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The Challenge of the Universe, by the Rev. Charles J. Shebbeare (S.P.C.K., 7s. 6d. n.), is a very interesting book, written in an easily intelligible manner and giving abundant evidence of much thought and sincere goodwill; for the passing and misleading references to the case of Galileo are, we are convinced, due to an imperfect acquaintance with the facts and not to any anti-Catholic bias—the author, however, should, in view of any future edition, consult Father Hull's monograph of the subject (C.T.S.,).

The materials from which the book has been constructed have been collected in a most curious manner. So far as classical writers are concerned, we have never seen a better account of their views: Mr. Shebbeare has also an adequate acquaintance with scholastic philosophy. It is when we come to modern authors that we find gaps in his knowledge. There is much excellent criticism of Mr. Russell's works, but apart from this there are curious omissions. The book is a restatement of the Argument from Design, yet there is no mention of the attempt in the same direction which forms the first essay in Sir Bertram Windle's *Century of Scientific Thought*. The argument from the æsthetic sense is one of the best which we have seen, but the valuable evidence given in Hutton's *Lesson of Evolution* is not alluded to. We cannot think that the writer would have urged that the view that law involves the idea of a lawgiver was a sophistry, if he had read the discussion between Wasmann and Plate at Berlin published in *The Problem of Evolution* nor that he would have treated the question of Vitalism as inadequately as he has done, if he had made a study of Driesch's invaluable works on that subject. But, in spite of these limitations, the book is well worth reading.

THE CHALLENGE OF THE UNIVERSE

THE CHALLENGE OF THE UNIVERSE

A POPULAR RESTATEMENT OF THE ARGUMENT FROM DESIGN

BY THE

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CHAPTER I: THE PROBLEM OF EVIL 1

"If there were a God, no evil would be found in the world. But evil is found in the world. Therefore there is no God." This argument has seemed to some minds to gain new cogency from the events of the war. But is it really unanswerable? Perhaps not—if we reflect that the conquest of evil, through patience, courage, and other efforts of a rational will, is among the highest of rational acts; and thus that a Universe in which there was no evil to be conquered could not conceivably attain perfection.

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If we once see that the existence of evil is not an obviously unanswerable objection to religious faith, then it is worth our while to inquire candidly whether "Naturalism" or Christianity best meets the intellectual challenge which the Universe presents to us. Mr. Bertrand Russell has written a noble description of a religion of freedom based upon Naturalism and an "unyielding despair." We must face the questions which his essay raises. Does the constitution of the Universe take any account of man as such, and of his moral and spiritual interests? Or is human life but the accidental outcome of purely mechanical forces? Is there, outside man and human efforts, any Power—personal or impersonal, conscious or unconscious—which "makes for righteousness" and spiritual progress?

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The favourite popular argument, in defence of religious hope, is that which is known as the "Argument from Design," or sometimes as the "Teleological Proof." This argument points to the orderliness of Nature. There are in Nature many qualities which, if we found them in the work of man, we should regard as results of intelligence: the same sort of qualities as distinguish the work of an adult from that of a child, the work of a sane man from that of a lunatic, the work of an artist from that of a mere craftsman. Nature exhibits uniformity even where there is no direct

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mechanical contact to explain this. Each sheep is physically separate from the other members of the flock: yet all are going through similar processes of nutrition. In every ear of corn matter is being collected and arranged in a similar complex structure. This uniformity cannot be taken as a matter of course, of which the explanation is obvious. Nor can it be a mere accident. Thus—it is argued—the world looks so *like* a plan or design that it must surely *be* one. But if the world is the result of design, does not this imply that it is the work of a Designer?

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This popular argument seeks, in effect, to show that the world is governed (1) by general principles, and therefore (2) by a Conscious Mind in which those principles dwell. It is, however, an error to assume that government by principles necessarily implies government by a Mind. The example of Geometry would be enough by itself to disprove this assumption. Let us first ask, then—not "Is the world governed by a God?" nor "Is it governed by principles of wisdom?"—but "Is it governed by general principles at all?" The value of the popular argument lies in the fact that it points to certain phenomena which become highly significant if they are considered together: viz. (1) the pervading *regularity* of Nature; (2) the appearance of *co-operation* among the parts of plants and animals; (3) the delicate and complex schemes of *form* and *colour* which physical processes produce; and (4) certain facts which suggest that the Universe is a *single system*, a rationally ordered Whole. There are many cases in Nature where a large number of bodies or particles behave according to one single formula or rule of action. It is a common evasion to say that formulas, rules, laws, principles dwell in our minds only, and except in the case of human agency exercise no influence upon the outside world. Yet we all assume in our predictions—e.g. of eclipses, of the fall of a stone left without support, of the regular return of night and morning, winter and spring—that we are dealing in each case with a principle of regularity to which, in the future as in the past, events in the outside world *must* conform. Can we then deny that we regard the principles as really governing the phenomena? But granted that Nature is governed by principles, are the principles that govern Nature purely mechanical in character? Are the colour-schemes of the landscape beautiful by mere accident? Are they the mere by-product of mechanical uniformity? Or is Nature in some sense governed by specifically æsthetic principles? It is not unreasonable to ask questions of this sort, nor to maintain that to the unphilosophic mind—if to no other—the readiest explanation of the artistic appearance of the Universe is that the Universe is in truth the work of a divine architect.

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Before we attempt to restate this argument in the light of the criticisms directed against it in modern times, it is well to recall how it has been formulated by distinguished thinkers in the past, e.g. Socrates, Aristotle, Cicero, St. Thomas Aquinas.

CHAPTER VI: MORAL KNOWLEDGE 58

It is also well to recall the argument which Kant and others have sought to substitute for it, viz. the "Moral Proof" of God's Existence. This latter argument can be so stated as (1) to furnish in itself a direct refutation of "Naturalism"; (2) to form an important element in that very restatement of the Argument from Design of which we are in search. Naturalism denies that the laws of the Universe take account of the spiritual interests of man. We find, however, that there are laws relating directly to our most important spiritual interest of all, our knowledge of Right and Wrong. We find, first, that there are fundamental moral principles which we can all be made to see and accept if only they are put before us with sufficient clearness. Further, we find that the Moral Ideal is a connected Whole, and that our minds are so constituted that, if they are familiarized with certain of the leading principles of morality, they pass on from these by a natural sense of affinity to other elements in the Moral Ideal as occasion brings them to light. We trust the man of good feeling to act rightly in quite novel circumstances. The "Law" on which we rely is that familiarity with right moral principles breeds general sympathy with the true Moral Ideal. This is the law on which we base our educational methods: and this law cannot be successfully explained away by any naturalistic hypothesis. These hypotheses, if carried out consistently, have to treat our moral convictions as *illusion*, and we all know in our hearts that they are *not* illusion.

Again, an ideal for human conduct presupposes some ideal for the Universe at large. It is a law that the mind of man is so constituted as to recognize, in its main outlines, the true ideal for the Universe when this ideal is clearly set before us. To this truth the literature of all ages bears witness. The union of virtue and happiness in a setting of physical uniformity and æsthetic beauty, has called forth the praises of poets from the days of the Jewish Psalmists to our own.

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The fundamental thought which the popular argument embodies may now be reformulated as follows:

(I) The basis both of our everyday predictions of natural events, and of those made by systematic science, is to be found in the belief that the world is in some sense a rational Whole governed by a rational system of laws, i.e. in the

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belief that reality conforms to a rational standard or ideal. No sane man believes in a world which conflicts with the ideal which he himself seriously accepts. It is for this reason that we positively reject (though we can have no direct proof that they are untrue) the myths of Paganism and all similar absurdities. For what other grounds of rejection can we have? It is easy to refute the error that our rejection of the myths and our prediction of eclipses, etc., is due to the unaided influence of past experience. (See Mr. Russell's parable of the chicken, *Problems of Philosophy*, p. 98.)

But (II) we have seen already that one of the laws of Nature is that men's minds tend towards a reasonable conception of what the Universe ought to be. (See chapter vi.)

If this is so, then we may ask (III) whether we could possibly call a system of laws *rational*, which prescribed, on the one hand, that men should tend towards a true conception of what the Universe ought to be, and yet prescribed, on the other hand, that this conception should be quite left out of account in the actual ordering of the Universe itself? If a conscious Creator produced such a world—deliberately implanting in men high aspirations and yet dooming these aspirations to ultimate disappointment—we should conceive such a Creator, not as God, but as a mischievous fiend. Such a plan would exhibit the height of irrational perverseness. But if such a plan is irrational when consciously framed and carried out, this is because it is irrational in itself. If then we are right in attributing to the Universe a general rationality (in the sense in which rationality is an object of admiration) and in basing our predictions upon this belief (as we shall find that we do), then the world cannot be the perversely ordered scheme we have just imagined. The conclusion suggested is that the System of Laws which governs the Universe and which, among other things, implants a rational ideal as (in spite of much incidental difference of opinion) a fixed element in the human mind, also orders the Universe at large in accordance therewith. Thus the admission that there is in the human mind a tendency to form correct judgments about good and evil may be regarded—as unbelievers have themselves often regarded it—as the "thin end" of the Theistic or Optimistic "wedge."

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But is this notion of a world so ordered as to fulfil rational *ends*, and to embody a rational *ideal*, consistent with the pursuit of Physical Science? Can the notion of physical "law" and moral and æsthetic "ends" be united in a single system? The answer is (1) that a world whose nature is to embody an ideal must in many respects resemble a work of art, (2) that the greatest works of art exhibit prominently the element of *regularity*, (3) that, if the Universe resembles these works of art in this respect, its regularity can be made the object of special study, its elements can be

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tabulated, its uniformities recorded even by those who are quite blind to the higher ends which it is achieving. Some of the best results in Nature have been attained through the struggle for existence: but this does not prove that their attainment was left to chance. Even the believer who regards Nature as we know it as but a subordinate part of God's creation—playing its part within a comprehensive teleological system or "Kingdom of Ends"—may yet quite consistently make Nature and its uniformities the object of his inquiries.

On the other hand, while the success of Natural Science is no argument against a teleological theory of the Universe, the discovery of one single teleological law is a complete refutation of "Naturalism."

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Can we, then, find any unquestionable teleological laws—i.e. laws which prescribe the realization in Nature of such "ends" as beauty, life, knowledge, or are all the laws of Nature purely mechanical? We have already recognized one non-mechanical law in chapter vi. But does this stand alone or are there others? Is there, e.g., in the particles of which a plant or animal is composed any tendency towards organic co-operation as such? Is it a law, in regard to these particles, that in certain given conditions just those relative movements take place which conduce to the life and health of the whole? It should be noticed (1) that actual co-ordination where there is no co-ordinating principle is accident pure and simple. If the parts of which plants and animals are formed have no tendency towards organic co-operation as such—just as a civilian crowd may have no tendency towards military co-operation—organic co-operation if it occurs will be either due to accident or to some external influence. It is no more likely that we should meet with a long succession of lucky accidents in botany than in warfare. Thus, in the case of the plant, we seem driven to choose between the conception of an external Creator or Artificer, on the one hand, or, on the other hand, of the influence of an unconscious inward * principle of life, co-ordinating the various processes of which the history of the plant consists. We may notice (2) that according to Darwin: "Science as yet throws no light on the essence or origin of life" (*Origin of Species*, chapter xv; cf. chapter viii). Darwin, therefore, does not profess to have explained, or explained away, the difference between inorganic existence and organic life.

* If some one objects, "You have not exhausted all the possibilities: Why not (A) an external unconscious, or (B) an internal conscious, principle?" The answer must be, "Not B, because the parts of the plant do not themselves think. Not A, because, in relation to the view maintained in this essay, the description of laws as external influences would be unmeaning." The common talk about divine "transcendence" and "immanence" has covered much loose thinking.

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Again, is there in Nature any tendency towards beauty—towards the formation of harmonious schemes of colour? Or are such schemes when they occur the result of pure chance? A good colour-scheme might conceivably be produced by pure chance, e.g. by pigments placed at random on an artist's palette; just as a tune may be played by chance by an unskilled person striking at random on the keys. But such accidents are rare: and it is obvious that natural beauty is too constant a phenomenon to be a parallel case to these. Nor can Natural Beauty be successfully explained on Darwinian principles. Thus we must accept it as a law of Nature that mutually harmonious colours are placed together as such; even if we are unable to decide whether the æsthetic principles which thus govern Nature work by the agency of a conscious Mind, or govern the facts of Nature in somewhat the same sort of unconscious way as the facts of geometry are governed by the principles enunciated by Euclid.

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In the realm of "spiritual experience," again, there are certain uniformities which are just as much entitled to be called "laws of Nature" as are the uniformities of Chemistry and Physics. Consider the laws of moral and intellectual influence. No less definite than the laws of the response of Western Europe to the influence of Greek literature and art, are the laws of the response of the mind and conscience of man to the influence of Jesus. Yet obviously such laws cannot be stated in terms of mere mechanism. It is in the realm of spiritual experience (in the specific sense) that we meet with some of the chief facts which have led men to regard God as conscious and "personal": to develop their Optimism in the form of Theism.

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"But why has this teleological argument, which, in one form or another, has been before the world for ages, so often failed to produce conviction?" Partly because of certain inveterate prejudices and confusions of thought. (I) There are those who speak as if Natural Science denied everything which it does not affirm, and claimed therefore by itself to give us a complete theory of the Universe. (II) There are those who make the opposite mistake, and speak as if Natural Science confined itself strictly within the limits of experience, and must therefore be held more trustworthy than Philosophy or Religion. But Natural Science, in truth, passes the limits both of experience and of demonstration, whenever it predicts future events or infers

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occurrences which took place before man appeared on the earth. Apart from a tacit assumption that the Universe as a whole agrees with an ideal which we can accept as rational, we have no ground for making any single prediction, or even for rejecting the wildest absurdities of mythology or superstition. What ideal then *can* we accept as rational? The man who can confidently give one clear answer to this question has a settled faith, whether it be Naturalistic or Christian. Naturalism has no right to claim superiority here as more "scientific." We must let the rival ideals enter the discussion on equal terms. (III) There is much confusion of thought as to the meaning of the word "accident." If we ask whether the beauty, order, and rational appearance of the world are due to accident, we are told that since Nature has no free will, therefore *of course* beauty is no accident, since all that happens happens by necessity. But this does not follow. Take the case of the rock * resembling a human countenance. The form of the rock is due to natural forces. It took this form by necessity. But the resemblance is none the less accidental, and is the kind of accident not likely to be repeated. Is the agreement between Nature and æsthetic principles an accident of this same kind? The assertion that all natural events are necessary is an irrelevant answer, and merely enables us to evade the question.

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Apart, however, from these prejudices, religion has obstacles to encounter from its own inherent difficulties. First, there is the difficulty of imagining a future life. Can we conceive it in a form at once attractive and complete? Yet this difficulty, perhaps, if we face it honestly, will not be found to be insuperable: especially if we are contented to give up the attempt to form a full detailed picture of our future state, and to confine ourselves to general terms. Miss Schreiner's eloquent criticism of the Christian hope of heaven (see *Story of an African Farm*) becomes less alarming the more closely it is examined.

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Again there are difficulties connected with belief in God. "The God," it is said, "who should bring about a European War because men have forgotten Him, is a God caring for nothing but the satisfaction of His own vanity." But this objection is based upon a misunderstanding of religious language. To forget God means—in the mouth of the religious man—to forget *righteousness*. God is not conceived by religion as a mere "person" with whom we have purely external relations. In falling under God's wrath we fall also under our own. Men trust God's accusing voice

* At the Trou de Han, near Rochefort, is a stone known as the head of Socrates.

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because it is the voice of their own better self—the true language of their own hearts. To estimate such objections rightly, we must first understand the religious mind. If we conceive of the ultimate law of the Universe—the ultimate necessity by which men and all things are what they are—as something fundamentally good, and also as conscious of itself in such a sense that we may enter into communion with it and make it the object of our love and worship, then we have the personal God which religion sets before us. It is not in this form that the conception of God gives rise to the objections most commonly brought against it.

