforded no supernatural assistance, for in itself that nature is mortal.[2] The reply will no doubt be made

[1] *Evolution and Ethics*, p. 33.

[2] In view of the limited range of the facts upon which Weismann

that immortality pertains exclusively to the soul, and does not depend upon continuance of the body. This reply cannot consistently be made by those who, from the standpoint of naturalism, maintain that what is called the soul is naturally and wholly dependent upon the physical organism to discharge its proper functions and to express itself. In any case, man is not a disembodied soul, but is by nature constituted by an union of body and soul. When they are divided, the man is dead; and the survival of his soul after the dissolution of the body is not human immortality. It is rather the death of the man, and the survival of an entity which all natural investigation shows to be insufficient to itself, apart from the human organism. The aspiration of human beings after immortality must be interpreted in a sense that does not utterly disagree with what we know of human life and death. It means aspiration after immortality of the whole man — the only man that can be said to live. Whatever may have been the original words and meaning of a certain passage in the Book of Job, the English rendering, "In my flesh shall I see God," [1] expresses the only consummation that can adequately satisfy man's natural instinct and heart-desire.

bases his curious theory of the immortality of the protozoa and the germ-plasm of higher species (see *Evolution Theory*, pp. 260–263), I cannot take seriously Dr. Orr's use of that theory to establish the notion that man was originally in possession of natural immortality (*God's Image*, ch. vi). That writer's belief in the protestant doctrine that man's primitive state was a purely natural one handicaps his apologetic in various ways.

[1] Job. xix. 26.

That the immortality which is naturally craved for by man is a physical, as well as a spiritual, immortality, helps to explain the fact that, whereas physical death brings no shadow upon the lives of lower creatures, it constitutes the nightmare of humanity — a nightmare that no natural philosophy can dissipate, and which is tolerable to the natural man only as an escape from pain that seems otherwise incurable. There is indeed an instinct of self-preservation from *violent* death which is possessed by all members of the animal kingdom. But natural death does not reduce the happiness of the lower animals, nor does it violate their natural instincts. Man alone shrinks from physical dissolution as from something that stultifies his natural instincts, until he learns that it is a passing consequence of sin, which by redeeming grace can be made to be its own remedy and the condition of a restoration of the immortality for which he craves.

Assuming, as we may reasonably assume, that man is made for immortality, for an immortality of his actual and composite individuality, why should his acquisition of this immortality be deferred and conditioned by its seeming nullification through physical dissolution? Such a dissolution appears to mean a step backward, an undoing which requires a remedy and a resurrection from the dead. No reason can be discovered on natural grounds for such an interruption and reversal of human development. The only reason available is that given by Christian doctrine, that

death is a consequence of loss of divinely afforded means of immortality, a loss brought about by the avoidable and voluntary sin of our first parents.

The sum of the matter is that, when the Christian view of history is once intelligently accepted, the doctrine that man was originally, and by supernatural grace, made capable of sinless development and uninterrupted life forever, is perceived to accentuate rather than to violate the principle of continuity, and to permit belief in an evolutionary origin of man's physical organism.

## IV

Having reckoned with the principle of continuity, and having established the agreement therewith of the doctrine that man's primitive state was one of supernatural grace and potential immortality, we shall find no difficulty in reconciling that doctrine with the conclusions of evolutionary science which I defined in an earlier part of this lecture.

1. One does not need, in the first place, to abandon the catholic doctrine of man's primitive state in order to accept the conclusion that man's physical organism has been produced by natural evolution, and owes its specific characters to variations of lower organisms, preserved by natural selection. He only needs to supplement this theory by allowing for the superphysical elements in human nature, and by recognizing that physical antecedents and factors neither afford adequate explanation of human nature in

its fulness nor fully determine man's primitive condition. What the physical evolved the superphysical completed, and the supernatural mysteries of grace are obviously involved in man's unique position of conscious dependence upon God, and in his superhuman destiny. Grace does not stultify human nature, but perfects it, and enables man to realize himself in such wise as to satisfy his God-given instincts and aspirations.

2. In the second place, nothing in catholic doctrine interferes with acknowledging that, if the supernatural factors in human history could be ignored, the conflict which is found in every man between the lusts of the flesh and the higher demands of the spirit might be explained by a natural survival of propensities inherited from brute-ancestors. In my next lecture I hope to show that we are free to regard the fall as a reversion to the natural, and therefore to the condition which natural evolution engenders when not supplemented by the mysteries of supernatural grace. But if, as I trust I have sufficiently proved, the natural order is part of a larger order, and if an acceptance of the supernatural, as I have also endeavoured to show, is necessary for a rational view of moral history as a whole, we are not justified in believing that God did nothing to enable primitive man to restrain his animal impulses, and to give uninterrupted obedience to his moral instincts. To believe that primitive man was given supernatural grace, and forfeited that advantage by voluntary transgression, is consistent with an

acknowledgment that his existing condition is in line with unassisted natural evolution.

3. The proposition that man, so far as known to anthropological science, appears to have started in his development at a savage stage is entirely consistent with our doctrine of his primitive state, — that is, if we recognize, as we certainly ought to recognize, the limitations of natural investigation with regard to that state. No evidence has been or can be found which determines with certainty the absolute primitiveness of ancient savagery. Confessedly our first parents employed no tools and built no structures which could escape destruction and remain for our discovery and consideration. If we were to unearth Adam's bones, we should not be able to identify them as his, nor could we find in their neighbourhood any indications of his moral condition. All that modern investigation can be said to establish is that, when men began to use permanent tools and build enduring structures, they were apparently emerging from savagery — from such savagery as the Christian view of history would lead us to look for during the period between man's fall from grace and his development of material arts. The conclusion to which we are driven is that the evidences of a general prevalence of savagery among the most ancient races that have left traces of their condition neither prove nor disprove the primitiveness of such savagery. If they appear to prove it, this is because of what we have seen to be an unwarranted assumption, that the Christian view of

history is necessarily subversive of the principle of continuity, and therefore must give way to the naturalistic view.[1]

4. It is between these two views of history at large, and of the factors supposed to be operative in determining its course, that the issue is joined. To one who regards the physical order as complete and self-sufficient, a placing of man in a supernatural state of grace after his origin by natural evolution must appear to be subversive of rational continuity and hopelessly incredible. And his unbelief will be confirmed when he discovers that the earliest human conditions of which any trace remains are completely in line with natural evolution. That they are so we are neither justified by the present conditions of knowledge nor interested in denying. But the chief point in our argument is that every appearance of breach of continuity in the occurrence of a primitive state of grace disappears when the larger and more adequate Christian view of history is intelligently adopted. The naturalistic view does not satisfy all the requirements of continuity, for, as we have seen, it leaves several important gaps in natural evolution which require superphysical and supernatural factors to fill. It also raises serious

[1] On the impossibility of ascertaining man's primitive condition by natural investigation, see Fairbairn, *Philos. of the Christ. Religion*, p. 204; De La Saussaye, *Science of Religion*, pp. 28, 29; Ladd, *Philos. of Religion*, Vol. I., pp. 134–138. Ladd quotes Max Müller (*Anthropological Religion*, p. 150) as saying, "We know now that savage and primitive are very far from meaning the same thing." Cf. Bishop Gore, *Creed of the Christian*, pp. 43, 44.

problems of a moral nature, since it requires us to believe that the highest product of natural evolution is a being who has become responsible for impossibilities, and has never been enabled to fulfil the characteristic law of his being. The Christian view of history, on the other hand, explains the gaps in natural evolution by hypothecating a divine plan in which higher than physical factors find rational place. It does not wholly solve the moral problem, which is indeed too deep and complex for human solving; but it relieves that problem of an unnecessary and peculiarly stultifying element, and shows that sin — the only seeming exception to the law of continuity — was not made by God to be an inevitable event in history, but owes its origin to an avoidable and voluntary action of creatures. If sin is really what man's conscience declares it to be, no other explanation of it is morally tolerable.