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We can best draw this whole argument into a single view if we decide—after first clearing our minds about the meaning of the word "accident"—to ask and answer certain definite questions. (1) Is it an accident that Nature is uniform? If this is a mere accident, have we any right to use Uniformity as a principle of prediction? If it is *not* an accident, have we not here a case in which Nature is governed by a general principle? (2) Is it an accident that Nature is *beautiful*? Is the beauty of the landscape a parallel case to the example mentioned above—the chance-formed colour-scheme on the palette of the painter? Is it merely a lucky accident that Nature never violates the laws of æsthetic harmony as these are often violated by the human artist or craftsman? Can the significance of these æsthetic facts be explained away on Darwinian or any similar principles? If not, must we not admit that æsthetic principles have a real influence upon Nature? (3) Can Natural Selection, or any other theory, explain away that "tendency towards correctness" which we find in human thought? (4) Are not beauty in visible Nature, and correctness of thought in the mind of man, among the facts we should most naturally give as examples of that general appearance of rationality which the Universe exhibits? Again, is it not because of our belief in the rationality of the world throughout its whole extent—its agreement at all points with a standard we can recognize as rational—that we reject the myths of Paganism? Can we then allege that the observed agreement between the world as we see it, and that standard of rationality which exists in our minds, is a mere accident? If it were but an accident, what ground should we have for confidence that this appearance of rationality will continue? Why should not the wildest and most grotesque absurdities occur at any moment? If, on the other hand, the rational appearance of the world is no accident, does not this imply the dominance throughout the Universe of the standard which right reason sets up?

If these considerations lead us to believe in the government of the world by principles of wisdom, and hence dispose us to some form of theistic belief, it is clear that we shall not be satisfied with belief in a God of limited

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powers. If the rational appearance of the world is due to the will of a personal God, whose will nevertheless is not necessarily law for the Whole Universe, the rational appearance of the world would be but a mere accident after all. The devout man's insistence on the omnipotence of God is but the religious form of the philosophic conviction that the rational appearance of the world is no accident, but follows from the fundamental necessities of the Universe. On this basis a religious belief and practice can be founded which shall be as fully a religion of freedom as the Naturalistic Creed expounded by Mr. Russell.

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To the philosophic reader the foregoing chapters—in spite of the absence of technical language—will appear as an attack upon the philosophic heresy of Conceptualism. The refutation of Conceptualism leads in the end to the Platonic doctrine which makes Ideas the ultimate basis of the Universe. This Platonic doctrine is consistent with a non-theistic Optimism (for those to whom a non-theistic Optimism does not seem to be in itself a contradiction in terms): but it is not inconsistent with the Christian belief in a God Whom we can love and worship.

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PREFACE

Among the remains of early Christian literature there is nothing that possesses greater charm than the *Octavius* of Minucius Felix. The three intimate friends whose conversation the book relates are divided in religious opinion. Octavius and Minucius himself are Christians: Cæcilius is a Pagan. As they stroll along the beach in the neighbourhood of Ostia on a fine autumn day, a chance incident gives rise to a discussion of the truth or falsehood of the Christian religion.

The purpose of the present volume can hardly be described better than by reference to this early Christian work. The fifteen chapters which here follow are an attempt to open the way for similar frank and friendly discussions of the same great question at the present time. In any age the *Octavius* would serve as a model of outspoken and yet courteous debate. It is a truly remarkable fact that such a book should be written in the age of persecutions. Looked at in this light, the personal details and general setting of the dialogue—the walk of the three

friends along the shore, the description in elegant Latin of the sand which sinks softly beneath their feet, of the rising and falling of the breakers, of the children making "ducks and drakes" by throwing pebbles into the sea—these and many similar touches are none of them irrelevant. All serve to heighten our sense of the peacefulness of the scene, and of the intimate and friendly relations among the persons of the dialogue. How far the *Octavius* records an actual conversation it may not be easy to decide; though, for all we can see to the contrary, it may well have been founded on fact. But this is not the important question. The significant matter is that such a dialogue should at such a period, when memories of persecution were so recent, have seemed to a Christian writer to possess sufficient probability to serve even for literary purposes.

How often has the modern Christian been present at a similar discussion? If, with so few obstacles between us—compared with what must have existed in the days of the martyrs—the modern Christian and the modern unbeliever are less disposed than Minucius and his friends to discuss their deepest convictions, is this fact altogether to the credit of our age? And, if it is not, ought we not each of us, believer and unbeliever alike, to inquire how far and in what respects the blame rests upon ourselves? The believer may pay his opponents the compliment of admitting that in one respect—namely, the

production of popular literature—he has much to learn from them. The Rationalist Press Association has issued books and leaflets which set an example of lucidity, of candour, of intelligibility to a wide public, which all writers of the opposite camp might well be proud to follow.

But if it is significant that in the Age of Martyrs Christian and Pagan could be conceived as engaging in free and friendly discussion, it is no less interesting to find that the Christian apologist of that period should turn in the last resort to the Argument from Design. Besides defending Christianity against charges now obsolete, Octavius formulates a theory of evil, and subordinates it to a view of the Universe based upon this famous argument, so intimately associated in our minds with the Christian rationalism of the Eighteenth Century. The Christian writer who to-day makes use, even in a modified form, of any of the traditional "proofs of God's existence" is suspected in many circles of being at heart a Deist or, at least, a Unitarian. No one—it is thought—will trouble himself with these naturalistic and rationalistic arguments who has any more religious grounds of conviction; who rests upon a sense of living communion with the Holy Ghost, or feels that he shares through the Church and its Sacraments the life of the risen Christ.

This suspicion rests upon a wholly groundless prejudice. The Argument from Design seeks to

exhibit the Universe as an orderly whole in all its diverse aspects; and the real strength of the argument lies, not in showing that this order *is* the result of design, but in showing that it is *not* the result of accident. The world's order, as we shall see, includes not only mechanical uniformity —though this is one of its most important aspects —but also involves laws relating to æsthetic beauty in Nature, to intellectual correctness in the mind of man, and this a correctness which includes moral knowledge and what in a specific sense we call "spiritual experience." These laws point to a general conception of the Universe as a rational whole, such that all, even of its most evil elements, are ultimately subordinate to the purposes of Good. Such an ultimate Optimism may be held conceivably in a non-theistic form. We may regard the world as being, in Platonic language, the embodiment of the "Idea of the Good," rather than the work of a good God. Yet, though a non-theistic Optimism is quite conceivable, belief in God is the doctrine to which Optimism most naturally leads.

Thus the rationalistic arguments need not lack religious value except for those whose personal experience has been spiritually poor. Nor can we afford to despise such arguments at any stage of spiritual enlightenment. If our personal experiences have been equal to the richest ever claimed for the greatest Christian saints; if we have been filled with singular gifts of the Holy

Ghost, the clear insight of an Athanasius, the burning love and zeal of a St. Francis; if we have had visions and revelations like St. Paul; if we have witnessed physical miracles or even worked them; still we cannot take these experiences as the grounds of a theology—of a general theory of God and the Universe—except on the basis of just such a belief in the rationality of the world as the old-fashioned arguments seek to establish. The religious man values physical miracles, and special spiritual experiences, because they throw light on the general character of the Universe. Unless we believed already that the Universe is " all of a piece," a single system such that the character of one part interprets that of another, then neither physical miracles nor inward experience would have the significance which religion attributes to them. Even the common arguments which are based on the authority of the Bible or the Church, all presuppose just such a belief in God as it is the aim of the Argument from Design to produce in our minds.

Thus the general type of reasoning to which the Argument from Design is one attempt to give formal expression, is common ground for Christians of all schools. The writer of the following pages is a member of the Church of England. Yet every argument here used might be employed by a Methodist, a Congregationalist, or a Presbyterian, whether they belonged to the right or left wings in their respective Churches: and though

neither the criticism of the Argument from Design, nor the attempted restatement of its essence, proceed quite according to customary methods, still it is probable that, even if the book had been written within the Roman communion itself, it would have required (outside the Preface and the Epilogue) only a few slight alterations to enable it to receive the *Nil Obstat* and *Imprimatur* of the authorized judges. The argument in its best known form is sorely in need of revision. But the thought which lies behind it we may be justly proud to claim as part of our common Christian inheritance.

We must be careful, however, not to interpret this claim as implying that we have here the essence of "our common Christianity." Nothing is more utterly misleading than to seek our common Christian heritage in the mere *residuum* of doctrine which is left when we have subtracted everything about which Christians differ. The essential unity of the Christian faith is seen, not so much in doctrinal statements as in a common attitude of will, a common standard of values. It shows itself above all in a common conception of the sinfulness of sin, a common assurance of pardon to the penitent, a common devotion to Christ, the common Lord.*

And if it is the possession of a common standard

* Enthusiastic devotion to Christ shows itself in the develop-

of values that is the real distinctive mark by which the Christian may be known, this fact must in the end decide the character of Christian apology. The Argument from Design, or at least some argument closely resembling it, is necessary in order to convert our religious experiences into the material for a theory of the Universe. In many circles, however, at the present day there is a tendency to question whether a theory of the Universe is any necessary part of our religious equipment. "We find," it is said, "in ourselves and in our neighbours, certain lofty and religious ideals whose truth we recognize. By these we can live: by these we can live a life of mutual co-operation; and if we recognize them as the gift of a personal God, we can regard Him as the object of our common devotion without demanding that He shall be the Absolute, or the Infinite, or the Ruler of the whole Universe; still less that He and the

ment of what, to those who do not share them, will always seem to be "extreme" views of His work or person: e.g. (*a*) in Evangelical circles, the substitutionary doctrine of the Atonement; (*b*) in Catholic circles, the conception of His risen body as the Source of our life, the food on which we feed in the Eucharist, the firstfruits of the Resurrection, the first incorruptible body, and therefore the starting-point from which Incorruption sets out that it may at length subdue Corruption to itself, when the creation which has long groaned in pain shall be delivered into the glorious liberty of the children of God; (*c*) in some Liberal circles, the assertion that the knowledge of the true God is so exclusively mediated through Christ, that we must not admit, even of the Jew, that he worships the same God as we.

Universe should be held to be ultimately identical. We can uphold our ideals even though the Universe at large affords them no support. We can co-operate with God's aspirations even though we can have no certainty of absolute success; even though the 'doors of the future' are so far 'open,' that a good or evil issue to the struggle are alike possible."

The view which such language implies is not wholly false. We must first of all recognize good for what it is; we must first distinguish God and His will from the many elements in the Universe against which His will stands in opposition; before any worthy type of religion is possible to us. It is more important to know what is good than to know whether good will be ultimately victorious. Therefore the writers who are seeking to commend to us religious ideals and religious standards of value, and to make these the objects of our effort, quite apart from any conviction that these principles are embodied in the Universe at large, are doing good and heroic work. They are writing for us that which must always be the first and most important chapter in the defence of religion. But though to commend religious standards of value is the highest work of the apologist, there is still a place, and a necessary place, for the type of argument with which the following chapters deal. Religion will not be able to dispense for ever with a religious theory of the Universe: nor to rest content

for ever even with the sincerest worship of a "finite God."

I wish to thank very heartily, for help of many various kinds, not only those friends to whom I have expressed gratitude on a similar occasion before; but also several friends of a younger generation than theirs, with whom during the past few years I have discussed some of the problems which are dealt with below. I may name especially Mr. Miles Malleson, Mr. Leonard Hodgson (Vice-Principal of St. Edmund Hall, Oxford), and my wife. I hope and believe that every page in the present volume will be readily intelligible to any reader of ordinary education. But if this is so, it is due, in great measure, to what I have learnt in discussion with my friends.

The following pages are addressed to the teachers of Theology no less than to the learners and inquirers. If any teacher of religion is dissatisfied with my statement of the fundamental grounds of religious belief, it is incumbent on him as a teacher to formulate a different one. If he feels the inadequacy of the old argument, and yet objects to my revised version of it, he must furnish a new revision, or else construct some argument that will stand criticism better. It is not reasonable to put off the inquirer, who asks us to give a definite reason for our faith, by alleging that the various lines of Christian evidence have

" infinite ramifications " ; that they form " an immense cumulative argument whose independent members converge from every department of human experience upon a central point." These words are quoted from a writer whom there is every ground to respect. There are contexts, perhaps, in which such words may be used with innocent meaning. But used, as they are too often used, to excuse us from answering the simple and definite attacks of unbelievers with equal definiteness and simplicity, they can do nothing but mischief. We must remember that twenty bad arguments do not make a good one.

NOTE.—In warm gratitude to a friend not mentioned above, I should like to call the special attention of the reader—and still more of the reviewer—to the discussion in Note II at the end of the Epilogue.

CHAPTER I

THE PROBLEM OF EVIL

If we ask what will be the effect upon the Christian Religion of the present strife of Christian nations, the question is not easy to answer.

The story is told of a British officer who, having occasion as Censor to read the letters of his men, remarked that this experience had much increased his belief in the value of religious faith. He had found that it is to religion that men turn in the extremes of sorrow and anxiety. In judging of letters of this description, some allowance must, no doubt, be made for expressions of religious faith which are purely conventional. Yet the story will bring no surprise to those who in their own lives have learned the power of Christianity by obeying the principles of its Founder. They will be sure that whatever stirs the soul to its depths will also, in the main and in the end, assist the progress of Christ's religion.

But obviously this is only one side of the question. To many the War has appeared chiefly as a severe trial of faith. Husbands, lovers, sons, fathers, brothers have perished, although commended in unceasing prayer to God's protection.

Why were these earnest prayers of so little avail to save the lives of those for whom they were offered? Why does the God who is said to number the hairs of our heads, look on in silence while His children are mowed down in battalions?

The War has, in fact, raised in an acute form the Problem of Evil. This problem is not new. It would be good if the modern reader were more familiar than he is with the treatment of the subject by ancient writers both in Christian and in pre-Christian times. Those who know these writers best will be the last to say that the debate has been useless. Definite objections have been met: definite advance has been made. But the truth remains that we are confronted in every age, not only with examples of sorrow and pain, but with the still more disconcerting fact of sin; and the magnitude of the present War makes it impossible for the thoughtful mind to forget either sin or suffering, and the immense amount of both which is present in human life.

For Religion, however, the primary difficulty arises, not from the quantity of evil which exists or from the special forms in which it appears, but from the simple fact that there is in the world any evil at all. Why should a good God permit it? "If God has no wish to suppress evil, then," it is argued, "He is not good: if He wishes to

suppress it, but fails, then, like the rest of us, He finds that circumstances are too strong for Him. In a word, since evil exists, God is either not good, or not almighty." *

Can we then cut the knot by simply abandoning the omnipotence of God? Though the belief in a God with limited powers—unable to carry out His will to the full—has been formulated by writers of great ability and distinction, its failure to satisfy the normal religious mind is well known. We shall see below that in the end it must prove equally unsatisfactory to the thinker. It meets our intellectual needs as little as it meets the demands of the religious spirit.†

Thus, at first sight, the problem of evil may well appear, from the standpoint of religious belief, to be quite insoluble. "If there were a God, no evil would be found in the world. But evil is found in the world. Therefore there is no God."‡ Such is the statement by St. Thomas Aquinas of the argument of his opponent. To many the argument will seem so unanswerable that they will not be at the trouble to wait for the reply. Moreover there are hundreds who feel

* See this argument as stated by St. Thomas Aquinas, quoted in note below.

† See chapter xv, pp. 204–206.

‡ *Summa Theol.*, Pars prima, Qu. II, Art. III. *Si Deus esset nullum malum inveniretur. Invenitur autem malum in mundo. Ergo Deus non est.* The words stand in a special context. But no injustice is done to the author in applying them more generally.

the force of the difficulty for every one who puts it into words.

There is one reflection, however, which sets these matters in a new light. Those who argue that " since evil exists, God is either not good or not omnipotent " are assuming that a perfectly good God would remove all evil from His world if He found Himself able to do so. They are assuming that a Universe which contains evil must necessarily be less good than a Universe which is without it.

So long as we attend to the mere words, this assumption may seem to be true and even self-evident. If we pass beyond the words to what they signify, we shall see reason to change our opinion.