In endeavouring to maintain the truth of the catholic doctrine of man's primitive state, we shall often be hampered by absolute lack of interest in the subject among those whom we address. This indifference may arise from an inveterate, although mistaken, conviction that modern science has put our doctrine out of court among intelligent men. But there is another cause of indifference. Men are not likely to feel a deep interest in problems the solution of which appears to have no practical bearing or importance; and the importance of a correct view of man's primitive spiritual condition does not appear, until we have devoted seri-

ous attention to its connection with other truths confessedly vital. When I say confessedly vital, I mean among those who accept the general truth of Christianity.

If Christianity is really true, its primary doctrines of redeeming grace are the most vital of all truths which lie within the apprehension of human beings. Our eternal welfare is bound up with, and conditioned by, the atoning death of Christ and the grace of regeneration that is secured to us by union with the second Adam. If Christ came to seek and to save those who were lost,[1] then we must either repudiate the necessity and significance of His coming, or regard ourselves as fallen from the state which our Maker intended us to enjoy, and which, therefore, if He is the God we believe Him to be, He must originally have enabled man to enjoy. The doctrines of salvation and original righteousness hang together, so that we cannot repudiate the latter and consistently retain the former. Similarly, if the scriptural and catholic doctrine of baptismal regeneration has any valid meaning at all, it presupposes that the natural man has fallen from grace, and is not in the state originally intended and made possible for him by His Creator.[2] If the intellectual conditions of our age make it peculiarly diffi-

[1] St. Luke xix. 10.

[2] Dr. Tennant concedes the disagreement of the purely evolutionary view of sin with baptismal remission, so far as it concerns original sin. *Origin of Sin*, 2d ed., pp. xii, 231. His concession is inadequate but significant.

cult for men to be convinced of these things, we may not on this account abandon the task imposed upon us of persuading men that in catholic doctrine lies the truth which alone can enable our sinful race to attain its glorious destiny.

# LECTURE VI

## ORIGINAL SIN

If the purpose of my last lecture was successfully achieved, the task now before us has been much simplified—the task, I mean, of reckoning with the implications of the evolutionary hypothesis which bear, or are thought to bear, upon the truth of the catholic doctrine of sin. If, as I have been maintaining, that hypothesis permits us to believe that man's original state was one of supernatural grace, in which he was enabled wholly to avoid sin and to escape the physical death to which he was naturally liable, it would also seem to permit the supposition that some special cause, in addition to natural evolution, has brought about the present moral condition of mankind.

The question requiring answer is, How did mankind lose the advantages of that primitive state? Why is it that he has reverted, so to speak, to the condition in which, according to evolutionary doctrine, he would naturally have been from the beginning, if he had not been given supernatural privileges and endowments? The only answer to this question with which we have to reckon is that of the doctrine of the fall and of original sin. The evidences which establish the correctness of that answer have been very briefly indicated in my fourth lecture, and their sufficiency ought not

to be questioned by those who believe in supernatural revelation, in biblical inspiration as historically understood, and in the evidential value in spiritual matters of scriptural inductions. In this connection permit me to remind you once more that arguments based upon the use of isolated proof-texts, whether positive or negative, constructive or critical, have little value. I have sought to avoid their use, and feel justified in disregarding critical arguments against catholic doctrine based upon the inadequacy of such proofs.[1] Holy Scripture contains memorials of the stages of a progressive revelation, and therefore affords data that require to be connected in a comprehensive view of the whole process — its earlier stages being interpreted, not by the limitations of meaning which they exhibited at first, but by the trend and inspired purpose which the completed process enables us to detect throughout. If early revelations meant more than either could at once appear or could be present in the consciousness of individual sacred writers, the Gospel enables us to apprehend that more without either forcing Sacred Writ into unnatural meanings or reading into it the fancies of a scholastic imagination.

But in these lectures our primary concern is not with the biblical and theological validity of catholic doctrine. The question before us is this: Assuming that man was originally in a sinless state of grace, and that the

[1] Cf. pp. 139, 140, above — especially the note on p. 140, wherein Dr. Tennant's dependence upon a negative use of the proof-text method is indicated.

catholic doctrine as to the cause of his present moral condition is otherwise credible, can this doctrine stand the test of comparison with the established results of evolutionary science? The doctrine referred to contains two propositions: — that Adam's sin caused his loss of grace and reversion to a state of nature, involving concupiscence and physical mortality; and that this fallen condition has been transmitted to his posterity. It is only the second of these propositions that can be affected in any way by evolutionary science, for obviously no imaginable result of physical or biological investigation could reduce the certainty that a state of grace, and whatever supernatural advantages are afforded thereby, must be subverted and lost when wilful sin is committed. No human being can sin without thereby giving his animal nature the whip-hand; and the incongruity between such a result and a retention of his original and supernatural advantages, as described in catholic doctrine, hardly needs to be argued.[1]

[1] Two objections of Dr. Tennant, based upon other than evolutionary grounds, and therefore not discussed in the main text, ought perhaps to be noticed. See his *Origin of Sin*, pp. 27–31.

(*a*) He urges the difficulty of accounting for sin on the part of beings whose disposition had been made righteous. Such an objection seems to be based upon an uncatholic conception of original righteousness. All that catholic doctrine on this point teaches is that the natural propensities of the flesh in our first parents were counterbalanced — not nullified — by supernatural grace. The possibility of carnal motives appealing to the will and causing temptation remained. What grace secured for Adam was *sufficient* spiritual motive and power invariably to resist temptation — in short, full

Our question then reduces itself to this: Does evolutionary science permit us to believe that our first parents transmitted their fallen condition to their posterity? It is a question, you will observe, of transmission of characters;[1] and we have to consider what biological science teaches on that subject. In

freedom to choose between sin and sinlessness, and *sufficient* discernment of the wrongfulness of sin. The disposition of our first parents, in the ordinary sense of that word, was not a *prius* of temptation, but was yet to be determined by his conduct. Originally he was by nature open to sinful inducements and by grace sufficiently supplied with inducements to avoid sin. He possessed both the motives and the power of either good or evil choice. But when he sinned, grace was alienated, and the natural predominance of his inherited animal instincts asserted itself.

(*b*) The other objection is that human experience affords no analogy of so serious a subversion of the balance of man's faculties by one act of sin as is implied in the doctrine of Adam's fall. The want of an analogy is easily explained. Our experience in this regard is concerned wholly with fallen man. The consequences of sin on the part of a previously sinless man — that sinlessness being made possible by grace — could be realized but once in history; because when the first sin occurred, the conditions under which it was committed permanently disappeared. Moreover, the consequences of that sin need not be thought to be sudden in their full actualization. What was the immediate result? It was no such subversive disturbance of man's natural faculties as is hypothecated in Dr. Tennant's objection. It consisted simply in an alienation of grace and a loss of all moral resources that were not afforded by his unassisted nature. But, Dr. Tennant being witness, man's natural state involves a conflict "between nature and nurture," and all the moral evils which are in fact actualized in human history. That they have been actualized under the laws of natural development, and gradually, does not militate against the catholic doctrine of the fall. Cf. Tennant, *Origin of Sin*, pp. 91 *et seq.*

[1] Whether of *acquired* characters remains to be seen.

my second lecture I explained to you the rival theories of neo-Lamarckians and neo-Darwinians as to the transmission of acquired characters. Lamarck had maintained, at the commencement of the nineteenth century, that the natural evolution of species is accomplished by the transmission of organic variations originally produced by the use, or non-use, of organs. This view came to be described technically as the transmission of "acquired characters." Professor Weismann not very many years ago assailed Lamarck's doctrine, and denied that acquired characters are, or can be, transmitted, basing his denial upon results of investigation into the respective functions of germ-cells and somatic cells.[1] It has been thought that if his denial has been made good, we must surrender our belief in the transmission of Adam's fallen condition to his posterity. We have therefore to consider whether Weismann's conclusion constitutes a scientific result with which we must reckon; and whether, if so, it is inconsistent with the doctrine of original sin.