A Universe which contains no evil would contain no pain and no danger ; for pain and danger are both of them in themselves evil things. But if there were no pain, there could be no such thing as patience : and if there were no danger there could be no such thing as courage. In general, if there were no evil to be conquered, there could be no such thing as moral and spiritual victory. And yet it is just in the conquest of evil by the will of man, that the noblest aspect of human life is seen. Thus, in rooting up from the world the tares of pain and suffering, we should be rooting up with them the wheat of our highest moral virtues.

The assertion that it is good that evil should

exist wears at first sight the appearance of a paradox. But the more we pursue this train of reflection the less paradoxical will it appear. If the reader will ask himself honestly whether he would really prefer, to this Universe of mingled good and evil in which we live, a Universe in which there should be no pain and no patience, no danger and no courage, no conquest of evil because there was no evil to be conquered, his answer can hardly be doubtful. None but the most frivolous of mankind could think it good that we should know only the life of the happy butterfly, flitting gracefully from one pleasure to another. Few would think it good that our existence should consist wholly of pleasure mixed with godlike contemplation, a lofty conversance with spiritual and intellectual interests divorced from that bracing of character which is the product of sorrow and of pain. The saints of the Apocalypse* remember for ever in heaven the sins and the sufferings of earth. To the unbeliever the visions of John the Divine may seem to be the idle fancies of an enthusiast. Even the believer may regard them as figurative in an extreme sense, and wholly incapable of exact realization. But to believer and unbeliever alike, it must surely be clear that the Apocalyptic picture of a life which perpetuates the moment of victory—which rejoices for ever in the marvel of conquest, cleansing, and redemption, and there-

* Revelation v, 9; cf. vii, 14.

fore keeps in undying freshness* the memory of the conflict through which the victory was won—bears witness to a high nobility of conception. "These are they who have come through great tribulation, and have washed their robes." When we remember that with this picture there is joined the conception of a God Who is Himself a partner in the sufferings of mankind — afflicted in all the afflictions of His people, bearing their griefs and carrying their sorrows, uniting Himself with their intercessions with groanings which cannot be uttered†—it will be seen that a belief in the goodness and nobility of suffering is interwoven with the very texture of Christianity. Moreover, the modern mind, for the most part, is very ready to recognize that the hope of a Kingdom of God, entered into through much tribulation of which at every stage God Himself is a partaker, embodies a higher ideal than the Aristotelian conception of a God active with the endless activity of thought, a thought which ever contemplates itself. Such a God, far from humbling Himself to behold the things that are in heaven and earth, thinks continually and unchangingly of that only which is "most divine and precious." To the modern reader, such language suggests the notion of a God exalted above the love of men and eternally

* Compare the phrase, "the Church triumphant."

† Isaiah lxiii, 7; Matthew viii, 17; Romans viii, 26.

absorbed in the contemplation of His own perfections.*

The assertion of the ultimate goodness of the more painful and violent of our experiences is indeed singularly congenial to the mind of the present day. The modern feeling on this subject is well expressed in the words in which Goethe's Faust speaks of his desire not so much for joy as for comprehensive experience †; and tells his eagerness for the "painful delight" ‡ of the heart which closes itself to no feeling whether sweet or bitter,§ but rather feels impelled to share ||

> The fortunes, good or evil, of the Earth,
> To battle with the Tempest's breath
> Or plunge where shipwreck grinds his teeth.

* If the modern reader conceives the God of Aristotle as, like Narcissus, vainly contemplating Himself in a mirror, he does an injustice to the philosopher. It better represents the doctrine if we say, not that God is always thinking of Himself, but rather that He is engaged always (as we are sometimes) in the purest exercise of thought when thought is its own object. In a sense we must all admit that, since God can contemplate nothing greater, He must contemplate Himself: and with this admission Christian theology has not been afraid to reckon. The heart, then, of our modern objection to the Aristotelian God is not so much that He contemplates what is noblest, as that He shuts His eyes to the material world and to many aspects of life which we think worthy of His attention.

† See the speech beginning *Du hörest ja, von Freud' ist nicht die Rede.* ‡ Dem schmerzlichsten Genuss.

§ mein Busen . . .
Soll keinem Schmerzen, künftig sich verschliessen.

|| See Dr. Anster's paraphrase. The lines in the original are as follows:

> Ich fühle Muth mich in die Welt zu wagen,
> Der Erde Weh, der Erde Glück zu tragen,
> Mit Sturmen mich herumzuschlagen
> Und in des Schiffbruchs Knirschen nicht zu zagen.

How frequently since Goethe's time similar sentiments have been expressed by writers both in England and on the Continent is well known to all students of literature.

Thus when it is argued that an almighty God ought to have been able to bring about good without the intervention of evil, the answer is fairly obvious. It is, of course, no sufficient justification for evil that evil sometimes leads to good. To justify the permission of evil, we must show how the highest of good things is unattainable without it. There are those, however, by whom even this plea is disallowed. They contend that since God must be regarded as the Maker, not of the world only, but of the very nature of possibility itself, He ought to have produced something better than this clumsy contrivance by which good is purchased only at the price of evil. It is sufficient to reply by recalling the example already given. To suggest that patience might have existed in a world which contained no pain is to use words without meaning. Patience is one of those good things which in its very essence is dependent upon evil. When we once realize that the conquest of evil by the effort of a rational will is the highest function which a rational being can perform, we shall then see that no world which was devoid of evil could conceivably attain perfection.

There are, no doubt, grave difficulties which

still remain. The problem of sin is harder even than the problem of pain, though the two may be dealt with in a similar manner. Apart, say, from the sufferings of Job, the patience of Job could have had no existence. But similarly the sin of the Penitent Thief is the necessary preliminary to his repentance, and a true repentance may well be judged to be a nobler spiritual state even than the most heroic patience. In a well-known hymn of the Church, the sin of Adam is spoken of as a " happy fault " since it brought to mankind the priceless blessing of redemption.* On behalf of such a theory of evil many passages may be quoted from the writings of St. Paul. Yet there are many defenders of Christianity who view all such reasonings with suspicion. They fear that men will find in them an excuse, if not a justification, for continuance in sin.†

In spite, however, of this and other remaining difficulties, the example of the relation between pain and patience has to some extent cleared the ground. As we have seen, it is not the amount, or the kind, of evil which exists which constitutes the chief problem ; but the fact that any evil should exist at all. This is the fact which the opponent of Christianity can make the subject of his most effective rhetoric. This is the point at which his case may appear to be put most

* For the history of this hymn, sung in the Latin office of Easter Eve, see Mr. Webb's *Problems in the Relation of God and Man*, p. 259.

† See below, chapter xiv, pp. 193–194 and note.

succinctly and most unanswerably. If then this main difficulty can be met, we may have hope of dealing successfully with the others.

Thus one effect upon religion of our present troubles is that they call us to face an old problem with new resolution, and to face it in the only way in which it can be effectively treated—namely, in direct relation to the wider problem of the world at large. Our theory of evil must depend upon our general conception of the Universe. The Universe offers us a confused spectacle of evil and of good. It is obvious that no shallow theory is sufficient. A shallow Optimism is confronted with the facts of evil: a shallow Pessimism with the facts of good. A theory which ignores either is self-condemned. And thus the Universe presents a challenge to the human mind; it challenges us to find a theory adequate to its divers aspects.

The search for such a theory is no unpractical enterprise. For many years to come our children will be drinking of the bitter cup which the events of this generation have mingled for them. For many years every country of Europe will have to deal with urgent practical questions.* Yet experience has shown that it is the mark of rational humanity to "look before and after."

* This will be true even if the recovery after the war is surprisingly rapid.

Men have never succeeded for long in separating the questions of the day from the deeper questions which lie behind them. To all who recognize this truth—whether they adopt towards Christianity an attitude of acceptance, of doubt, or of total denial—it will be evident that we shall take up with better courage the challenge of our times if we have first dared to take up with boldness the challenge of the Universe.

CHAPTER II

THE FREE MAN'S WORSHIP

To meet this challenge duly we have need both of industry and of candour.

Mr. Wells in one of his recent novels gives some excellent advice to religious teachers. The religion, he says, which is taught by some instructors of the young, may be described as "Muffled Christianity." The Christianity of the Schoolmaster is muffled, he thinks, both in its moral and its intellectual aspects. The pupil is never led to suspect that Christianity makes any such demand upon his allegiance as to require him to take an unpopular side or to sacrifice his own career for the common good: nor, secondly, is he ever allowed to hear Christian beliefs dealt with in an impartial manner. He never hears any honest argument against them, and therefore —so Mr. Wells argues—can never have heard any genuine argument in their favour.

Against this charge the Schoolmasters may be able to make a good defence. Or they may plead extenuating circumstances. But whatever may be the value of Mr. Wells's criticisms of the teaching profession, his advice to the defenders of Christianity is well worthy of consideration.

When he advises us, in effect, to make clear that Christianity calls men to a distinctive type of life and service, exacting in its demands, and sometimes revolutionary in its consequences, he is clearly right. Such Christian service is the best of Christian evidence. The simple saints who, whether their intellectual gifts are high or lowly, see what are the true issues of life—who walk in penitence, humility, love, usefulness, and self-denial, and thus exhibit in some degree the sweet reasonableness of their Master—these are of more value than many arguments.

Yet argument, none the less, has a value of its own; and Mr. Wells surely is right again when he advises freedom of discussion. There are few texts of Scripture more unblushingly disobeyed than the command of St. Peter that we should be ready always to give an answer to those who ask a reason of the hope that is in us. The power of successful argument is not a common faculty. Few of us, therefore, will willingly engage in argument with our juniors. As life advances, we get to suspect that argument is not only socially tedious, but for the most part unproductive of conviction. We know also that men may have excellent reasons for their beliefs, and yet no power to express them in words.

Nevertheless reflection shows the wisdom of St. Peter's advice. Man, after all, is fundamentally rational. In the long run we all distrust a belief for which no reason can be given. In

intellectual matters absolute honesty is the first and great commandment. There is in the world much honest doubt on religious subjects; and honest doubt, however crudely or even offensively expressed, deserves an honest answer.

The truth is that a reasoned treatment of religious beliefs is most neglected just where it is most required. On specific issues—on the doctrines which divide Roman Catholics from Protestants, or Churchmen from Dissenters—excellently clear books are written. But these books are of no value to the many who are doubting whether any part of religion is true; whether the hopes of the Christian have any foundation whatever.

Let us turn our attention then, first and foremost, to the great fundamental questions. Does the constitution of the Universe take any account of man as such, and of his moral and spiritual interests? Or is human life but the accidental outcome of purely mechanical laws? It is on the answer to this question that the truth or falsehood of all religious hope depends.

On this subject we meet with two sharply contrasted views. On the one hand we have the doctrine of Special Providence; the belief in a loving Father Who takes heed of our smallest concerns, and orders all things with a view to the highest interests of mankind. This view has its

classical statement in the New Testament. Of the man who conceives the Universe as constructed for the private benefit of himself, his friends, and his relations, the modern world is characteristically intolerant. It is important therefore to notice that from the New Testament all such narrow-mindedness is absent. The New Testament writers are men conversant with great interests, with those eternal problems of good and evil which are the deepest concern of mankind at large. It is indeed no more true that the believer in Providence is necessarily a person of narrow mind than that the upholder of the opposing view is necessarily a man of low spiritual vitality.

This opposite view is expressed with peculiar force in an early essay by Mr. Bertrand Russell entitled *The Free Man's Worship.* The world which physical science presents for our belief seems to Mr. Russell to be a world without purpose.* "Blind to good and evil, omnipotent matter rolls on its relentless way" †; and so "the individual soul must struggle alone, with what of courage it can command, against the whole weight of a Universe which cares nothing for its hopes and fears." ‡

"That man," he says, "is the product of causes which had no prevision of the end they were achieving; that his origin, his growth, his

* *Philosophical Essays*, p. 60. † *Ibid.*, p. 70. ‡ *Ibid.*, p. 68.

hopes and fears, his loves and his beliefs, are but the outcome of accidental collocations of atoms: that no fire, no heroism, no intensity of thought and feeling, can preserve an individual life beyond the grave; that all the labours of the ages, all the devotion, all the inspiration, all the noonday brightness of human genius are destined to extinction in the vast death of the Solar System, and that the whole temple of man's achievement must inevitably be buried beneath the *débris* of a Universe in ruins—all these things, if not quite beyond dispute, are yet so nearly certain that no philosophy which rejects them can hope to stand. Only within the scaffolding of these truths, only on the firm foundation of unyielding despair, can the soul's habitation henceforth be safely built." *

In such a world the problem for man is how to preserve untarnished the higher aspirations of his soul. Though "man with his knowledge of good and evil" be "but a helpless atom in a world which has no such knowledge," man need not therefore worship force. We may "preserve our respect for truth, for beauty, for the ideal of perfection which life does not permit us to attain: though none of these things meet with the approval of the unconscious Universe." † Nor need our attitude be one of mere defiance. "Christian resignation," as Mr. Russell perceives, "is wiser than Promethean rebellion." ‡ And,

* *Philosophical Essays*, p. 60–61.

† *Ibid.*, pp. 63–64.

‡ *Ibid.*, pp. 64–65.

further, " in the spectacle of Death, in the endurance of intolerable pain, in the irrevocableness of a vanished past, there is a sacredness, an overpowering awe, a feeling of the vastness, the depth, the inexhaustible mystery of existence, in which, as by some strange marriage of pain, the sufferer is bound to the world by bonds of sorrow. In these moments of insight we lose all eagerness of temporary desire, all struggling and striving for petty ends." * And so, in Mr. Russell's view, it comes about that " to abandon the struggle for private happiness, to burn with passion for eternal things, this is the free man's worship." †

Thus it is that Mr. Russell would have us bear the cross without hoping for the crown. Such an attitude of Christian resignation, as, divorced from the support of Christian consolation and hope, it has been exhibited by more than one unbeliever in our time, is one of the noblest spectacles which life has to offer.

Yet it cannot be denied that Mr. Russell's theory of the Universe—the theory which is now commonly called " Naturalism "—presents us with a view of life gloomy in the last degree. It affirms that the laws of Nature are absolutely indifferent to man and his interests : it forbids us to extend our hopes beyond the grave : it leaves us, as Mr. Russell himself confesses, to an " unyielding despair." In the search for truth we

* *Philosophical Essays*, p. 67. † *Ibid.*, p. 69.

must not allow our conclusions to be dictated by our wishes. The " Will to believe " must never be admitted as an argument. But, so long as we do not allow our wishes to bias our thinking, we may frankly admit that it would grieve us to find Mr. Russell's conclusions correct, and would please us to find that they could be triumphantly refuted. The desire to lift the cloud of depression into which an acceptance of Naturalism would plunge us, is a perfectly legitimate motive for candid and searching inquiry.

Can we find, then, any valid argument by which Mr. Russell's confident assertions can be disproved ? If this is done, can we advance further, and find reasons to justify a general Optimism ? Can we find reasonable support for the Christian belief that, in spite of evil or by means of it, the spiritual interests of mankind will show themselves completely victorious in the end ?

We must not hastily assume that Naturalism and Christian Optimism are alternatives. It is an interesting fact that for many minds the choice does lie between these two. They feel that if they reject the one they must immediately accept the other. The reader on careful self-examination may perhaps find that this is the case with himself ; and the significance of this fact may appear below. Meanwhile, however, we may confine ourselves to the simple question whether Naturalism is true or false : whether the Universe is, or is not, so constituted, that its

laws have reference to the spiritual interests of mankind.*

This question, it should be noticed, is not identical with the question whether the world is governed by a Personal God. The conception of God as a Person has played in all ages a great part in religion. The faith that behind the mysteries of Nature lies a mind and heart similar to the mind and heart of man, belongs to religion in some of its humblest, but also in some of its noblest, developments; and those who have poured scorn upon this belief have evinced little understanding of the profound human instinct which it expresses. Yet it is a mere fact of experience and history that other views of God have had, and have still, a great influence on human thought. The evidence of this fact which is most familiar to the general reader is the well-known phrase of Matthew Arnold, who conceives God, not as a self-conscious Person, but as the "Power not ourselves which makes for righteousness."