## I

Before undertaking this the chief remaining task of these lectures, I wish to make a digression — one, however, which may help us to avoid confusing side issues, and thus more clearly to understand exactly what is involved in discussing the problem of the

[1] Germ-cells discharge the function of propagating the species. Somatic cells combine to build up the soma or individual organism.

transmission of Adam's carnal tendencies. You may remember that in my fourth lecture I mentioned certain speculative opinions connected with the problem of sin, which have come to be mixed up in many minds with catholic doctrine, and which ought not to be permitted to embarrass our consideration of that doctrine. Before proceeding further, I wish again to call your attention to them, and to explain more fully than was practicable at that stage of my argument their precarious nature, and the importance of dissociating them from the really catholic doctrine of the fall and of original sin.

1. First of all allow me to insist that a catholic believer may safely refuse to be committed to a defence of any particular theory of predestination. I say theory, for it is impossible for a believer in Holy Scripture to deny that divine predestination constitutes a factor in human history, and in the mystery of sin. The reality of this factor is clearly asserted by St. Paul,[1] is maintained by catholic writers of all schools, and is borne out by certain deductions from the doctrine of divine power and sovereign providence. But revelation nowhere affords us sufficient knowledge of the nature and method of this predestination to justify dogmatism in regard to the definitions on the subject which have gained currency, whether Augustinian, Calvinistic, Arminian, or Jansenist; and such definitions may not be permitted either to prejudice the counter truths connected with human freedom and responsibility, or to

[1] Especially in Rom. viii. 28–30.

determine the content of the doctrine of sin.[1] The caution and vagueness with which the subject of predestination is handled in one of our *Articles of Religion* is noticeable; and that article proved to be quite unsatisfying to those who at the time of its publication were agitating the question. The seventeenth article indeed acknowledges that God has chosen the subjects of His saving grace from eternity, and it could hardly acknowledge less if the subject were handled in any manner; and it goes on to speak of the comfort which the subjects of grace feel in the contemplation of this mystery. But, lest such acknowledgment should seem to countenance the very precise definitions of that age, the article proceeds to point out the baneful effects upon sinners of speculation concerning the subject, and reminds us

[1] The best treatment of the subject is perhaps J. B. Mozley, *Augustinian Doctrine of Predestination* — a work to which I have frequently referred in these pages. The subject should in the first place be studied historically, with the aid of such histories of doctrine as those of Harnack, Hagenbach, Neander, and Bethune-Baker.

Predestination may be accepted in three forms: (*a*) Of individuals and races to especial privileges in this world — *e.g.*, of Israel, and of individuals to baptismal grace; (*b*) Of the Church, in her corporate capacity, to glory; (*c*) Of individuals, as such, to glory. Scripture is most frequently concerned with (*a*) and (*b*) and defines practically nothing with reference to (*c*). The controversies of the Augustinian and subsequent ages have to do with (*c*). They lie chiefly (1) between absolute predestination, having no reference to human merits, and prèdestination based upon knowledge of human conduct; (2) between predestination to glory — no other predestination being involved, — and a double predestination of certain to glory and of the rest to damnation. No one of these conflicting positions is supported by catholic consent.

that the mystery in question may not be defined and maintained in terms that nullify the general validity for mankind of the promises of God and of our responsibility for obedience to the revealed will of God.[1]

The conclusions to which we are driven by every consideration that can rightly determine our view of the matter are that the mystery of predestination can be apprehended only in an incipient form, and one which precludes definition; that it may not be accepted in a manner that either alters or subverts other truths, made known to us by revelation and experience; and that no inferences can be made from it which are either sufficiently certain or comprehensive enough in their bearing to justify our use of them in determining and defending catholic doctrine. A critical example of error in this regard is the theory of irresistible grace, which was broached incidentally by St. Augustine, was involved in much scholastic theology, and was erected into a dogma by modern Calvinism. Such a theory is logically subversive of human responsibility, and of the catholic doctrine of sin; and is therefore to be passed by in our argument, as non-relevant to our purpose.

2. A second opinion which ought carefully to be dissociated from biblical and catholic doctrine is the view that the guilt of Adam, using the word guilt in its strict and literal sense, has been transmitted to all of his descendants, so that new-born infants are to

[1] See Bishop Forbes, Bishop Gibson, E. T. Green, and B. J. Kidd on *The Thirty-nine Articles*, Art. xvii.

blame for his sin before they are capable of distinguishing between right and wrong and of wittingly choosing the wrong. St. Paul, in the fifth chapter of his *Epistle to the Romans*, has been understood by many to imply such doctrine, when he says that, "as through one man sin entered into the world, and death through sin; and so death passed unto all men, for that all sinned." [1] The Greek of the last phrase is ἐφ' ᾧ πάντες ἥμαρτον, and by mistakenly rendering ἐφ' ᾧ as equivalent to *in quo*, "in whom," the Vulgate and St. Augustine have helped to give plausibility to such exegesis.[2] But the whole context shows that St. Paul is using the terminology of sin in an extended application, which requires us to interpret his language as to some extent symbolical. Sin, strictly taken, means a personal act. St. Paul obviously could not have meant to say that all committed sin in Adam in the sense of personal action. But if he did not mean that, he was plainly using the verb "to sin" in an extended and derivative sense; [3] and we must, in view of the context, take him to be applying the term sin to describe — not the act of sin itself, but — the consequence for us of Adam's act. This consequence is called sin because it not only comes from sin but also

[1] Rom. v. 12.

[2] St Augustine, *contra Duas Epp. Pelag.*, iv. 7, c. 4; *c. Jul.*, vi. 75; Cf. W. Bright, *Lessons from the Lives of Three Great Fathers*, p. 174, note 1; J. F. Bethune-Baker, *Early Hist. of Christ. Doctrine*, p. 309, note 2.

[3] Cf. p. 145 (esp. note 1), above; also F. R. Tennant, *Sources*, pp. 267, 268.

engenders sin on our part, when the law affords occasion for disobedience. In short, the phenomenon of inherited liability to sin is described in the terms of its causation and of its effects.[1] The sense in which St. Paul could say that all sinned in Adam's transgression must be, in effect, that all are involved in the effects of Adam's sin in such wise that they also sin when given opportunity. That he is using the word sin in a derivative sense is also shown by the language which he proceeds to employ: "For until the law, sin was in the world: but sin is not imputed when there is no law. Nevertheless death reigned from Adam until Moses, even over them that had not sinned after the likeness of Adam's transgression," etc.[2] It is clear that if sin is described to be in the world in relation to those who have not literally sinned like Adam, this sin is not actual sin, but the death, physical and spiritual, which reigned because of sin and which subsequently engendered sin. Moreover, St. Paul's denial that sin is imputed when there is no law — no occasion for actual sin — shows that he did not mean to teach that God holds those to be "guilty" who as yet have "not sinned after the likeness of Adam's transgression."

Such teaching, however, is to be found in St. Augustine's writings, and is perhaps involved in a very few passages of earlier patristic literature; but it is not primitive, and has never gained catholic consent. It comes from technicalizing metaphorical language, and thus making it to suggest a meaning which St. Paul's

[1] See p. 136, above.

[2] Rom. v. 13, 14.

actual teaching does not warrant. The phrase "original sin" cannot now be banished from the theology of transmitted tendency to sin, but its constant distinction in theology from actual sin ought to preclude its identification with personal guilt. If so, then we ought to treat all the phrases of similar suggestiveness which appear in St. Paul and in theological documents with the same discriminating allowance for rhetorical symbolism.[1] To take a critical example, if we are said to be "by nature children of wrath," [2] the analogy of the use of language which I have been discussing warrants our understanding this to mean that our natural condition inclines us to conduct that displeases God. It is quite unnecessary to read into the phrase the teaching that God is angry with new-born infants for being what they have had no choice in becoming. The free and partially figurative language of St. Paul was useful for accentuating ideas that needed to be emphasized. But it becomes misleading and pernicious when in theology it is employed to signify more than he can be shown to have meant by it.[3]

[1] Dr. Tennant perceives the metaphorical use to which St. Paul puts the word sin; *Origin of Sin*, p. 94; but betrays a tendency to regard every acknowledgment by catholic writers that we have sinned in Adam as of itself proving their belief in transmitted guilt.

[2] *The Church Catechism.* Cf. Ephes. ii. 3, as considered above, p. 145, where references are given.

[3] We can fully sympathize with Dr. Tennant's regret that theology has technicalized the phrase "original sin" and related terms, without either undertaking to repudiate a terminology so long established or supposing its use invariably to imply a literal imputation of Adam's sin to his posterity and a transmission of his guilt.

3. Equally pernicious and uncatholic, as well as unscriptural, is the sixteenth-century theory of total depravity. I mean the theory that the fall has made human nature a positive mass of unqualified evil. No doubt many writers have called man totally depraved without meaning more than that he is utterly unable by his unassisted natural powers to save himself, and to attain to the supernatural destiny for which he was made. But the phrase is misleading when thus used, as well as modern, and has certainly meant in certain Calvinistic circles the horrible opinion which I have defined. Rhetorical emphasis upon man's sinfulness may result in the use of language that implies an utter lack of good in human nature; but to assert such total depravity with literal meaning is to go counter to much Scripture and to common knowledge. To say that the seeming virtues of the unregenerate are splendid vices is to contradict experience. Happily for us, believers in catholic doctrine are free to acknowledge thankfully that the unregenerate are not wholly given over to evil. Abundant evidence is continually appearing that, with all their tendency to sin, and their natural incapacity to fulfil the supernatural end for which they were made, the unregenerate have capacity for natural virtues, — for virtues which only need rightly to be related, and to be completed by heavenly grace and virtue, in order to become the foundation and earnest of Christian perfection. It is their inability wholly to avoid sin even as they understand it, and their incapacity in things that directly pertain to man's chief end, that

constitute the moral state hypothecated by the catholic doctrine of original sin.

4. Another uncatholic opinion, which the technical use of St. Paul's symbolical language has made to appear scriptural to many, is the view that original sin deservedly brings everlasting punishment, even upon those who die before they have committed sins of their own. This opinion is closely related to one which I have already shown to be unwarranted — the view that the personal guilt of Adam is transmitted to his posterity. The most plausible scriptural exegesis which is thought to support the notion that God is angry with fallen creatures because of their inborn condition is a common interpretation of the passage in the *Epistle to the Ephesians*, wherein his readers are declared to have been, previously to their regeneration in Christ, "by nature children of wrath." [1] I have already shown that we are not justified in taking this phrase to mean that God is angry with the unregenerate because of conditions which they have had no part in producing.[2] A general induction of scriptural teaching on the subject shows that the attitude of God towards fallen mankind is one of loving pity — the depth of which is demonstrated by the costly mystery of the death of the Son of God for us while we were yet sinners.[3] Such induction also shows that the alternative of heaven or hell is limited in its asserted application to those who

[1] Ephes. ii. 3.

[2] See pp. 145, 197, above.

[3] Rom. v. 6–8; Ephes. ii. 4–8.

have the opportunity of accepting, or rejecting, the redemption of Christ. How God will deal with those who by reason of the many forms of invincible ignorance do not enjoy this opportunity is not the subject-matter of scriptural teaching. We may infer that the love which is shown in redemption will not be lacking in any dealings of God with His creatures, but beyond this we have no basis for assertion either in Scripture or in catholic doctrine. We can only maintain with St. James that we have been "begotten by the Word of truth that we should be a kind of firstfruits of His creatures," [1] and rest upon the scriptural truth that God "willeth that all men should be saved." [2] If any are finally lost it will be, therefore, because their own conscious obstinacy has made salvation impossible, and omnipotence has no application to the impossible.

Our ninth *Article of Religion* says of man's inherited moral state that, "in every man born into this world, it deserveth God's wrath and damnation;" and the *Church Catechism* declares that we are "by nature born in sin, and the children of wrath." These assertions are so closely modelled upon scriptural language that their interpretation ought to be determined by correct biblical exegesis. This is obviously the case with the language of the *Church Catechism*, and a consideration of the great ambiguity of the phrase, "deserveth God's wrath and damnation," will justify a similar treatment of it. Damnation, strictly taken,

[1] St. James i. 18. [2] 1 Tim. ii. 4.

means condemnation,[1] and need not be taken in its acquired and popular meaning of everlasting torment. It is possible, so far as we know, that some of those who are technically among the finally damned [2] receive blessings suited to their capacity, and are happier than they would be if forced into the kind of contact with God that is promised to faithful Christians. I have in mind the speculative view of ancient as well as later writers that there is a middle state for the reward of righteous heathen.[3] The truth of this view cannot of course be known to us in this world.

The word "deserve" has several very distinct meanings, and it was a failure to distinguish between them that had much to do with making futile a large amount of sixteenth-century controversy on the subject of human merit. Permit me to mention two of the chief meanings that might be intended by the word "deserve."

(*a*) In the first place, in its strictest sense, it refers to either personal guilt or merit on account of works. A man deserves punishment for evil deeds and reward

[1] Condemnation, it may be understood, as in its present state unfit for the attainment of its appointed destiny.

[2] The finally damned are, in the technical use of certain theologians, all those who miss the beatific vision, whether they are consigned to a state of misery or not.