As against Mr. Russell, Matthew Arnold and the orthodox believer are on the same side. For Mr. Russell the "power not ourselves which makes for righteousmess" is as much a figment as the divine Governor of the world. For Mr.

* Mr. Russell speaks of a fortuitous concourse of atoms. Many who accept his Naturalism would reject this phrase. Are we to praise Mr. Russell for having the courage of his opinions, or to blame him for giving away his case? On this question the future chapters will throw light.

Russell there is not even any "power not ourselves which makes for beauty." In admiring Nature, he thinks, the "insight of creative idealism" is finding the "reflection of a beauty which its own thoughts first made." In other words, he conceives us as "reading in" to the Universe what apart from us it would not contain.

For the present moment, then, let us keep in mind one single question. Let us inquire whether, outside man and human efforts, there is any Power—personal or impersonal, conscious or unconscious—which makes for righteousness and spiritual advance; and let us examine in relation to this question the well-known arguments which in all generations have supported the religious faith of mankind.

CHAPTER III

THE PLAIN MAN'S ARGUMENT

Of the various arguments devised in past times to prove the existence of God—and incidentally to refute a Naturalism like Mr. Russell's—the clearest and simplest is the familiar "Argument from Design."

This argument points to certain facts of Nature which look like evidences of design or arrangement; and draws the conclusion that the world is so *like* a plan that it must really *be* one; that is, that it resembles a work of intelligence in too many respects for this resemblance to be accidental.

At the present moment the Argument from Design is out of favour: partly because it is supposed to have been demolished by Darwin; partly because it seems to ignore the sufferings, the inequalities, the injustices of life, to which the modern mind is so peculiarly sensitive. If a wise God designed those elements in the world which are pleasant and profitable, what explanation are we to give of the evil and the pain?

In some quarters, however, this argument still holds its own: nor is its influence confined to ignorant men unacquainted with Darwin, nor to

simple souls who know nothing of the ills of life. Yet it has never in modern times been the special argument of the philosophic thinker. In contrast with other arguments preferred by the learned, the Argument from Design has been called* the "argument of the plain man." Employed mostly by men versed in the hard facts of life rather than in philosophic systems, it is often seen in its most impressive shape when stated in the most informal manner.

Take, for example, the well-known question of Napoleon and the comment made upon it by Carlyle. "During Napoleon's voyage to Egypt" —says Carlyle on the authority of Bourrienne— "his *savans* were one evening busily occupied arguing that there could be no God. They had proved it, to their satisfaction, by all manner of logic. Napoleon, looking up into the stars, answers, 'Very ingenious, messieurs; but who made all that?' The atheistic logic runs off him like water; the great fact stares him in the face: 'Who made all that?'"

In all such popular arguments we have to distinguish what is said from what is meant. If we ask, "Who made the world?" the unbeliever may readily answer, "Why should it have been made by any one? How can you prove that nothing

* See Mr. Webb's *Problems in the Relation of God and Man*, p. 159.

can exist which is not the work of a conscious being?" But such an answer implies a misunderstanding of the issue. The force of Napoleon's argument depends, not upon the fact that there exists a world of some kind, but simply and solely upon its character.* Had he found himself confronted with a world of Chaos, instead of a world of Order, his question would never have been asked.

The mind of the man of action contemplating the works of Nature is impressed always by the "orderliness" which they exhibit. In some languages, as is well known, a word signifying the "Order"—*Cosmos*, *Mundus*, *Monde*—is the very name by which the world is called. The word "Order," it must be admitted, is often somewhat vaguely employed — sometimes to signify a wise and well-considered arrangement, sometimes to signify mere arrangement as such without deciding whether it is good or evil. But to the plain man Order in either sense suggests intelligence. Even the uniformities and similarities which are recorded by Physical Science seem to him to call for some explanation such as a purely physical theory cannot offer. Napoleon's question indicates that he sees in the world the same sort of qualities which we should regard as the results of intelligence if we found them in the work of man; the qualities which distinguish the

* In this respect the Argument from Design is in contrast to the "Cosmological Proof."

work of an adult from the work of a child, the work of a sane man from that of a lunatic, the work of an artist from that of a mere craftsman.

In human work—in a Gothic Cathedral and equally in a steam-engine—the idea of the Whole comes first and the parts are subsequent. It is with reference to the idea of the Whole that the parts are formed or selected. In the machine the parts come together as means to a common end. In a work of art every feature is an end in itself, and exists for the sake of its own beauty. But the various features are still parts of a Whole and co-operate to produce the general "effect" under the influence of a governing conception. Even in simple cases, as when plants or stones are arranged in rows or circles, we recognize that an idea has come first. The position of each individual plant has been governed by a single principle which takes account of them all. Indeed the "government of separate objects by a single principle" is, in these cases, the very essence of what "order" or "arrangement" means.

Is the world, then, similar to human work in this respect? There is much to suggest that it is. I look around, and am aware that every blade of grass is going through a similar process of growth: that all the sheep on the hill-side are going through similar processes of nutrition: that in every ear of corn matter is being collected

and arranged in a similar complex structure. Yet these are not cases of direct mechanical contact; they are not like the case where a number of levers move in a similar manner because all are worked by a single crank. Each individual sheep is physically separate from the others. Whence then this unity of behaviour? Has not the student of Physical Science been too much disposed to take the Uniformity of Nature for granted, as if because it is familiar it was therefore understood and explained, and need cause no further question? Has he not sometimes spoken as if by Natural Selection we could explain the uniform behaviour of organic bodies, while in truth he is compelled, like other people, to presuppose this uniform behaviour as the starting-point of his explanations? The Uniformity of Nature is a sufficiently remarkable fact. To the plain man disposed towards religion uniformity is itself a religious argument. Whenever we see in articles of manufacture the same unity of character or behaviour as we find in natural objects, we know what to conclude; they have all been formed according to one rule or pattern; one principle has governed all the cases: and this implies the work of a governing or designing mind. And so, he argues, it is with the world; Nature goes by rules, and rules, he thinks, can only act through the agency of a mind which can grasp them. "The world," said a thoughtful artisan, "is a System, and every System has its Master."

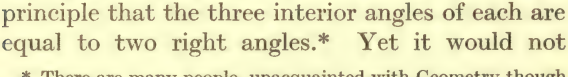
CHAPTER IV

THE ARGUMENT EXAMINED

THE plain man's argument, then, has two stages: first, he concludes that the world is governed by *principles*; secondly, that it is governed by a *Conscious Mind*.

These two stages should be kept distinct. At its second stage—as must be frankly admitted—the argument tries to move too fast. We have no right to jump to the conclusion that "government by a principle" is the same thing as "government by a mind." There are clear cases where these are not identical. The measurements of all the triangles in the world—in all their variety of shapes and sizes—are governed by the single principle that the three interior angles of each are equal to two right angles.* Yet it would not

* There are many people, unacquainted with Geometry though otherwise well educated, to whom the measurement of *angles*

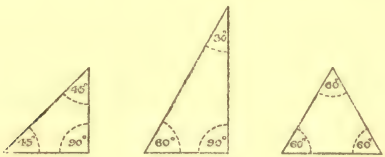


conveys no meaning. Yet if we agree to call a right angle an angle of 90 degrees it is easy to see what is meant by an angle of 45 degrees, or of 30, 15, 135, etc.; and hence to understand the

occur to any one who understood the Euclidean proof to speak of the triangles as subjected to this principle by divine decree, or to interpret the law in terms of conscious Will or Purpose.*

Thus it is not the aim of the present volume to defend the popular argument as it stands; but rather to show that the fundamental thought which it enshrines can be restated in a less questionable form. The chief criticisms directed against the Argument from Design are due to Kant † and to Darwin. We must seek to rewrite it, bearing these criticisms in mind. Yet a brief discussion of the argument in its popular form is an excellent introduction to the whole subject,

meaning of the statement that the three interior angles of any triangle are together equal to two right angles, i.e. that the three numbers representing the three angles will, if added together, always come to 180, e.g.



For the *proof* of the statement we must look elsewhere (Euclid, I, 32). But what is said here should be enough to make plain, even to the most ungeometrical person, the drift of the argument in the text.

* See below, Epilogue, p. 219.

† There will be no explicit reference in this book to Kant's criticism. But the attempt has been made consistently to state the argument in a form to which these criticisms shall not apply. See Note at end of Epilogue.

and will serve to familiarize us with ideas which are not too prominent in the thoughts of this generation.

Even if the Argument from Design fails to prove what it sets out to prove, still it proves something. It points to certain groups of facts which become significant if they are considered together.

It points, first, to the *regularity* of Nature, to the fact that everywhere Nature conforms itself to rules. It points, secondly, to the appearance of *co-operation* among the various parts of Nature, especially among the organs of organic bodies. Thirdly, it inquires whether it can be a mere accident that the physical processes of Nature are so admirable in their *æsthetic effects*, in the schemes of line and colour which they produce. Fourthly, it points to the fact that similar laws hold good in all parts of the known universe, and points to certain other facts likewise which suggest *unity* of *system*. The appeal of Carlyle is to the " great fact " which stares us in the face. That the world has a " Maker " is not an observed fact, but an inference. But the regularity, the mutual co-operation, the æsthetic harmony of Nature in its various parts, and in some sense also its unity, are facts which all schools of thought will admit. The question is how far recent discovery and recent thought—and especially the doctrines of Darwin—have robbed these facts of

significance for religion. Men, as we saw, have found, or have fancied, that the world possesses those qualities which belong to the best kind of human work, the work of the grown man, the sane man, the competent artist. Before we reject the old argument as worthless, we must ask whether the world does possess these qualities or not; and, if we find that it does, we must then inquire whether our own theory of the world, whatever it be, takes this aspect of Nature sufficiently into account.

I. Take, one by one, the facts mentioned above. Take, first of all, regularity. Nature unquestionably conforms itself to rules. Is it also governed by them?

We saw that the question "Is a Naturalism like that of Mr. Russell true or false?" is not identical with the question whether there is or is not a Personal God. For the present moment, then—instead of asking "Is the world governed by a Person?" or even "Are the principles which govern the world wise ones?"—we will confine ourselves to the question which justly comes first, "Is the world* governed by principles at all?"

There are those who totally deny it; who assert that the Laws of Nature, and all other general principles too, exist in the human mind only. These thinkers regard the outside world

* That certain geometrical facts are so governed we have seen already. Is this true also of the world at large?

as a collection of isolated individual things—bodies, molecules, atoms, or smaller units*—separate one from another in their own nature, while the bond which binds them together in our minds is a purely mental fact, an afterthought by which the mind compendiously sums up its experiences and observations.

On this theory Nature consists of blind isolated particles moved by blind brute forces, nor is there anything which bears even the most remote resemblance to a "spiritual principle in Nature." In the words of Democritus of old, nothing is "real" but "atoms" and "void"; and though we must not assume that his modern followers are at one in all respects either with him or with one another, we have still to reckon with the opinion (strongly and even obstinately held) that in Nature apart from man all is separateness and isolation; that the bond which binds the units together is mental, the creation of the human mind.

It is, however, a pure mistake to suppose that this kind of "atomistic" doctrine gains any genuine support from modern discovery. It is true that recent additions to our knowledge have greatly changed the outlook. The constancy and immutability of Natural Law revealed itself to primitive mankind in the regular changes of the seasons, the constant properties of fire and water,

* There is, of course, no intention here to deny the value of these conceptions for the purposes of Physics.

the daily rising of the heavenly bodies, the moon "appointed for certain seasons." the sun which "knoweth his going down." For us the regular seasons are explained by astronomic motions: these in their turn by the mutual attraction of innumerable particles of matter; this again, perhaps, by the action of still minuter particles. Yet, after all, the element of regularity has merely shifted its ground. The regularity of the larger bodies presupposes the regularity of the smaller. The smaller particles may follow laws which are less complex even than Newton's formula of gravitation*; but, whether the ultimate laws be complex or simple, we always come back in the end to a number of separate particles behaving according to one single rule of action. From this conception we cannot escape. Moreover, our prediction, whether it be the astronomer's prediction of eclipses, or the ordi-

* The jet of water, reaching the ground after it is propelled from a horizontal spout, describes a parabola. It is easy to argue that in Nature itself we have merely the downward pull and the outward thrust. Yet here on any showing we have a vast number of distinct particles all subject to a *real necessity* quite independent of our minds. This necessity is also a *general* necessity. We predict the fall of the water with confidence, because we believe that *all* the particles *must* conform to a single rule of behaviour. Thus—even if the principle of the parabola and (as some will argue) the principle expressed in the Newtonian formula, belong to our minds only—we get back sooner or later to a general principle to which separate facts *must* conform; by which, in other words, they are "governed." Our prediction of natural events *assumes*, what in the case of Geometry we can *prove*, that a certain group of facts must conform themselves to a single principle.

nary man's expectation of the alternations of seed-time and harvest, day and night, assumes that this regularity "must" continue; and therefore that those ultimate movements of minute particles* upon which all this visible regularity depends will inevitably continue to proceed according to the same rules as heretofore. It assumes, too, that this regularity will affect, not only those particles whose effects come within our ken, but all similar particles in all parts of the Universe. If, then, in the case of each Law of Nature we assume—as we do—that we are dealing with a principle of regularity to which the movements of matter "must" conform, why should we hesitate to say that the movements are "governed" by the principle—if not through the agency of a Conscious Mind, then in somewhat the same sort of unconscious way in which the measurements of triangles are governed by the laws defined by Euclid?

II. We come, secondly, to the co-operation of one natural object with others, especially the mutual co-operation of organs in plants and animals. Nature, as we have just seen, is sub-

* It is a common mistake to speak as if we arrived at our knowledge of the regularity of visible processes through our knowledge of the invisible regularities which Physics has to assume as their foundation. The truth is that we assume future regularity in these invisible movements of minute particles, only because we have already assumed it in the case of those with which we are more familiar.

ject to general laws. Are there any special laws which regulate co-operation? The parts of Nature do, as a fact, work together. Are there laws which order these helpful relations; or is this co-operation but the chance result of laws purely mechanical—laws which do not prescribe co-operation as such?

In pre-Darwinian days the organic body was treated as an evidence for religion. In the formation of such bodies there is much that looks like selection on definite principles for a definite purpose. The eye is a highly complex structure: an assemblage of different substances of which each appears to be necessary for the function which the eye performs, since even slight injury impairs its power.* It is not every kind of matter which will form an eye. A selection, then, it would seem, must consciously or unconsciously take place whenever an eye is formed. Yet this selection is actually accomplished with success in the myriad eyes of men and animals. The question is whether the whole apparent marvellousness of these facts, which has seemed to lend them a significance for religion, is explained away by the Darwinian theory.

The appearance of selection and co-operation has led the religious mind to two divergent conclusions. The commonest view, no doubt, has been that animals and plants are made by God

* The defects of structure mentioned by Helmholtz do not remove this impression of general success in adaptation.

as watches are made by a watchmaker*; with the difference, tacitly if not explicitly recognized, that the watchmaker merely puts together pre-existing material. But, side by side with this conception of a Divine Architect working from without, stands the rival theory of an unconscious but quasi-purposive principle within the organ itself. There have been times when, in the words of Haeckel, "physiology has substituted for the conscious Divine Architect an unconscious creative 'vital force'—a mysterious, purposive, natural force, which differed from the familiar forces of Physics and Chemistry, and only took these in part during life into its service."† We are not concerned just now to ask whether the principles which govern Nature are best conceived as conscious or unconscious. Our present question is more general. Is there any special principle which regulates the co-operation of part with part, or is this co-operation when it occurs the mere by-product of "the familiar laws of Physics and Chemistry"?

The doctrine of a special principle regulating the co-operation of our organs is commonly dubbed "Vitalism": and Vitalism has been a singularly unfortunate doctrine, unfortunate in

* A popular hymn says that God "paints the wayside flower and lights the evening star." It is probable that many whole-hearted believers in the Christian religion would strongly resent the imputation that they took these words quite literally. They believe, they would say, in an "immanent" rather than a "transcendent" God. † *Riddle of the Universe*, chap. xiv.

its defenders,* unfortunate in the examples quoted in its support.† This subject, however, though it has become a matter of considerable popular interest—especially in relation to the question whether a living organism might conceivably be produced by artificial means in the laboratory of the chemist—is too intricate to be conveniently dealt with in the present chapter. It will fall better into its place below. At the point we have now reached one single remark will be sufficient.