[3] Patristic views are given by J. B. Mozley, *Predestination*, ch. iv. pp. 117–123. St. Thomas in *Sum. Theol.*, III. Suppl. lxxi., maintains for unbaptized infants a natural beatification, in which there is no sense of loss of the beatific vision. Cf. A. P. Forbes, *Nicene Creed*, p. 305; E. B. Pusey, *What is of Faith as to Everlasting Punishment*, p. 11. A valuable history of opinion as to the "Lot of Those Dying in Original Sin" is given by Dr. P. J. Toner in *The Irish Theol. Quarterly* for July, 1909, pp. 313–326.

for meritorious ones. Scripture threatens sinners — I mean actual sinners — with divine penalties and promises the reward of eternal life to the righteous.[1] When it is said that we cannot deserve heaven by our good works, two things are meant: that they are reduced in value by the sins which we continue to commit; and that in any case they are inadequate to deserve, as a wage, so great a blessing as that of eternal life with God. It is only by reason of their being done in Christ that they are effectual, and it is by reason of His merit that they are so superabundantly rewarded.[2]

(*b*) Obviously, to speak of a state as deserving wrath, where no actions of the person involved are referred to, is to use the word in a derivative sense, and this derivative sense is found in common speech as well as in theology. It is practically equivalent to "fit for" and "entitled to," by reason of such fitness. Thus a brute is said to deserve such treatment as its nature fits it to receive, and not to deserve either inferior or superior treatment. The same language is employed with reference to man. "A man is a man for a' that," and deserves humane treatment. His created nature is entitled, in brief, to be satisfied within the limits of its existing physical and moral capacities. He deserves that much. But he does not deserve more; and this negation may be expressed in positive form by saying

[1] St. Matt. vi. 4, 6, 18; xvi. 27. The word *μισθός*, wage, is often employed to describe the reward of the righteous; *e.g.*, St. Matt. v. 12; 1 Cor. iii. 14; 2 St. John 8.

[2] St. Luke xvii. 10; Rom. vi. 23; Ephes. ii. 8.

he deserves to be excluded from receiving more — not because guilty of wrong-doing, but because, in his existing condition, he is unfit for more.

Now it is this secondary sense that must be given to our ninth article, if we are to avoid making it teach something abhorrent to our sense of justice, as well as foreign to catholic doctrine. Because in his fallen state every man is unfit for his supernatural destiny, he deserveth exclusion from that destiny so long as such unfitness continues.[1] Official language, in any case, cannot be imposed in an indefensible meaning, when its terms are ambiguous and susceptible of a more tolerable construction. What the sixteenth-century framers of the ninth article believed on the subject has official weight only so far as they succeeded in securing its unambiguous expression by the Church. But even could it be shown that our Articles teach that God is angry with all the unregenerate because of their inherited natural impulses, and that He will everlastingly punish all who die unregenerate, whether they commit personal sins or not, such teaching would have no ecumenical authority. It would be provincial only. We can accept the catholic doctrine of original sin without being committed to it.

[1] The fact that this unfitness *ought not to be* gives a moral sense to the negative deserving, and a penal quality to the result — that is, in the abstract and in relation to the sin of Adam by which it is caused. But inasmuch as the new-born child has no part in producing his unfitness, we may not regard it either as involving personal guilt, or as imparting to its results the quality of personal punishment, which has no meaning except in relation to personal guilt

## II

It is now time to return to the main course of our argument, and to discuss the problem of the transmission of our first parents' fallen state to their posterity. In considering this problem we have chiefly to reckon with Professor Weismann's denial of the transmission of acquired characters.

Weismann's argument [1] is substantially this: Individual organisms contain two kinds of cells — germ-cells and somatic cells. The latter are the ones which, by their multiplication, differentiation, and growth, build up the body or soma; and they alone are affected by the use and non-use of organs, or become modified by the characters acquired during the lifetime of the individual organism. But they have no part in the propagation of species, so that their acquired characters perish when the individual dies. The process of propagation takes place wholly within the germ-cells, and no variations or characters can be transmitted to offspring unless they have affected these germ-cells. But the germ-cells, it is maintained, are isolated from the other cells of the soma or organism at large, and cannot be affected by the ordinary causes which modify the organism during an individual lifetime. The acquired characters of the organism cannot therefore be transmitted — at least, not unless they are of a very radical nature, and such as affect the organism at its root.

[1] Already summarized in pp. 65–67, above, where references are given.

It will be observed that Weismann's view is based upon a rigidly mechanical conception of organisms and of their propagation. The plausibility of his argument lies to some extent in our inability to imagine any mechanical process by which a change in a functional part of the organism can so affect the germ-cells as to cause them to reproduce that change in the same part of the organisms of offspring. In the absence of complete knowledge of the process of propagation, and of the laws that determine heredity, the basis of his argument is not free from elements of insecurity, and his exclusion of non-mechanical or superphysical factors cannot be proved to be warranted. In short, his position is to a considerable extent based upon speculative premises, and is largely supported by an appeal to our inability to furnish an exact and demonstrable description of the process of transmitting acquired characters.

Over against his contentions must be placed the circumstance that many modern biologists, in spite of their acquaintance with Weismann's arguments, are led by observed facts — especially in the fields of paleontology, domestic breeding, and medical science — to the conclusion that acquired characters are in many instances certainly transmitted. The issue is one between a partially speculative theory of cellular processes and the inferences ordinarily drawn by paleontologists, professional breeders, and physicians from the facts which come within their observation.[1]

[1] See V. L. Kellogg, *Darwinism To-day*, pp. 271, 272. He gives a bibliography of the subject on p. 305. Herbert Spencer's argu-

Among these facts the ones which are most open to general observation are connected with the hereditary nature of certain diseases, such as tuberculosis and syphilis. Dr. Brown-Séquard performed some notable experiments upon guinea-pigs which seem to prove that an artificially induced epilepsy can be transmitted.[1] There seems to be something desperate in Professor Weismann's comment on these experiments when he says, "Clearly formulated problems, like that of the inheritance of acquired characters, should not be confused by bringing into them phenomena whose causes are quite unknown. What do we know of the real causes of those central brain irritations which give rise to the phenomena of epilepsy? It is certain enough that there are diseases which are acquired and yet are 'inherited,' but that has nothing to do with the Lamarckian principle, because it is a question of *infection* of the germ, not of a definite variation in the constitution of the germ." [2] What does such a reply amount to? The question at issue is not whether the effect of disease on the germ is to be called "infection," instead of a "definite variation," nor whether we know the real causes of the irritations which produce epilepsy. The question is, Are acquired diseases inherited? He confesses that in certain instances they are, and thus concedes the real point at issue; for no one now main-

ments in behalf of the Lamarckian view are summarized by R. H. Lock, *Recent Progress*, pp. 59–65.

[1] Described by V. L. Kellogg, *op. cit.*, pp. 290–295.

[2] *Evolution Theory*, Vol. II. p. 68.

tains either that all acquired characters are transmitted, or that the Lamarckian factor is of universal validity in the organic world, and capable of displacing natural selection.

Weismann's position cannot be regarded as constituting an established result of biological investigation, for it is rejected by many of those to whom we look for expert judgment in biological problems. We could not reasonably be blamed, therefore, if we refused to reckon with it in putting catholic doctrine to the test of evolutionary science. But I think that we shall be better advised if we take Weismann's position more seriously; for, in spite of its disputatious nature, a wide-spread conviction exists that it has a good deal to say for itself. Until more is known of the laws of heredity, Weismann's argument will have to be reckoned with, notwithstanding its lack of corroboration by experimental proof. But the chief reason for taking Weismannism seriously is the fact that belief in its possible validity has caused some of the most thoughtful writers of our day to feel grave doubts as to the possibility of a transmission of the effects of Adam's sin to his offspring.[1]

As I shall endeavour to show, good reason exists for denying that the impossibility of a transmission of acquired characters, if proved, has anything to do with the question as to whether Adam's fallen condition could be transmitted.[2] But assuming that Adam's

[1] See F. R. Tennant, *Origin of Sin*, pp. 35–38, for a careful expression of these doubts.

[2] See pp. 211–213, below.

state after his fall has the nature of an acquired character, it is to be noticed that, as we have proved by his own language, Professor Weismann himself does not venture to assert the absolute impossibility of transmission of any functional modifications acquired during the lifetime of parents. Certain acquired diseases are admitted by him to be inherited, and we only need to remember how naturally man's present moral state is described in terms of disease to perceive the reasonableness of belief that it was "acquired" by our first parents and "transmitted" to their offspring.

This point may well be enlarged upon. The fallen state of mankind is conventionally described by theologians as a corruption of nature,[1] and its several effects are usually called "wounds." [2] According to the ordinary division these wounds are four. The wound of blindness, or ignorance, has reduced man's capacity to discern spiritual things; the wounds of concupiscence and malice have disturbed human affections in their passive and active aspects; and the wound of weakness has disabled the will in relation to the fulfilment of man's chief end. The word "wound" is not, of course, here used in its strict and physical sense, for it describes moral conditions. But the mutual interaction of mind and body is too well established intelligently to be denied; and a disturbance of our moral nature must

[1] In the ninth of our *Articles of Religion*, it is described as "the fault and corruption of the Nature of every man."

[2] See St. Thomas Aq., *Sum. Theol.*, I., II. xxxv. 3; A. P. Forbes, *Thirty Nine Articles*, pp. 145–150.

involve in its corrupting effect the whole man.[1] In acknowledging the inheritance by offspring of certain acquired diseases, Professor Weismann prefers to describe the first stage of the process as an "*infection* of the germ," rather than as "a definite variation" in its constitution.[2] Now the very word "infection" is frequently employed by theologians to describe the effect of Adam's sin upon human nature.[3]

If a failure of the various bodily functions to work in mutual harmony constitutes physical disease, surely a state of conflict between the animal and spiritual propensities of our moral nature may be called moral disease. It is, conscience being witness, a condition that ought not to be — a condition which hinders the man from fulfilling the proper function of his moral nature. Moreover, it is a deeply seated disease, so deeply seated that could we describe it as "a definite variation," we should still have reason to believe its production of some effect upon the germ-cell to be possible, even if we accepted the general validity of

[1] In describing our present condition as a "corruption of nature" we do not commit ourselves to a denial that the nature wherewith we sin is the nature that was evolved in its physical aspects from the lower species. The point is that the conflict "between nature and nurture," as Tennant describes it, — which he refers exclusively to natural causes and we refer to a loss of the grace which was superadded in order to prevent an evil result of such conflict — must, whether by a leap or gradually, produce a condition within our nature that may rightly be called "corruption."

[2] As quoted above.

[3] Our ninth article says, "And this infection of nature doth remain," etc.

Weismann's view. If we concede for argument's sake that ordinary acquired characters cannot be transmitted, extreme instances of radical modification might well be regarded as exceptions that prove the rule, their effect being sufficiently penetrative to overpass the barriers that normally isolate the germ-cell from the rest of the organism. A modification of moral disposition affects personality at its root, and personality is the determinative characteristic of human nature, than which there is none more central. Sin thus affects human nature at its innermost point; and, if any modification acquired by parents can be inherited, surely this one can.[1] Once acquired and inherited, nothing short of absolute sinlessness could bring about a recessive modification capable of transmission in an offspring possessed of man's original righteousness. Human experience teaches that sinlessness is not a character which man in his existing condition can naturally acquire.

What I have been saying presupposes not only a vital connection and mutual interaction between mind and body — between moral and physical functioning, — but also a difference in kind between them. A denial of this difference is not scientific, but wholly depends for its truth upon the validity of the naturalistic philosophy, and of its description of all realities in mechanical terms. We need not again point out the fallacies of that philosophy. No other philosophy, however, can

[1] Such a method of argument is adopted by J. Orr, *God's Image*, pp. 237–243.

give plausibility to the objection that we know of no mechanical means by which a moral change could affect the germ-cell. We certainly have no evidence that the means must be mechanical, and no knowledge is available which warrants a dogmatic denial of any effect of acquired moral change upon offspring.

Our reckoning with Weismann's position has thus far been based upon the assumption that the doctrine of original sin involves the transmission of an acquired character, and upon the necessity of such an assumption depends the pertinence of Weismann's position to that doctrine. Inasmuch as protestant writers regard man's primitive state as wholly natural, they are compelled to regard the truth of Weismannism as throwing them on the defensive. Catholic theologians are not under the same necessity. According to their doctrine, man's primitive righteousness was due to supernatural causes, and his fall was not the acquisition of a new natural character, —not a modification of human nature, — but the loss of special endowments of grace.

It is quite true that the results of this loss of grace can be described by such terms as "natural corruption," "moral disease," "spiritual wounds," and the like. But such descriptions, so far as catholic doctrine determines their interpretation, do not necessarily imply that human nature has been modified. They are applicable to the original state of human nature as viewed from a purely evolutionary standpoint. According to the evolutionary theory primitive man possessed a nature in which inherited animal propensities were

too strong for the as yet undeveloped moral instincts which called for their restraint. In brief, the conflict which is now universally experienced between the carnal and the spiritual parts of our nature is not less truly a conflict because said to be the outcome of natural evolution; and it is precisely this state of natural conflict to which catholic theologians suppose man to have fallen when he lost the supernatural gifts which, according to their doctrine, were designed to forestall the conflict. Such a state of conflict, we maintain, is a state of disease, whether it be regarded as exclusively originated by natural evolution, or as resulting from a loss of supernatural endowments.

So far as catholic doctrine is concerned, we are free to combine the two accounts. We may at once acknowledge that natural evolution accounts for the internal conflict which catholic theology explains by its doctrine of the fall, and maintain that this conflict would have been prevented from becoming actual, if man had rightly employed the supernatural advantages that were afforded to our first human parents. It is as if a stream were to be diverted by artificial means in order that destructive floods might be prevented, and subsequent carelessness or malice were to cause a break in the barriers and a resumption of the natural flow. The result could rightly be explained by the original nature of the stream, and yet the fact that it was due to human carelessness would be undeniable. The application of my illustration needs no elaborate explanation. The original nature of man explains his

present state of moral corruption. Yet it was avoidable human sin that nullified the supernatural means which were sufficient to prevent such a state from being actualized. This view leaves place for both the evolutionary and the catholic explanations of our moral condition, and shows that both explanations are necessary for a full account of things. It also shows that the question of the truth of Weismann's denial of the transmission of acquired characters need not disturb a believer in catholic doctrine, because that doctrine does not depend for its validity upon the fact of such transmission. It permits us to agree with St. Athanasius and other ancient writers in regarding the fall as a reversion to the limitations and liabilities of man's unassisted and created nature.[1] The view that natural evolution describes his creation does not militate against such doctrine.

## III

Our task is nearing its completion; and all that remains for us to do is to deal with two rival theological theories as to the method by which original sin is transmitted, and to indicate the moral importance of the catholic doctrine of sin.

The two theories to which I refer are known as traducianism and creationism.[2] Both are ancient, and

[1] *De Incarn.*, ch. 5. See Tennant, *Sources*, pp. 310–314, on the teaching of that writer.

[2] On this subject see A. Moore, *Essays Scientific and Phil.*, pp. 75–82; *Science and the Faith*, pp. 208–211; Prof. Le Conte, *Evolu-*

either one can be held without prejudicing catholic doctrine; but neither one can claim ecumenical authority. Modern science is thought by some to have thrown difficulties around the acceptance of either. According to traducianism both the souls and the bodies of infants are derived through natural generation from their parents; whereas, according to creationism, the body only is thus derived, the soul coming into existence in each case by special creation, and being united with the physical organism after its conception — whether immediately or at some subsequent stage of development in the womb.

If traducianism is true, the inference is natural that moral dispositions, so far as they are transmissible, are directly and spiritually transmitted through the derivation of the souls of children from their parents. The fact of moral heredity is not to be denied, although different views are tenable as to the amount of such heredity, and both theologians and physical scientists can be found who regard this heredity as dependent upon the validity of the traducianist view.