It should be remembered that Darwinism, as Darwin himself understood it, does nothing to account for the development of living organisms from inorganic matter. The theory of Natural Selection‡ presupposes the distinction between living organisms and inorganic matter, and it assumes as a starting-point the living organism as already in existence. If, then, Darwin *presupposes* the living organism he cannot justly be said to *explain* it.§

III. With regard to our third group of facts, those relating to beauty in Nature, the common

* After running one career of error in the past, Vitalism, under the guidance of M. Bergson, seems to be preparing another career of error for the future.

† For some remarks on the well-known case of formic acid, see *Religion in an Age of Doubt*, p. 7.

‡ See chap. ix, p. 97, etc.

§ See *Origin of Species*, chap. viii, opening paragraph : " I have nothing to do," etc. Cf. chap. xv : " It is no valid objection," etc., in paragraph beginning " It can hardly be supposed that a false theory," etc.

argument is that Natural Beauty is a persistent and very remarkable fact which calls for an explanation such as Physical Science by itself cannot give; and therefore leads us on, either to the belief in a divine creative Artist, or at least to some theory in which the blind atoms and forces of Naturalism are not the last word in explanation.

Now, whatever we may think of this argument, there is no ground for saying that it has been made obsolete by Darwin. In certain cases, no doubt, Darwinism has valuable explanations to offer. The bright colours of male birds can be explained by sexual selection—by the preferences shown generation after generation by the female for the brightly coloured partner. The bright colours of flowers can be explained by their power to attract the fertilizing insects. But these and all similar explanations cover a very narrow field. If there is any one who still thinks that he can give a general explanation of æsthetic facts by evolutionary arguments of this simple sort,* we may invite his attention to the colour-schemes of inanimate Nature—to the Alpine snows, to the clouds at sunset or at dawn, to the wide prospects of rock and sand, of stream and sea. Here we have colour-schemes as delicate as in the colourings of flowers or birds; yet here there is no question of heredity, and therefore no place

* For a different form of evolutionary explanation of beauty, see below, p. 37.

for this particular kind of evolutionary explanation.

Again, throughout Nature we have not merely beauty, but harmony; and here Darwin has no advantage whatever over the explanations which were open to Physical Science in pre-Darwinian days. To the eye of the painter the landscape is an assemblage of coloured points. We may explain by Chemistry the colour of each point taken separately. But neither Chemistry, nor Physics, nor Biology, nor all these sciences together, do anything to explain the delicate harmony of the whole. Why, again and again, do just those colours occur together which form a harmonious scheme? This is a question which Physical Science as such cannot answer. If it were true, as a Philistine might think, that any colours would look well together, if only there are enough of them and they are sufficiently bright and varied, then the harmoniousness of natural colour might seem to call for no special explanation. But, as every one with an eye for colour knows well, the laws of harmony in colour are at least as strict as the laws of harmony in music. The plain man, then, is right in thinking that some special explanation is wanted.

A more ingenious form of evolutionary theory seeks to explain, not the beauty of Nature itself, but human taste. It is suggested that we like the colour-schemes of Nature because these have

been familiar to us and to our ancestors for generations: or, again, that our æsthetic tastes are somehow to be accounted for by their utility in the struggle for existence. These theories, as we shall see below,* break down utterly when they are confronted with the facts.

So, again, do all theories which deny the reality of Natural Beauty, and treat it as some illusion or creation of our own. There are those—of whom Mr. Russell is one—who speak of beauty as the product of our creative imagination. But are they quite in earnest? Do they consistently think that all those elements in the world which excite our admiration are read into Nature by us—that there is nothing worthy of æsthetic admiration in the world as it stands? The claim when so stated will be at once rejected. The creative imagination is powerful no doubt; but the suggestion that it alone produces beauty, and that Nature itself contributes nothing, is clearly absurd. If this were so, why should one thing be pronounced more beautiful than another? If Mr. Russell, thirsting for beauty, is confined to his bedroom just as he is starting for Italy and the Alps, it will hardly console him to propose that he should stimulate his creative fancy by a contemplation of old files of the *Times* and an extensive view of bricks and mortar.

The fact is that Nature, as actually presented

* Chap. x.

to our senses, conforms itself to æsthetic principles—to the principles of delicacy, congruity, and harmony. It is for this very reason that the artist takes Nature for his model. If, then, we once perceive that the colour-schemes of Nature conform to these principles, we are driven to suppose either that the principles have in some way an influence upon Nature, or else that the conformity of natural scenes to these principles is a mere accident—just as much a pure coincidence as if a picture were formed by pigments smeared in the dark upon an artist's palette, or a tune played by men blowing at random into organ-pipes lying in confusion in a builder's shed. When we think of the vast number of coloured points involved, we shall see that in the case of the landscape a coincidence of this kind is inconceivable.

The beauty of the landscape is due on any theory to physical particles and the manner in which they are disposed. Is there, then, any necessity that just those particles should exist, and just those very dispositions of them should always take place, which are fitted to produce a harmonious effect ? If there is no such necessity, then it is a piece of pure good luck that the world possesses the beauty which, as a matter of fact, is found on every side. But Nature is beautiful so constantly that we seem forced to believe that it is in some sense under a necessity to be beautiful. If this is true, then it follows that Nature

is in some sense governed by æsthetic as well as by purely physical principles.

IV. Our fourth heading involves but little difficulty. That there are facts which suggest that the world is a systematic Whole is shown by the almost universal influence which this conception possesses. Atheist, Agnostic, and Christian alike assume that the world as a whole is based on some intelligible scheme, the character of which can be grasped, at least in outline, by the mind of man. Nothing could be further from the truth than to suppose that we know only the facts nearest to us in Space and Time, and have no conception of the Universe outside these limits. In fact, if the world were dark to us outside certain narrow limits, it would be hardly less dark to us within them. For if we knew *nothing* of the world outside, how could we know that it might not at any moment upset, suddenly and totally, all those computations upon which our daily actions depend? If immense masses of matter, of unknown powers, might, for all we knew, be rushing upon us at an unknown degree of rapidity, none of our predictions would be worth a moment's purchase.* Bodies which now are too far off to be perceptible by the most delicate instruments might within a few seconds' time alter the whole physical state of the Solar System. Thus it is only by possessing some

* Cf. chap. xv, p. 202, and see Note II at end of Epilogue, p. 228.

conception of the world as a whole that we can have any confident knowledge of the nature of its parts.

We see, then, the general tendency of the Argument from Design. It points to the orderly and systematic character of Nature, and especially to those respects in which Nature bears resemblance to a work of art. We have no right to assume that such regularity as we find in Nature is a matter of course; and if its regularity is not a matter of course, still less so is its harmony, its beauty, its general artistic appearance.

When, therefore, the supporters of Naturalism argue that the orderliness which makes such an impression upon the religious mind is after all but the result of that fixity of law which is the postulate of Physical Science, an effective answer lies ready to hand. "Even if you are entitled to take uniformity for granted, as something which needs no further explanation, still mere uniformity as such does nothing to explain beauty. A world might be marvellously uniform and yet not at all beautiful. Granted the existence of just those material particles which the world actually contains, and granted that they contain just those forces and properties which do actually belong to them, then certainly it is absolutely necessary that we should have as a result just that Universe with which we are

acquainted. But it is mere stupidity * which thinks that the beauty of the world is thus accounted for. An important question remains unanswered. Is there any special reason why just those particles, forces, and properties exist which produce a harmony of colour, not once or twice, not here or there, but in all the diverse landscapes which Nature exhibits ? "

The believer's argument is not simply that " Naturalism is false because it cannot explain beauty." To such an argument there would be an easy retort : " Neither can you yourself give an explanation which is complete." The sound argument is that Naturalism, in denying that there is in Nature any tendency towards beauty and æsthetic harmony as such, is hereby treating the beauty of Nature as a mere accident ; and this, we rightly feel, is utterly incredible.

If, on the other hand, there is in Nature a real tendency towards beauty, we have advanced at least one step towards the religious man's view of the world. The world is no longer utterly cold and purposeless. The laws and tendencies of matter are no longer wholly hostile or indifferent. That tendency towards beauty to which our argument points, is a very different thing from the conscious purpose of a personal God. Yet the plain man who identifies the two is not without

* That this is not too strong a word may be shown by considering any parallel case. Take the case, supposed below (chap. v, p. 55), of the rock which resembles the face of a well-known statesman.

excuse. The fact that the world is like a work of art does not prove that there is a conscious Creator, but it does suggest it. This resemblance is no chance resemblance, as when the glowing embers of the fire resemble faces, or the clouds resemble a camel or a whale; it is a matter of settled principle and constant law. To the unphilosophic mind, therefore—if to no other—the readiest explanation of the artistic character of the world is that it is in truth the plan of a Divine Architect.

CHAPTER V

A CHAPTER OF HISTORY

THE Argument from Design, then, even in its least systematic shape, seems worthy of some respect. This opinion will perhaps be confirmed if, before leaving the pre-Darwinian period, we glance at two or three of the more formal and literary statements of the same argument.

For our first example we may go to Aristotle. In a well-known passage of the *Metaphysics*,* he describes how men first became dissatisfied with Thales and the purely physical school. To this dissatisfaction, he thinks, they were "forced by the truth itself." The earlier philosophers had sought for the explanation of the world in material causes: earth, air, fire, or water. But it was noticed that many things which exist or come into being are "well and beautifully formed." Of this goodness and beauty it is not reasonable to look for the cause in earth, or fire, or any similar substance: nor is it likely that even the earlier philosophers themselves would have thought that it was. Nor, again, can we

* Book I, p. 984b.

reasonably attribute so great a matter as the goodness and beauty of the world to mere chance. When, therefore, some one said that Mind was present in the world, as it is in living beings, and was the cause of the order,* and all the arrangement which we observe in Nature, he appeared like a sane man amid the wild talk of the earlier thinkers.

The arguments here are in effect two. First, we cannot regard the beauty and goodness of the world as due to chance. Secondly, we can find no adequate explanation of it in purely physical causes as such. The mere qualities which belong to earth as earth, or to fire as fire, afford no explanation of the goodness and beauty which belong to many of the things around us. Yet some special explanation seems to be called for, unless we are contented, as we are not, to attribute them to chance—to say that they come "of themselves." The suggestion that the beauty and goodness of Nature are due to "Mind as in animals" does at least recognize that there is something to be explained and makes a serious attempt to explain it.

A similar, but more extended, piece of reasoning is to be found in the *Memorabilia* of Xenophon.† A discussion is recorded in which Socrates—in

* See Index in the Teubner edition, *κόσμος καὶ τάξις*.
† Book I.

converse with a friend who "neither sacrificed to the gods nor prayed,* nor used divination, but laughed to scorn those who did so"—asks whether it is more wonderful to make dead images (as do the artists whom his friend admires) or to make living animals. "To make living animals," is the reply, "would be much the more wonderful, if it is true that they are indeed the work of intelligence and not due to chance." "Suppose," says Socrates, "we distinguish from one another the things which have no obvious use or purpose, and the things which are manifestly beneficial, which would you think to be due to chance, and which to intelligence?" "It is reasonable," answers his friend, "to attribute to intelligence the things which serve a useful purpose." Socrates then proceeds to enumerate, in a manner fairly familiar in all ages, the various appearances of benevolent design which seem to him to indicate that intelligence rather than chance has presided over the production and development of man and the animals. "You believe," he says, "that you yourself possess some intelligence. But do you think that no intelligence exists elsewhere? You know that you have within your body but a small part of the dry matter of the world, and but a small part of the liquid matter of the world, and so with other elements; while there is much of each of these things outside you.

* Following the conjecture—which, though elegant, is very doubtful—οὔτε εὐχόμενον.

Do you think then—in regard to mind alone—that you have by some lucky chance snatched it together from nowhere, while Nature with its vastness and its innumerable contents is brought into order by some kind of thoughtlessness?" When his friend replies that he is led to this view because he does not see the masters of the world, as he does see the makers of the statues and the poems, Socrates rejoins that by this reasoning we might conclude that human acts themselves are due to chance and not to intelligence, since we can no more see our own souls than we can see the Gods. He then proceeds to a lofty and religious treatment of the whole subject. If the eye of man can take in a wide range of visible objects, why may not the eye of God see all things at a single moment? If the mind of man can give simultaneous consideration to the concerns of Greece, of Sicily, and of Egypt, may not the wisdom of God be sufficient to embrace all things at once within its care? Such teaching, thinks Xenophon—anxious always to defend his Master against the charge of impiety—cannot but have a good moral effect, since if men believe that divine eyes are always upon them, they will be led to abstain from wickedness as much in their moments of solitude as when they are in the presence of human witnesses.

Even more interesting than this Socratic dialogue is the discussion on the same subject which

Cicero, in his *De Natura Deorum*, describes himself as hearing at the house of his friend Caius Cotta. The discussion consists of a defence of the Epicurean doctrine by the senator Velleius, and of the Stoic view by Lucilius Balbus: while Cotta himself, as an Academic, replies to both his guests in a vein of scepticism. Cicero is a mere auditor, but his sympathies are on the side of belief, and he welcomes the Stoic defence of it.

It is the speech of the Stoic which bears most directly upon our present subject. Balbus, at a certain point in his discourse, after commenting in much the same manner as Socrates does upon the admirable adaptation of the parts of Nature to various purposes of use and beauty, asks again the old question *: Are the usefulness and beauty of Nature due to chance? "Do the parts of Nature," he inquires, "come together fortuitously, or is their arrangement such as could never have taken place except under the government of intelligence and divine forethought." "If the productions of Nature," he argues, "are better than those of art, while yet it is only by means of reason that art can work, we cannot regard Nature as itself irrational. When we see a statue or a picture, we know that the skill of the artist has been employed. When we watch the course of a distant vessel, we do not doubt that it is guided by skill and reason. When we see a clock—whether it be a sundial marked out with lines †

* Book II, §§ 87, 88, etc. † Reading *discriptum*.

or a water-clock—we know that it tells the time by art and not by chance. How, then, can we consistently regard as devoid of wisdom and reason that world within which all these types of skill, the artists who exhibit them, and everything else besides, are together embraced? If some one took to Scythia or to Britain that mechanical sphere, recently constructed by our friend Posidonius, which by each revolution imitates the movement accomplished in a day and night by the sun, the moon, and the five planets, who in those barbarous regions would doubt that this sphere was a work of reason? Yet our philosophers doubt whether the world, from which all things arise and take their being, is itself the result of chance or of some blind necessity,* or on the contrary is the product of reason and divine intelligence." "The man," he continues later, "who can believe that the adornment and beauty of the world has arisen from the fortuitous concourse of separate bodies, borne along by force and gravity, ought (so far as I can see) to think it possible that if innumerable alphabets of letters—each letter cut out in gold or some other material—were to be somewhere thrown together, we might produce a continuous copy of the Annals of Ennius by just tossing out these letters on to

* It is interesting to compare with this phrase the following sentence of Hegel. Speaking of Nature as *mere* Nature, abstracted from what it is in its deeper significance, he says: "Die Natur zeigt in ihrem Daseyn keine Freiheit, sondern Nothwendigkeit und Zufälligkeit."—*Encycl.*, 1st ed., § 193, p. 127.

the floor; whereas I do not suppose that good luck could accomplish so much even in a single verse. If a concourse of atoms can form a world, why should not a porch, a temple, a house, a city —much less laborious achievements—be formed in the same manner?" "I approve," proceeds Lucilius, "the argument of Aristotle. 'Let us suppose,' says that philosopher, 'a race of men who had always lived underground, in excellent and brightly lighted houses, embellished with statues and pictures, and furnished with all such objects as are possessed in abundance by the wealthy. Let us suppose that these men had never come up to the surface of the earth, but had heard by rumour and report of the existence and power of the Gods. Let us suppose that at last the jaws of the earth were one day thrown open, and the prisoners were able to leave their hidden dwellings and to visit the parts which we inhabit; to see all at once the earth, the sea, the sky; to perceive the vast expanse of the clouds and the might of the winds; to behold the sun, and to learn his size, his beauty, and also his influence—since it is he who by pouring his light abroad over the whole heaven is the giver of the day—and then, when night had darkened the land, to see the whole sky picked out and adorned with stars, to note the changes of the light of the growing or waning moon, to mark the rising and setting of all these heavenly bodies, and their courses fixed and immutable to all eternity.