The naturalistic philosophy obviously leaves no place for the antithesis between matter and spirit which is involved in the argument between traducianists and creationists. And among those modern scientists who are not thus precluded from considering the problem

*tion and Its Relation to Religious Thought*, pp. 293–304; R. I. Wilberforce, *Incarnation*, pp. 29 *et seq.*; H. P. Liddon, *Some Elements of Religion*, pp. 93–104; St. Thos. Aq., *Sum. Theol.*, I. cx, cxviii; *Cath. Encyclopedia*, *s. v.* "Creationism," Vol. IV, p. 475.

— their number is large — difficulties appear to surround both views. Their habit of interpreting things in evolutionary and physical terms makes it difficult for them to accept the hypothesis of the special creation of individual souls; and this difficulty is not wholly removed by a theoretical rejection of naturalism. On the other hand, the notion that an indivisible entity, such as the soul is considered to be, can reproduce itself by natural generation seems incredible, because hopelessly unimaginable. Modern science may, therefore, be said to leave the question at issue unanswered.[1]

Dr. Tennant says,[2] "Heredity, in the strict sense of inheritance by birth or descent and not in that of appropriation of environment, cannot take place 'in the region of spiritual personality.'" Admitting that mental qualities are inherited, he adds, "But their transmission takes place only in the form of modified physical structure, with which the psychical quality is necessarily correlated; it is mediated solely through the body." This makes for the creationist view, and, in a very subtle and vague form, he appears to accept it.[3] He says that it is "a debatable question" whether St.

[1] Biological science, as science, has indeed no direct concern with the problem of the soul's origin, for its subject-matter is the organism. The heredity which it investigates is physical.

[2] He discusses the subject in *Origin of Sin*, pp. 31–35.

[3] He borrows from Lotze. "The soul . . . is, as it were, a 'uniformly maintained act of God,' begotten from Himself when the organism with which it is destined to be associated has been prepared; He is the One which supplies underlying unity to the many, and they, despite that unity in Him, when once arisen, are independent things." *Op. cit.*, p. 33.

Augustine's doctrine of "inherited sinfulness" does not require some such view as that of traducianism; and adds, "If it does, both fall together. For philosophy will not allow such notions as those which traducianism, when least materialistic, necessarily involves." [1] Dr. Tennant's language amounts to an assertion that traducianism is untenable, and to a suggestion of doubt whether the creationist view will logically permit us to accept St. Augustine's doctrine of inherited sinfulness. I am not defending Augustinianism, but Dr. Tennant's argument seems to suggest doubts as to the logical validity for creationists of any form of the doctrine of original sin, whether it includes St. Augustine's theory of inherited guilt or not.

Now modern investigation has certainly increased the difficulty of accepting the traducianist view; although the preference for creationism which is widely felt among theologians does not owe its origin to this cause, but is of many centuries' standing. Without being a catholic doctrine, creationism is the usual concomitant of belief in the doctrine of original sin.[2]

[1] *Op. cit.*, p. 31.

[2] Tertullian was the chief patristic defender of traducianism, but took a semi-materialistic view of the nature of the soul. St. Augustine apparently leaned to the same view, but did not definitely teach it, and did not share in Tertullian's materialism. His failure to teach it in connection with his defence of original sin is highly significant. Traducianism was widely accepted by Western fathers and by St. Gregory Nyss. in the East. The Easterns, however, generally held the creationist view. Traducianism practically disappeared from catholic theology in subsequent ages; partly because of its materialistic implications, and partly by reason of apparent

The question of their mutual consistency is therefore well-nigh unavoidable in a defence of catholic doctrine.

It seems to me that when Dr. Tennant acknowledges an inheritance of mental qualities, and from a creationist standpoint explains this inheritance as taking place "in the form of modified physical structure," "mediated solely through the body," [1] he supplies a theory which completely removes the inconsistency which he suggests as possibly existing between creationism and the doctrine of original sin. In its catholic form that doctrine hypothecates the transmission of a state of conflict between animal and moral tendencies in which animal propensities are found frequently to gain the victory. But this conflict is certainly due to physical antecedents, although it is mental and moral in its results. That is, the state of the soul is determined to an important extent by the physical organism in which it exercises its functions. If, therefore, the physical conditions under which a new-born child develops moral character and performs moral actions are inherited, it is clear that the tendency to sin which these conditions explain is also inherited, whatever view we may take as to the origin of the soul. If the soul owes its origin in each child to special creation, the fact remains that it begins its moral and spiritual functioning under a handi-

success of the efforts made to reconcile creationism with the doctrine of original sin. See J. F. Bethune-Baker, *Early Hist. of Christ. Doctrine*, pp. 302–304. It seems impossible to accept this writer's assertion in a concluding note, that "the Traducian theory is the only one which modern biological knowledge supports."

[1] *Op. cit.*, p. 35.

cap which has been physically inherited. The conclusion to which we are led is that an acceptance of creationism need not in the least interfere with the reasonableness of belief in the catholic doctrine of original sin.

We come at last to the question of the moral value and importance of the doctrine of original sin. If it has no moral value — no bearing upon practical problems and issues — it was hardly worth our while to employ so much argument in its defence. The doctrines of Christianity are not imposed upon us as mere trials of faith, but as affording the knowledge which must determine a true ideal of human destiny and of the method of attaining it. Saving doctrine should not be regarded as an arbitrary stipulation, but as called saving because needed for the guidance of those who would live a saving life.[1] I have already shown that, if the moral state in which mankind has found itself during all the ages which our natural knowledge of his condition embraces is its original condition, the language of redemption and of baptismal regeneration which is so much employed in the New Testament needs correction; for these doctrines, as they are there exhibited, imply a fall from grace, and depend for their truth upon the doctrine of original sin. The practical importance of the doctrine of the fall is therefore involved in that of the New Testament dispensation of salvation.[2]

[1] Cf. the author's *Introd. to Dog. Theol.*, ch. ix. §§ 1, 2.

[2] Cf. p. 185, above.

I have also called your attention to the fact that our belief in divine righteousness is imperilled by the supposition that man's existing incapacity to avoid sin represents the condition in which God constituted our first parents when He made them responsible agents.[1] The necessity for moral endeavours of belief in divine righteousness is too obvious intelligently to be denied. It seems worth while, however, again to emphasize the incongruity between an exclusively evolutionary view of the origin of man's sinful tendencies and the truth of divine justice. Under the conditions of human knowledge during this earthly life, the problem of evil can never cease to be a problem. Theodicies that claim to be adequate really explain away the fact of sin and are therefore altogether futile. Sin is a fact, and it constitutes a seeming infringement upon either the power or the righteousness of God. We grant that without the capability of sinning being given to men by God the development of a kingdom of human righteousness could not be achieved, for real freedom in choosing between good and evil appears to be involved in the development of human character. Yet we do not escape the difficulty that sin, once committed, and in whatever degree of culpability, looks like either a failure of divine arrangements or a result of divine connivance with evil. To suppose that God may do evil that good may come is impossible for those who perceive what evil means. We are precluded by all our knowledge of God from believing that the origin of sin is due to

[1] Cf. pp. 170–175, above.

divine connivance. The only road to a solution of the problem lies through a larger knowledge of the nature and possibilities of infinite power than we possess.[1]

But when we are told that man's present incapacity to avoid sinning is not only a natural incapacity, which is to be explained by the evolutionary method of his creation, but represents the condition under which God arranged man's original moral probation,[2] the mystery of evil becomes something more than a mystery. It becomes what we can only regard as undeniably an act of injustice on the part of God. To hold men responsible for the impossible cannot be made to appear righteous to an enlightened conscience, and yet that same conscience bears constant witness that God does hold us responsible for every sin.

The reply that the culpability of sinners varies in degree with their moral development, and that we ought not to measure the guilt of our undeveloped first

[1] The problem of evil is more fully considered in the author's *Being and Attributes of God*, ch. vii, § 5.

[2] Dr. Tennant acknowledges that his account of sin "sees in it something empirically inevitable for every man": *Origin of Sin*, p. 113; and says elsewhere "that the impulses of our nature are in full sway before the moral consciousness begins to dawn:" *op. cit.*, pp. 96, 97; also that "the iron chains of habit have already begun to be forged before the expulsive power of new affection and reverence can be felt": *op. cit.*, p. 109. Yet he maintains that this "internal conflict between . . . natural desire and moral end is . . . *the expression of God's purpose*" (italics mine): *op cit.*, pp. 118, 119. We agree with him when he says that animal propensities "belong to man as God made him": *op. cit.*, p. 95. Our point is that, if the resulting inevitableness of sin was left unremedied by grace, God became the cause of sin — an impossible conclusion.

parents by the standards of a Christian conscience,[1] is to miss the point, although the fact that an undeveloped soul incurs less guilt in sinning than an enlightened Christian is hardly to be disputed. It is not the degree of guilt that determines the responsibility of God, if He puts them of His own will to a probation in which avoidance of sin is practically impossible, and then holds them guilty for sinning. The slightest sin, and the slightest responsibility therefor, when sinlessness is in effect impossible for the individuals involved, warrants the charge of injustice against Him who created such conditions and yet holds men accountable. Men cannot be held responsible, even in the very lowest degree, for the unavoidable, when the Judge is also the cause of its being unavoidable, without a violation of righteous judgment. We believe, of course, that the Judge of all the earth must do right; and this conviction, combined with our knowledge that that Judge holds men accountable in some degree for the slightest sins — I mean for every sin the wrongfulness of which is to any extent perceived by the sinner, — compels us to regard an exclusively evolutionary explanation of man's existing tendency to sin as incredible.

If the reply is made that catholic doctrine is open to the same objection, inasmuch as it teaches an existing incapacity for sinlessness on the part of men, and yet declares them to be held accountable by God, the answer is this: Catholic doctrine does not, as does an exclusively evolutionary view of sin, compel us to ex-

[1] Tennant, *op. cit.*, pp. 91–94.

plain our moral incapacity as coming from God.[1] It teaches, on the contrary, that God imparted to man such supernatural endowments that he could have avoided sin, in spite of the handicap of inherited carnal impulses. It also teaches that, when creaturely wilfulness nullified these endowments, and caused mankind to revert to the moral incapacity of his unassisted nature, God provided a dispensation of redeeming grace which enables men to meet their responsibility for sin and ultimately to escape from its power.[2]

An exclusively evolutionary view of sin certainly has a tendency to lower men's sense of its seriousness. This has been denied, and it has been urged "that the sinfulness of sin is really more stoutly maintained by a theory which makes all sin actual and a matter of personal accountability, however less guilty its earlier stages may be than its later, than by a theory which finds the source of sinfulness in a supposed hereditary state for which no man is responsible." [3] Such a reply appears to have some force as against the view that we

[1] We are not committed, for instance, to the supralapsarian theory that God predestined man's fall. Yet that horrible theory is the theological counterpart of the evolutionary view that our moral helplessness is "the expression of God's purpose."

[2] The catholic doctrine of justification does not mean that our faith in Christ's death exempts us from responsibility for sin; but that such faith initiates in us a state in which, by repentance and sacramental grace, we are enabled to suffer with Christ in such wise as to satisfy through Him the justice of God and attain to holiness and eternal life.

[3] Tennant, *Origin of Sin*, Pref. of 2d ed., p. xx. The context, pp. xix–xxvii, constitutes Dr. Tennant's reply at large to the charge that his view logically involves a minimizing of sin.

inherit guilt as well as incapacity to avoid sin; but it has none whatever in relation to catholic doctrine, which borrows St. Paul's secondary use of the word sin to describe our inherited moral weakness, but imputes personal guilt to those only who have actually sinned. In tracing to natural heredity the internal conflict which inevitably issues in acts of sin, catholic doctrine does not conflict with Dr. Tennant's view, that we can "assign the rise of evil itself . . . to the difficulty of the task which has to be encountered by every individual person alike, the task of enforcing his inherited organic nature to obey a moral law which he has only gradually been enabled to discern." [1]

The evolutionary and catholic views of sin differ in their methods of accounting for our sin-producing inheritance rather than in their definitions of its nature and their estimates of the responsibility of children. The evolutionary view that our inheritance is wholly due to the laws of natural development compels us to regard the Creator as responsible for our inability to avoid sin and guilt. The catholic explanation, that it has been caused by an unnecessary human act of wilfulness which has nullified divinely provided means for transcending our naturally inherited weakness,[2]

[1] *Op. cit.*, p. 81.

[2] We should not overstate the supernatural factors of man's original righteousness. All that is required by catholic doctrine is that our first parents should have been *sufficiently* endowed with grace to make them really free and responsible under the conditions of their beginnings of human experience — really capable of avoiding conscious sin.

places the responsibility for our slavery to sin upon human shoulders. It is this difference that justifies our contention that the purely evolutionary view must result in minimizing the awfulness of sin. If sin is the inevitable fruit of natural incapacity, and this natural inheritance constitutes the sum of the resources afforded to primitive man by the Creator, it is difficult to justify any serious estimate of human guilt, so long as sinlessness remains an unattainable ideal. Catholic doctrine justifies the fearful condemnations of sin which we find in Scripture, as no other doctrine does. It relieves God of all responsibility for the inevitableness of sin, and by its doctrine of redeeming grace shows that, without the slightest change in His condemnatory attitude towards sin, God has found a way of showing mercy to the victims of the sin of our first parents and of gradually saving us from its consequences. The experience of mankind bears out what I am saying. Wherever men have referred their inability to avoid sin entirely to the original and necessary constitution of things human, they have been tempted to abandon the struggle, and to minimize the witness of conscience to human responsibility and guilt.

It has been denied by Pelagians and others that sin is an inevitable result of the natural condition in which we are born. One fact alone shows the purely abstract and unconvincing nature of such a denial. All men sin. The only sinless man known to history is One who, because of His sinlessness as well as for other reasons, is known to be the eternal Son of God.

If His sinlessness was human sinlessness, it was none the less a result of transcending grace — not a result which the purely natural man has shown himself to be capable of producing in any stage of his development. Apart from supernatural assistance man misses the mark, and exhibits the one example in creation of a species that invariably fails to fulfil the distinctive law of its being. To deny that primitive man enjoyed special assistance, and to exclude the sin of our first parents from our explanation of universal human sinfulness logically involves that we should make God the author not only of the *possibility* of sin, as Dr. Tennant puts it, but also of the *practical impossibility of avoiding it.* That natural evolution has been a factor in producing our fallen state, we are free, as believers in catholic doctrine, to acknowledge. To regard it, however, as the whole explanation is to impugn divine justice and to stultify our moral instincts. Evolutionary science, as distinguished from naturalistic philosophy, leaves us free to avoid such a nightmare of belief.

By the Rev. Francis J. Hall, D.D., Professor of Dogmatic Theology in the Western Theological Seminary, Chicago, Illinois.

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