Surely, when all this spectacle broke upon their sight, they would think that the Gods did indeed exist, and that it was to them that all these great works are to be attributed.'" On this Aristotelian argument Lucilius makes an apt comment. "Familiarity," he thinks, "breeds intellectual quiescence." We do not ask the reasons of the things we see daily. It is for this reason that we evade the impression which Nature, if we came to her with fresh and open minds, would infallibly make upon us.

For a fourth and last example of the manner in which philosophers of repute have dealt with the popular argument, we may turn to St. Thomas Aquinas. St. Thomas distinguishes five methods of proving the existence of God; and the fifth is, in all essentials, though with considerable differences of form, the same argument as we have already heard from Socrates and from Lucilius Balbus the Stoic.

The Argument from Design is known in the technical language of philosophy as the "teleological proof." Teleology is the study of purposes or ends or final causes in Nature. We are familiar, even in common speech, with the distinction between those things which are "means to an end," and those which are "ends in themselves" —that is, are of value for their own sake. The "final cause" of a thing is called in ordinary

language its " use " or " value " or " purpose." If happiness were " our being's end and aim," then happiness would be the " final cause " of the human race.

Now St. Thomas, differing from many modern thinkers, holds that the final cause is unmeaning apart from personal agency—that the " end " is not a cause " except so far as it moves the agent."* It is thus that he appears to misunderstand † the half-mythological doctrine of Empedocles who regarded strife and friendship as governing principles in Nature, and taught that it is through friendship that the parts of animals are gathered together. This, to St. Thomas, seems tantamount to alleging that the parts of animals come together by chance. Yet if we take the advice of Aristotle and " follow out the meaning of Empedocles, rather than his inadequate expression of it," ‡ it seems clear that, if mutually suitable parts come together in virtue of their " natural affinity "—and this, surely, is what the phrase " friendship " must be intended to suggest—then their union is not accidental. On such a theory it would be regarded as a law that those things which possess mutual suitableness tend somehow to be brought together. St. Thomas may complain that this seems to him to be a wild and obscure speculation (though in light of some of the facts of natural beauty we

* *Quaestiones Disputatae de Veritate*, Art. II, Qu. V.
† *Ibid.*, Art. II, Qu. V. ‡ *Met.*, 985a.

may hold that Empedocles was perhaps feeling after a truth), but in any case it is not right to confuse this conception with that of fortuitous concourse.

The word "end," then—in the sense in which St. Thomas uses it—is really, though he may not admit it, a wider term than "purpose." The latter necessarily implies conscious agency, the former does not. And it is round the two words "end" and "accident" that this whole argument, in all its forms, does really turn. That in Nature certain things occur—such as beauty of colour—which our reason is bound to recognize as "ends in themselves": that Nature (to put the same thing in other words) conforms itself to certain rational "ideals"; that all this production of good and admirable results is no mere accident; this, and just this, is what the teleological argument is concerned to show, whether we meet with it in its popular or in its more philosophic versions.

St. Thomas makes a clear statement of this argument in the following words: "We see," he says, "that some things which lack knowledge —namely, natural bodies—work in reference to an end. This is clear from the fact that always or for the most part (*semper aut frequentius*) they work in the selfsame manner so as to bring about that which is best. Whence it is plain that they reach their end, not by chance, but as a result of intention. Those things, however, which are

without knowledge do not tend towards an end, except so far as they are directed by some one who knows and understands; for example, the arrow by the bowman. Thus there is an intelligent 'somewhat,' by which all natural objects are ordered in relation to an end (*ordinantur ad finem*); and this 'somewhat' we call God." *

Again, in reply to certain philosophers who deny that the world is governed, he remarks that "we see in natural objects a constant selection of the better course, either universally or in the majority of cases. But this would not happen unless by some forethought natural things were directed towards good as an end (*ad finem boni*); and such direction is just what we mean by 'government.' Thus the fixed order of Nature does itself manifestly prove the government of the world, just as if one entered a well-ordered house one should infer from the very ordering of the house the rationality of him who ordered it."† Dealing with the same question in another treatise, he maintains that "it is impossible that it is by chance that the bodies of animals are so formed that the life of the animal is preserved; for those things which happen by chance occur only in the minority of cases; whereas these suitabilities and utilities in Nature happen either universally or in the majority of cases; wherefore

* *Summa Theol.*, Pars prima, Qu. II, Art. III.
† *Ibid.*, Qu. CIII, Art. I, conclusio.

it is impossible that they should happen by chance."*

Such, then, are some of the examples of the use of the familiar argument as they may be drawn from the literature of nearly two thousand years. A comparison of these various statements one with another shows them to possess at least two important points of resemblance.

In the first place, they all insist that the order, and especially the beauty of the world, is no accident.

" But why," the supporters of Naturalism may reply, " do you address this argument to us ? We of all people in the world recognize most clearly that there is no such thing as chance, since everything that happens happens by necessary law."

This reply, however, though very frequently heard, is based on a very simple confusion. Necessity and accident are far from being mutually exclusive. If a rock, under the stress of wind and weather, reproduces the profile of Mr. Gladstone, though its shape is thus the result of absolute physical necessity, its resemblance to the eminent statesman is an accident. But if we see that natural beauty is not a sheer accident of this sort, then we must admit that somehow (however mysterious the machinery may be by

* *Quaestiones Disputatae de Veritate*, Art. II, Qu. V.

which the result is brought about) the laws of harmony in colour have a real influence upon the selection of the colours in Nature, and thus that Nature is really governed by a principle æsthetic in its character.

The second point of resemblance in these four statements is that all imply an argument which is put most succinctly in the three words of St. Thomas Aquinas, *Non contigisset nisi*: "It would not have happened unless."

There are certain cases in which we all assume that unless there is some special reason why a certain assemblage of circumstances *should* occur, this is in itself a strong reason why it should *not*. Here lies the strength of circumstantial evidence. "If," says the Judge, "you think it a mere coincidence that the prisoner was in the exact neighbourhood where the crime was committed at or about the time of its commission—that the sum of money found in his possession is exactly equal to that of which the murdered man was robbed, that the footsteps on the ground correspond with the very unusual measurements of the prisoner's boot," and so forth through a large number of concurrent circumstances—"you will then doubtless bring in a verdict of 'Not guilty'; if, on the other hand, you think the number of coincidences involved in the theory of his innocence too great to be credible, you will find him guilty of wilful murder." If the question were

asked, " Why should not these various occurrences have happened quite apart from the prisoner's commission of a crime ? " we should at once reply that, in case of his innocence, though any of these things might quite well have happened separately, it is in the highest degree unlikely that they should all have happened together.

The ultimate grounds—mathematical or philosophical—on which this reasoning rests, have been the subject of much embittered controversy. The important matter is that we are all agreed as to the soundness of the reasoning itself. It is true that we do not all draw the line at the same place. Some of us are prepared to attribute to the " long arm of coincidence " greater powers than would be allowed to it by others. But no sane man is willing to believe in the accumulation of coincidences without limit. Even if a man's life is at stake, we pronounce confidently, *Non contigisset nisi.*

CHAPTER VI

MORAL KNOWLEDGE

So much, then, for the Argument from Design in its pre-Kantian and pre-Darwinian form. It is not certain that the great critics of the argument, Kant and Darwin themselves, would have been altogether hostile to the attempt so to reformulate it that it should henceforth be invulnerable to their criticisms.

But before we come to this question of restatement, there is another argument which demands our notice. For the Argument from Design Kant sought to substitute the "Moral Proof" of the existence of God*; and in so doing he was only stating in a specialized form an argument which has carried weight with mankind in every generation.

There are three reasons why this "Moral Argument" should be the object of our attention. In the first place, the Moral Argument can be so stated as to furnish in itself a direct refutation of Naturalism. Secondly, it can be so stated as to form an important element in that very restatement of the Argument from Design of which we are in search. Thirdly, it is, when reduced to its

* See *Critique of Judgment*, § 87, etc.

simplest terms, the strongest of all supports to the religious man's conception of the world, the clearest answer to "Materialism." When the religious man seeks to justify his beliefs in set terms, he most commonly turns to some form of the Argument from Design. But it is the Moral Argument which has most effect upon his personal faith. The deeper a man's personal interest in morality, the more acute his moral sensitiveness, the less satisfied is he commonly found to be with a Naturalistic theory. Again the spectacle of other men's fidelity to principle is at all times the most effective witness to a lofty conception of duty. It is thus that the blood of the martyrs is the seed of the Church. Nor is it in Christianity alone that this proverb is verified. It is as true of Galileo, and the Martyrs and Confessors of Physical Science, as of the Martyrs of Religion.

Morality—fidelity to principle—seems in fact to be a kind of miracle. Why do I feel bound to act against all my personal interests and inclinations ?—to act as a man of honour though it be to my own hindrance ? I may in my conduct disregard this obligation of honour, but in my heart I am compelled to own it. And even if my strictness of principle is as inconvenient to my neighbours as it is to myself, they too cannot fail to respect it. The honesty of Rutilius the publican brings upon him the implacable hostility of his colleagues. Their conduct, we say, reveals human nature in a contemptible aspect. Yet in

so saying we assume that they knew in their hearts that Rutilius was right. It is only this assumption which justifies our contempt for their behaviour.

Such facts suggest a form of the Moral Argument immediately relevant to our subject. Naturalism denies that the laws of the Universe take any account of the spiritual interests of man. We shall find, however, that there are laws relating directly to our most important spiritual interest of all, our knowledge of Right and Wrong.

We shall find, first, that there are fundamental moral principles which we can all be made to accept if only they are put before us with sufficient clearness. Further, we shall find that the Moral Ideal is a connected Whole. We trust the man of good feeling to act rightly in quite novel circumstances. We cannot always deduce the true rule of conduct from previously admitted principles. Yet our minds are so constituted that, if familiarized with certain of the leading principles of morality, they pass on from these by a natural sense of affinity to the acceptance of other elements in the Moral Ideal as occasion brings these to light. The law* is that fami-

* For this use of the word "law," see chap. ix, pp. 93–95, chap. vii, p. 71. The law mentioned in the text may be called "psychological." It states an observed and verified uniformity. To confine the word "law" to Physics is a purely arbitrary proceeding.

liarity with right principles breeds general sympathy with the Moral Ideal.

It is no disproof of this law that men do not always think alike. The varieties of moral opinion have amused the spectator of mankind from the days of Herodotus downwards. Men no more think alike on matters of conduct than on questions of æsthetic taste. Yet both in æsthetic and in moral experience there are certain uniformities which we can count upon.

Out of a thousand pupils in a Conservatorium we are confident that the great majority will learn, not only to know by ear when an instrument is in tune, but also to see broadly the difference between good music and bad. In the majority of cases both ear and taste respond correctly to training. Unless this were true, musical education would be a sheer imposture.

The case of morals is similar. Just as surely as you can train a pupil to perceive for himself that consecutive fifths are in most contexts a bad musical progression, so you can train him to perceive that treachery is base especially when accompanied by ingratitude. A savage may boast of a treacherous act and glory in its ingenuity. But almost every one, if we use the right methods, can be made to feel that treachery not merely undermines public confidence, but is base in itself. The man incapable

of being so taught is abnormal—an exception to a law.

And so in less extreme cases. All cruelty, even the cruelty of neglect, stirs our indignation, and few can think this indignation misplaced. Few are quite impervious to the argument that they would not like such treatment themselves. The mere fact that this simple argument is so widely understood, shows a general capacity to perceive, when it is pointed out, that we owe some duty to others. This is a far-reaching principle. But experience shows that under certain conditions every one can be brought to see it, and shows also pretty plainly what the conditions are.

At times we need a moral shock to bring the latent principles to the surface. In an Australian camp a young Englishman was challenged to ride a buck-jumping horse, and then urged under taunts of cowardice to ride him in spurs. While he was providing himself with these, one of his hosts loosened the girths. Another, after he had mounted, struck the horse with a stockwhip. As the horse plunged forward, the saddle shifted and the rider was killed. Immediately the man who had loosened the girths was felled to the ground by his companion. The companion had looked on without protest at the cowardly deed itself; he discovered its heinousness in his horror at its consequences.

Such moral shocks, however, are not always

needed. There are certain principles which men will inevitably accept if their attention is once thoroughly roused to them. If sound moral principles are intelligently presented to the young they will, for the most part, see for themselves that they are true. This law is the basis of our whole educational system.

The law is applicable to others besides children. Many quite excellent men are blind to the duty of suffering as Galileo did, in the cause of scientific truth. Yet when once the nature of scientific truth is understood—when a man has reached that stage of education at which the spectacle of the age-long struggle between science and superstition is revealed to him—the duty of speaking the truth on these matters becomes clear to him at the same time. Galileo is admired by the very men who are most likely to dispute the argument of this chapter. Their position is a paradox. They acknowledge the absolute duty of declaring that there is no such thing as absolute duty.

Take, again, the virtue of chastity. What to us would be gross indecency may to a savage be a religious ordinance; and, of course, if what the savage thinks and feels in the performance of such rites is different from what we should think and feel if we could bring ourselves to the same actions, then even the strictest moralist must see that it is absurd to judge him by the same external standard. But this does not touch the question at issue. The question is whether the normal

man can be made to see that bestial indecency is wrong within the context of civilized life.

To this whole argument there are certain familiar objections. "Is morality after all," it will be asked, "such a miracle as you allege? Is it not merely the outcome of the necessities of social life? If we are to live in communities, we must put ourselves under certain restraints." It is true, of course, that we all perform many duties mainly in order to enjoy the protection and amenities of social life. But if the whole of our conduct was based upon prudential considerations, it would possess none of the marks of morality. Every one would make a false Income Tax return whenever he knew that he could escape detection; nor would any one expect him to refrain from this and similar advantages. A purely prudential morality would not afford the mutual confidence upon which society rests. You could trust no man further than you saw him.

At the present moment, however, the prudential theory is seldom stated in this crude form. It is now more often maintained that society from an unconscious instinct of self-preservation instils moral notions into its members; that it teaches us from our earliest years to condemn the traitor because we all perceive by instinct that treachery is dangerous.

Or, again, we are told to look for the origin of

morality in Natural Selection. "There is no law"—it is said—"that men should have correct notions as such, either on morality or on any other subject. The law is that in our mental states, as in our bodily frame, we should on the whole resemble our ancestors.* Those feelings and convictions which are found useful to the race will be preserved, since the stocks which transmit them continue to thrive, while other stocks are destroyed in the battle of life. Thus our moral convictions have been preserved, not because they were true, but because they were useful."

To all such sceptical theories there is one compendious answer. They imply, what we know to be untrue, that all our moral convictions are mere illusion. If I say that the only reason why I think treachery wrong is because this conviction was necessary for the safety of the community, or for the continuance of the human species, this is tantamount to saying that treachery is not really wrong in itself; and that, if I had been evolved in a different manner, I might quite well have thought otherwise. If I am tempted to a treacherous act, these evolutionary explanations

* The difficulty of explaining human knowledge by Natural Selection is very great. Take, for example, our knowledge that $2 + 2 = 4$. Is it seriously suggested that the human mind might begin by holding any one of the conceivable wrong opinions on this subject, e.g. that $2 + 2 = 5$ or 50 or 500, and that then all views except the right one are weeded out by their inconvenience in practice?

are all on the side of the temptation. If there is no absolute right or wrong, why should I let inherited scruples stand in the way of my interests and inclinations? Why should I care for the future of my race, if my own gain or pleasure is, as a fact, more attractive to my feelings? The evolutionary explanation shows how our moral convictions might have come into being without being true. The important matter is that we know that they *are* true, and that their truth can be made evident to the normal mind.

A second objection turns upon the power of bad example. "You argue that all men can be taught to accept the principles of morality. True. But they can be taught to accept the principles of immorality likewise. Fagin can teach his pupils that adroit thieving is the road to human greatness."

We cannot deny that the influence of bad teaching is great. Yet bad teaching when compared with good stands in some respects at a disadvantage. It does not produce the same strength of assured certainty. In fact, it is not in its convincingness at all, but in its agreement with our inclinations, that its power lies. Falstaff defends his thieving on the ground that it is no sin for a man to labour in his vocation. But he knows in his heart that this excuse is not good; that he is, "if a man should speak truly, little better than one of the wicked." Excuses,

in fact, are an acknowledgment of the principle. If we did not know that dishonesty was wrong, why should we seek to excuse it ?

There are cases where wrong opinions are sincerely held. But in these cases it is seldom found that correct moral principles have been clearly grasped and deliberately rejected. What has happened is that relevant principles have been ignored. A military man of old time thought it a dishonour to decline a challenge. He was partly right. To play the coward—to fear wounds more than disgrace—this is as wrong as he held it to be. The objections to duelling, which have made it extinct in the most civilized societies, were not present to his mind. He is an example rather of blindness than of error.

And so with all the other hackneyed examples —the Thug who regards murder as a virtue, the Autolycus of Homer who prides himself on his power to deceive. The Thug—we may suppose —recognizes rightly that the courage and address needed to dispatch an enemy are good qualities. Autolycus perceives that " wisdom is better than strength." They are blind to the other aspects of their deeds. The power of education to dispel this blindness is proved by the fact that for examples of this moral obtuseness we must look to primitive or barbarous societies.

The case for Naturalism, as against this " argument from morality," may be stated, perhaps,

in other ways besides those already mentioned. But these objections need not further detain us; for the whole controversy turns upon two issues. Unless our moral beliefs are either *mere illusions*, or else, being true, are true by a *lucky accident only*, it follows that Naturalism is false; since Naturalism denies that there are any laws of Nature which prescribe, as such, correctness of moral knowledge. The facts we have seen enable us to rebut this denial; and, further, to assert that the Moral Ideal, in itself a connected whole, acts also as a single principle in our minds, and tends in some measure to shape our thoughts and feelings in accordance with its demands. The connexion between one virtue and another is felt where it cannot be demonstrated. If my friends say of me that I am a brave and honest man, but spoil myself by my overweening vanity, this criticism implies a connected ideal of human character. The universal conviction that such faults do really impair the value of our virtues implies, if we think it out, both the unity of the Moral Ideal and also its correctness.

One further remark remains. It is seldom expressly recognized, yet it will probably not be disputed, that an ideal for human conduct presupposes some ideal for the Universe. The laws of conduct are, at least in part, derived from a conception of what the world at large ought to be

and to contain. The conviction that cruelty is wrong depends upon the belief that the happiness of men and animals is a desirable ingredient in the world. Our condemnation of cowardice and vanity implies that a world containing brave and modest men is better than a world from which courage and modesty are absent. No one can withhold admiration from a world which produces, in however scant a measure, this union of virtue and happiness in a setting of physical uniformity and æsthetic beauty. The capacity to admire these qualities in the world, when they are pointed out, is witnessed to by the literature of all ages. It implies the very law with which we are here concerned—namely, that the mind of man is so constituted as to recognize in its main outline the true ideal of the Universe when that ideal is clearly set before us.

It was a habit of the great Sidney Smith never to admit the truth of a proposition till he knew for what purpose the admission was demanded. When the reader discovers in the next chapter for what purpose the statements in the preceding paragraph have been made, he will be free to revoke any assent he may have given to them, if he will and if he can.

CHAPTER VII

THE ARGUMENT RESTATED

We may now proceed to that restatement of the Argument from Design—or rather of the fundamental thought which this argument embodies—to which the previous chapters are intended as an introduction.

This restatement may be formulated briefly in three propositions which it will be necessary subsequently to defend. To these three propositions—summarized in still smaller compass below *—the reader's attention is specially invited. They contain the very kernel of the position which this book is written to maintain.

We may start from common ground. It is clear, in the first place, that we all regard the world as in some sense a *rational whole*, governed by a *rational system* of laws. This belief we shall find to be the basis alike of Physical Science and of common popular knowledge of the world; the basis also of some of those principles, such as the Uniformity of Nature, which are sometimes supposed to be of independent origin.† Further, if we will notice what kind of facts they are which

* Page 73 of this chapter. † Chap. xv, pp. 200–203.

we give as examples of the world's rational character—and also the kind of beliefs which we reject as inconsistent with this character—we shall see that this "rationality" of which we are thinking implies conformity to some such standard as may fairly be described as a rational "ideal." We are asserting the rationality of the world in a sense in which rationality is an object of admiration.

But, secondly, there is at least one law of Nature* which deals with something other than mere bodily or mental uniformity; at least one law which is directly concerned with our spiritual interests. This law has been stated in the preceding chapter. It is to the effect that the mind of man accepts as true the various fundamental principles of the Moral Ideal, if these are put before him with sufficient clearness. There is great uniformity in the use of the words "traitor," "drunkard," "swindler," and "coxcomb" as terms of reproach. Again, the tendency to accept this ideal of human conduct implies, as we have seen, a tendency to accept the corresponding ideal for the Universe at large. On this subject there is a very general agreement. Fearlessness, fixedness of purpose, bodily strength, in man—in nature, the songs of the birds, the colours of flowers, bright skies, and spreading waters—all these things we do and must admire. Our conception of the true ideal of the Universe is, so far

* See chap. ix, pp. 93–95; also chap. vi, p. 60.

as its main outlines are concerned, as obviously subject to law as any other phenomenon of our mental or bodily life.

Thirdly, then, let us ask an unfamiliar but important question. Should we dream of calling the world a reasonable whole, if the system of laws which governed it prescribed, on the one hand, a universal tendency in rational beings towards a knowledge of true ideals, and yet, on the other hand, prescribed that no account should be taken of these ideals in the ordering of the totality of the Universe? It is certain that if a Conscious Creator ordered such a world—deliberately planning that rational beings should have a tendency to know what was good, and yet that their aspirations should be doomed to ultimate disappointment—we should conceive such a Creator not as a God, but as a mischievous and malicious fiend. We should regard his plan as evincing the very height of irrational perverseness. But if such a system of laws, consciously planned, seems to us so supremely unreasonable, then we cannot call this same system reasonable, even if we dismiss from our minds the thought of a Creator altogether. We cannot reasonably say that, while of course only a fiend could *design* such a world, still if it came thus of itself without a designer, it is an exhibition of the highest rationality. If, then, we are right in attributing to the world a general rationality, in the sense in which rationality is a fit object of admiration;

if we are right in basing all our scientific predictions on this belief, as we shall find that we do * ; then the world is not the perversely ordered scheme which we have just imagined. No one, as a matter of fact, does believe in such a world-scheme as this. The educated man, for the most part, believes either in some form of religious or philosophic Optimism, or else in a consistent Naturalism which recognizes no laws which take account of any of our spiritual interests as such ; or perhaps he hesitates between these rival opinions, each of which presents us with the picture of a harmonious, homogeneous, internally self-consistent Universe. In such a mongrel world-scheme as we have imagined above no one does, or could, seriously believe.

We may now summarize these three points more shortly. First, we all believe that the world is a rational whole, governed by a rational system of laws. But, secondly, we have seen already that one of the laws of Nature is that men's minds tend to a true conception of what the Universe ought to be. Thirdly, we ask whether we should dream of calling a system of laws rational if they prescribed that all men should tend to a knowledge of these right ideals, and yet these ideals should not be taken into account in the ordering of the Universe. The

* See present chapter, pp. 76, 77, 80, 81 ; also chap. xv, pp. 200–203.

conclusion suggested is that the System of Laws, which implants these ideals as a fixed element in the human mind, also orders in accordance with them the Universe at large.

There is one sentence in this statement which is certain to arouse criticism : the assertion that the basis of Natural Science is the belief that reality conforms to a rational standard or ideal. Yet it is really clear that our ideals have a greater influence on our theories of the Universe than we generally acknowledge. Men seldom or never believe in a world which conflicts with the ideals which they themselves seriously accept, though they will readily believe in a world which conflicts with the ideals of other people. Have we ever met a man who believes in a Universe which is to him solely an object of ridicule and contempt ? Schopenhauer may profess himself a pessimist ; yet he believes that from this present evil world a way of escape is provided, and he certainly describes this deliverance with considerable enthusiasm. Mr. Russell, though he uses the language of despair, is a clear example of the thinker who believes in a Universe which he admires. His favourite art is Tragedy. But the beauty of Tragedy, he thinks, " does but make visible a quality which is present everywhere in life." Both Mr. Russell and Schopenhauer, though they can conceive a *pleasanter* Universe

than the Universe they believe in, do not seriously feel they can conceive a *better* one.

Why is it, again, that the modern man rejects without discussion the various mythologies of Paganism ? Even the strangest incidents which they relate cannot for the most part be disproved by evidence. The non-occurrence of these incidents is not an " observed fact." We have not observed that Aphrodite was *not* wounded by Diomede. Yet we never treat the truth or falsehood of these stories as a matter for suspense of judgment. We do not keep an open mind. We do not wait for evidence. We deny them out of hand. If we believed them, they would make the whole world appear to be flagrantly in contradiction with anything that right reason can admire or approve. We recognize that there are in the world many individual things, persons, and incidents, which separately and individually are grotesque in the extreme ; but we cannot believe in a Universe which is grotesque as a whole. Indeed, the fixed habit of rejecting from the world everything that is confessedly contrary to the ideals of reason, is the very habit which distinguishes the sane man from the madman.

What, again, should we say if it were suggested that, after our long experience of order, the Universe might suddenly relapse into Chaos ? Here again we have no direct evidence. The future continuance of order is assuredly no observed

fact.* Yet we should reject this suggestion of a general relapse into Chaos with the same decision as we reject the fables of Pagan mythology, and on similar grounds. We should not think it worth while to argue the case. A Universe of order relapsing suddenly into Chaos is rejected off-hand because of its intrinsic grotesqueness.

Thus, whatever school of thought we may belong to, we do as a fact set up in our minds an ideal of a reasonable and orderly world, and, for the most part, our conception of the actual Universe is in close accordance with this ideal. Whatever is in flagrant conflict with this ideal, as, for example, the Pagan myths, we reject as impossible and untrue.

"Yes," it will be answered, "it is true enough that our conception of the real world is in this sense in accordance with our ideal; but it is not *because* of its agreement with our ideal that we think this conception true. We have a more solid reason. The ultimate ground for all our

* The hypothesis of the composite nature of bodies formerly regarded as indivisible atoms—so that we are now reasoning about bodies with one-thousandth part the mass of the atom of hydrogen—makes it more obviously impossible to produce ocular or other empirical evidence of the ultimate nature of each material particle. *If we do not know the nature of the ultimate cohesive force which binds together the smaller bodies of which a particle is composed, how can we say that this cohesive force may not in time wear out* —may not undergo just such a "wearing out" as would lead to Chaos? The grounds on which we rule out Chaos as a possible hypothesis are clearly not empirical. The smallest particles we have yet thought of may themselves be composite.

physical beliefs is the principle of the Uniformity of Nature, a principle which arises in the mind as the natural result of the perpetual repetition of similar sequences in the experience of individuals through successive generations."

Now it happens that Mr. Russell—so often an object of criticism in the preceding pages—here comes to our help. He has given the answer to this deceptive argument. "The frequent repetition," he says, "of some uniform succession has been the *cause* of our expecting the same succession on the next occasion. Domestic animals expect food when they see the person who usually feeds them." But "the man who has fed the chicken every day throughout its life at last wrings its neck instead." Thus "when our instincts cause us to believe that the sun will rise to-morrow," we might conceivably be "in no better position than the chicken" who, relying on an uncritical expectation of uniformity, meets an unexpected death.

Of course, as Mr. Russell and every one else knows quite well, our expectation of future uniformity is rational and well grounded. But what is its basis? Not direct observation; for this cannot show us the future. Not the instinctive tendency which past repetition breeds both in man and animals; for this instinct, as we have just seen, may be utterly misleading. These negative answers are easy, though also important.

But Mr. Russell assists us further. He helps

us to a positive answer too. In a brilliant passage in the essay already quoted,* Mephistopheles is represented as telling Faust the history of Creation. God, says the tempter, wearying of the praises of the angels, thinks that He would find greater amusement in receiving praises which He had not deserved. So He creates Man, and orders Nature as we know it, and the course of human history, till this new whim is satisfied. At length " when He saw that Man had become perfect in renunciation and worship, He sent another sun through the sky, which crashed into Man's sun, and all returned again to nebula. 'Yes,' He murmured, 'it was a good play: I will have it performed again.' "

The reader will readily guess the purpose for which this little myth is invented. But let us suppose that some person, of excessive simplicity of mind, taking Mr. Russell's myth as a serious theory, professed himself convinced that the complexities of human life do really arise from the desire of a jaded Creator for novelty and diversion. No one, we may be sure, would laugh more consumedly than Mr. Russell.

But how is it that we are so certain as we are, that what Mephistopheles suggests cannot really have happened? The myth is not refuted by experience; for it presupposes just that course of Nature and of human history with which experience actually acquaints us. All the observed

* *The Free Man's Worship.*

facts on which the conclusions of Physical Science are based would, if the myth were true, have been just as they have been in reality. We reject Mr. Russell's ingenious invention in the same peremptory manner as we reject the fictions of the heathen poets, and on similar grounds. Our ground is that we can accept no belief which would give to the world as a whole an appearance of absurdity and grotesqueness. No other general principle but this, or its equivalent, will suffice to justify all the cases of peremptory rejection mentioned above. Let the reader try if he can frame any other general principle which will be adequate for this purpose. Yet, even if the failure of his attempt does not convince him that the task is impossible, this is no great matter so long as he admits—as he must admit—that no event can happen which would turn the world into a mere nightmare of grotesque absurdity.*

This peremptory rejection of a vast number of the beliefs which have been held in past ages, while yet no direct evidence of their falseness can be produced, may appear to us as a mysterious and even arbitrary proceeding. But it will appear so no longer if we reflect how absolutely certain we are in our own case both of the correctness of these various judgments and of the general ground on which they all rest. The men who invented the mythologies, and believed them, were men whose standards of approval

* Cf. chap. xii, p. 206, note.

and admiration were different from ours. The world as Paganism represented it did not seem to them contemptible, and therefore neither did it seem incredible. But as standards change, so beliefs as to what is possible change with them.

We may now return to the question with which this chapter opened. Can we believe in a world governed by a system of laws which prescribe on the one hand a general tendency in rational beings towards a knowledge of what is good, and prescribe on the other that considerations of good and evil shall be disregarded in the general ordering of the Universe? That there is no serious likelihood of our accepting such a view of the world we are all probably quite strongly convinced. But may we not go further? May we not say that the acceptance of such a view would be absolutely contrary to all the principles upon which our beliefs and habits are based? If the Universe had this fundamental absurdity at its core—if it were just one great unconscious practical jest—then we must be prepared for the happening of *anything whatsoever*, however absurd or irrational: for a sudden plunge from Order into Chaos; for the occurrence of incidents which we have believed to be confined to fable. In such a world we should be deprived of the right to use our last conclusive argument, our final protection against superstition—namely, our conviction that

flagrant absurdities are impossible. In a world in which unreason sat enthroned at the centre why should not trees dance, or stones speak, or the mountains salute us by wagging their heads ? *

The effect of this argument is to call attention to the decisive importance of the question raised in the preceding chapter. The admission that there are laws of Nature prescribing correctness of moral thinking in the human mind has often been regarded by the supporters of Naturalism as the thin end of the optimistic wedge. The aim of the present argument is to show that they are right in this surmise.

It is obvious that by such reasoning we can establish Optimism in a general form only. The particular religious or philosophic creed which results from it will depend on what we believe that the true ideal of the Universe would contain.† The conceptions of mankind on this subject have been many and various. Yet among civilized persons of normal education the differences are much less important than the agreements ; and these differences themselves are not beyond the reach of argument. If, then, the conclusions of this chapter are accepted, they cannot fail to have a great effect upon our general conception of the Universe.

* See chap. xv, pp. 201–202. † Cf. chap. xii.

CHAPTER VIII

THE WORLD AS WORK OF ART

THE writer who propounds a chain of reasoning must rely upon the co-operation of his reader. Even when its separate propositions are admitted, a special mental effort is required to bring them into connexion.

There is a certain class of reader, however, for whom this remark is, in the present context, quite needless. "I understand the argument perfectly," so such a reader may say, "I understand its separate propositions: I see the alleged connexion; and I do not propose to find any special fault with its logic. But nevertheless it leaves me unmoved. To speak frankly, it is a piece of pure scholasticism. Modern thought, with characteristic modesty, is afraid of *a priori* reasoning. It does not believe that any certainty can be reached by such methods. It will not put its trust in any beliefs except those which are directly suggested in experience, and can be directly verified thereby. It has no taste for excursions into the vast unknown. Moreover the conclusions of the preceding chapter seem to be ultimately irreconcilable with the most settled convictions of the modern man. It is all very

well to speak of Darwin with respect, and render lip-homage to his discoveries. But the whole chapter, none the less, is essentially incompatible with evolutionary methods of thought. If the doctrine of Natural Selection is true, then some of the most important matters in the world—the origin and development of man, his bodily frame, his mental constitution—have been in effect left to chance, to the issue of a doubtful conflict. This fact seems incompatible with belief in God, or any form of optimistic faith. Again, you will hardly dare to say that Natural Selection has shaped man's body only, and has had no effect on his mind. But if you admit that his moral and intellectual life has been partly the product of evolution, can you then introduce another and wholly independent factor—this supposed tendency to moral and intellectual correctness as such? Where is the line to be drawn between these principles? Which of our habits of mind are to be traced to Natural Selection, and which to this innate tendency to rationality and correctness? When once we have admitted the influence of Natural Selection anywhere, we are surely forced by logical necessity to admit it everywhere. Or—to approach the matter from the opposite side—if we once allow teleology * in any shape, why attempt any physical explanation at all? If we suppose that a conscious Creator designed the world for the fulfilment of His own

* See chap. v, p. 51.

purposes, or if we prefer to conceive of ideals as working in some mysterious way for their own realization, in either case we may well ask what need there is, or what room there is, for Physical Science. If we are going to explain natural events by the ends they fulfil, why explain them also by the causes from which they originate? In a word, can the physical laws, which are admitted by all, and the teleological laws for which you are contending, be united together in a single consistent system? Should we not choose definitely between Physical Science and Religion rather than seek to 'make the best of both worlds' by combining the two?"

These questions demand an answer. Faith in Physical Science is a common possession of all educated men. In the preceding chapter we have seen reasons for a teleological conception of the Universe—that is, for conceiving the world as a "Kingdom of Ends,"* or, to express the same thought in more modern language, as the "Embodiment of an Ideal." Can physical law and teleology, then, be united in a single system? Of the above questions this is the most fundamental.

If we are to judge the teleological conception of the world fairly, we must think ourselves into

* See chap. v, pp. 52–54.

the position of those who hold it. A world whose nature is to embody an Ideal must in many respects resemble a work of art. Now it is a characteristic of the nobler works of art that they exhibit prominently the element of regularity. It is not from Bach, or from Beethoven, or from their like, that we get wild rhapsodies, irregular in measure, chaotic in form, beginning in one key, ending in another. Beethoven, even when his music is *quasi una fantasia*, is never wildly fantastic. Well-marked themes recur on a regular plan. His forms may be new; they may be invented for the occasion; but they can as readily be reduced to rules, they are in all essentials as thoroughly formal, as when he follows the accustomed models.* The greatest artists are those who know that rules, though bad masters, are good servants. If, then, we conceive the world as embodying any ideal which the modern man can recognize as rational, this ideal will certainly express itself by uniformities and repetitions. Thus, just as a musical composition can be scientifically studied and brought under rules of counterpoint, harmony, and form—a study which can be carried out by those who have no perception of its distinctively artistic character—so the world can be made the object of scientific investigation, its elements can be tabulated, its uniformities recorded, even by those who are entirely blind to its nobler qualities. This is a

* See especially Op. 27, No. 1.

simple remark which hardly lies open to dispute. Yet it contains the answer to the most serious of the objections mentioned above.

The British sailor—it has been said *—regards Divine Providence as a form of "celestial naval discipline tempered by sentimentality." If so, he recognizes, however inadequately, the two elements which must be present in any system which could win our full admiration. It is certainly rare to find any Christian believer who conceives Providence in a purely sentimental fashion: who conceives that, if the world were the embodiment of the highest conceivable ideal, the laws of Nature must aim at nothing but human happiness. The religious man of the present day recognizes explicitly that happiness, though good, is not the sole good. He feels that physical regularity is an end in itself. The generation which has scaled the mountain for pure pleasure of victory, takes a conscious delight in the resistance of matter, in gravity as a force to be overcome, as men in all ages have taken a less self-conscious delight in cleaving the tree or breaking the clod. We have learnt to rejoice that good is attained through the clash of opposing forces: to admire for its own sake the gradual unfolding which belongs to all growth—first the blade, then the ear, then the full corn in the ear—to recognize with joy that the world is like a drama, in which every *dénouement*—every untying

* *Naval Occasions*, p. 205, 6th impression, No. 22.

of knots—demands that there shall be knots to be untied.

After these two remarks we shall solve the more easily the special perplexities set out above. Some of the best results in Nature have been achieved by means of the struggle for existence. But this does not imply that the attainment of these results was left to chance. We have seen that it is really incredible that it is mere lucky chance which produces the colour-schemes of the landscape. Yet each point of colour has its separate history; and many of the pigments by which the total effect is produced can be shown to be the outcome of the struggle between opposing forces.* The interaction of these opposing forces is in no way inconsistent with the belief that behind them is a law by which the harmoniousness of the whole landscape is necessitated. And so it may be with the world at large.

Thus, secondly, there is nothing to keep back

* A genuine struggle may be foreordained as regards its conclusion. Indeed on almost every hypothesis a large number, if not all, of the conflicts, whether in human history or in Nature, are such that if we had known all the conditions we could have predicted the issue. A modern Theism will wish to insist on the reality of the struggle. Even in works of art, where the whole is obviously under the control of a single will, the element of struggle is present. When, for example, discords occur which lead the ear to expect a resolution which does not come—when to the disappointment of this expectation is due the very poignancy of the artistic effect—there is a real conflict, a real tension between opposing interests.

those who believe the world to be the embodiment of an ideal from a systematic study of Natural Science. Many such believers have been conspicuously successful in this pursuit. But—what is more important—their position is intellectually sound. Even the believer who regards Nature as we know it as but a " part of God's ways "—as created by a personal God, but rather a subordinate part of His creation than the whole—may with perfect consistency study its laws; just as we may study the laws of a watch and predict with some accuracy its future behaviour, even though it is but a small system within a larger one, and even though it may from time to time be interfered with from without. So long as the watchmaker leaves the watch to work on the whole in its own way, and interferes with it rarely, and then only with good reason, we can with a fair degree of certainty draw conclusions from our knowledge of its internal mechanism. The fact is that even some of the crudest conceptions of Divine Providence are compatible with physical study.

Again, we are asked how we can reconcile the influence of evolution on our mental life with any inherent tendency in the mind towards correct thinking. Here, too, the difficulty is not so great as has been imagined. We have, as we have already seen, no justification for systematic thinking, except on the supposition that the mind has a general tendency towards truth; that is,

that the result of the effort we call thought leads to correct results more often than not. On any other theory, thinking is a dangerous or useless occupation. But in truth, the evolutionary explanation of our mental processes is a theory which cannot be successfully worked out in detail. How is Natural Selection to teach us elementary mathematics? Is it seriously suggested that there is in the mind no tendency to arithmetical correctness at all—that when first in the history of our race the question presented itself as to what was the product of two and two, it was a pure matter of haphazard what the mind should be disposed to answer: that the first men to raise the question might have answered that twice two was "five," or that it was "fifty," or that it was "five hundred"; and that the answer that it was "four" has become habitual merely because the inconvenience which followed from the other estimates destroyed in the end the stocks which made them. This suggestion, absurd as it is, is the only consistent application of the theory of Natural Selection to the explanation of human knowledge. What more in the way of *reductio ad absurdum* could we require? That there is in the mind at the least some tendency to avoid the more egregious blunders must be admitted by every one who gives a moment's reflection to the subject; and this by itself is enough to establish the principle that there is a certain tendency towards correctness in human

thinking. Whatever difficulty may arise in drawing the line between the sphere where this tendency has influence and the province of Natural Selection,* we cannot deny that this tendency exists. This would be true even if it only operated to guard us against the most glaring errors.

Again, why should an argument be rejected because it resembles those of the Schoolmen? Congeniality with the temper of a particular age is no test of truth; nor is a lack of this quality a proof of error. Though references to the "anti-logical spirit of our age" are frequently introduced into controversy, there are few who will seriously defend the scepticism which they imply. Such scepticism is as dangerous to Natural Science as to Religion. Chains of *a priori* reasoning may not be to our taste; but this is no excuse for refusing the conclusion when we have once admitted the premises.

The general position of the question, then, is this. That system of laws, physical and psychological, which the Natural Sciences investigate, and the world which is subject thereto, is regarded by Naturalism as the whole Universe. To Religion, on the other hand, "this present world" seems to be but part of a wider Whole: related

* Natural Selection may be called in to explain many of our instincts, of which some lead to truth and some to error. The full treatment of the question raised in the text would best be approached by considering the relation of instinct to reason.

to the Universe at large, somewhat as a Community within the State is related to the whole Body Politic, or as a play within a play is related to the drama of which it forms part. The fact that we can tabulate the uniformities of Nature without any reference to this more comprehensive Kingdom of Ends * which Religion offers for our belief, is no proof that this more comprehensive Kingdom is unreal. We may tabulate the contrapuntal rules which govern an episode in a musical composition without the slightest conception of their purposive relation to the whole work; and yet the more far-seeing critic may perceive that it is only in relation to the ideal which the whole work embodies that the episode and its details can be fully interpreted. Similarly the success of a Natural Science which eschews teleology is no proof that Nature does not play its part within a comprehensive teleological system. If Nature is subject to laws we can tabulate them. For this purpose it makes no difference, one way or the other, whether those laws are ultimately due, or not, to an æsthetic ideal which they help to embody, or a Divine Will which they help to realize.

On the other hand, while natural uniformity is no argument against a teleological theory of the Universe, the discovery of one single teleological law is a complete refutation of Naturalism. The system of Nature, as Naturalism conceives it,

* See p. 84 of this chapter; also chap. v, pp. 51, 53.

is homogeneous, and therefore harmonious in character. But this harmony is broken, and the attractiveness of the whole system destroyed, if we admit even one law prescribing an end. On this subject both parties to the dispute will be in agreement; since to deny all teleology is the main aim of the Naturalistic theory.

CHAPTER IX

ORGANIC LIFE

We see the world, then, as subject to a system of laws of which the greater part appear to be concerned with physical and psychological uniformities only.

But if this is true of most of the laws of Nature, it is not true of all. It is a law—as we have seen —that thinking leads, on the whole, not merely to psychological uniformity, not merely to similar conclusions in different minds, but to truth. Again, there is a *prima facie* case* for affirming two other laws which Naturalism rejects: first, a law that the parts of organic bodies shall co-operate to produce and maintain life; secondly, that material bodies shall co-operate to produce beauty of line and colour. We are not asking here whether life and beauty are due to the design of a Creator. It is enough for the present if we can show that reason must recognize life and beauty as ends in themselves; and that it is a law that the particles of Nature co-operate as means by which these ends are brought about.

But first a word on the term "law" itself. We are told sometimes that a law is nothing but a

* See chap. iv; cf. pp. 61, 65.

statement of observed facts: that science knows nothing of any "necessity" in physical matters: that the progress of observation has often shown the assumption of universality and necessity to be an error. Men thought it a fixed law that a bell struck by a clapper must sound. There is no such absolute necessity. In a vacuum the bell will be silent.

The patience, the caution, the devotion to facts, exhibited by the physical student, are virtues worthy of the highest praise. But when he states that his laws are never anything but a statement of observed—that is, of past—facts, he is forgetting the predictions which he himself bases upon them. Build a bridge upon sound mechanical principles, and, except in circumstances against which we do not intend to guarantee it, it will certainly stand firm. Keep a healthy plant in the right environment and it must grow. Science here is as confident of the future which has not come within our observation as of the past which has. Thus a law which is a basis for prediction is something more than a statement of past facts. No doubt the laws of Nature have often been wrongly stated. If we find that sometimes the bell when struck will not sound—if we find that under certain conditions oxygen and hydrogen behave in an unaccustomed manner—we must revise our formula. But this revision does not imply that there are in Nature no necessary sequences, but rather that there are such sequences

though we have not fully grasped their character. If there were in Nature no necessary connexion between one fact and another—if there were merely single facts, but no general laws—then the only reasonable course would be to abandon prediction altogether.*

We may return now to the special laws—if such there be—which regulate organic life and natural

* On the subject of "law" in Nature, two opposite errors proceed from two opposite schools of thought. There are those who still argue that law in Nature implies a legislator. One main aim of the present essay is to induce the defenders of Christianity to abandon this piece of sophistry. In all such matters we should gain immeasurably by a policy of candour: and we lose, as we deserve to lose, by every kind of intellectual dishonesty.

But if it is an error to think that law implies a legislator, it is no less an error to suppose that the laws of Nature as we actually employ them in our thinking are mere statements of observed fact. If any one chooses to call a mere statement of fact a law he is at liberty to do so, though this liberty will rarely be exercised. He must be careful, however, not to use this law, which states mere fact and not necessity, as a basis of prediction. He must also distinguish between "law" when used to express the necessity itself as it exists in Nature, and "law" as used to express something in our own minds, our own conception or formulation of this necessity. There are, in the phrase of Professor Huxley, "unascertained laws" of Nature—laws not yet known. These if not mere figments must obviously have an existence outside our minds: for they are not yet present within them.

"What is outside our mind," it may be replied, "is not a *general necessity*, but a number of *individual forces*." But we cannot reasonably argue—as we all do argue—from one individual force to another, except on the tacit assumption that these are bound together by some general necessity: that the forces acting on two given occasions must resemble one another. The Conceptualist really misunderstands the presuppositions of the mental processes he is daily employing. Cf. Epilogue, below.

beauty. Let us begin with organic life. The fact of the co-operation of the parts of bodies in the maintenance of life is plain; and at first sight it might seem as if the law were as clear as the fact. In the parts of a growing plant—we might say—there is a tendency to behave in such a way as to promote the continuance of vital processes. Since the plant has no free will, this tendency implies a necessary law. The tendency towards healthy life may be overpowered by circumstances; by the presence, say, of poisonous matter in the environment. But if the tendency exists at all, this implies the law that when the requisite conditions are fulfilled the healthy development of the plant must follow. If there were no necessary laws of plant life, there would be no such thing as scientific gardening.

To this argument, however, there is a familiar answer. "The plant has no tendency," it is said, "to health or life as such: it tends merely to behave as its ancestors behaved before it. The plant is subject, therefore, to the law of uniformity; but not to any special law concerned with the maintenance of life. If its fixed habits, and the variations introduced in the course of succeeding generations, happen to benefit the plant and its descendants in the particular situation in which they are placed, the race will continue; if not, it will perish. Thus all that appearance of selection and purposive action which has so charmed the mind of the simple believer,

is in truth the result of chance and habit, the outcome of a blind struggle for existence."

Ever since the publication of Darwin's *Origin of Species*—one of the greatest events in the history of human progress—such language is familiar to us all. Nothing is more distinctive of Darwin's own method than the patient accumulation of detail by which he showed how much the operation of Natural Selection may accomplish. Yet, after all, the general principle is more important even than the details; and in this respect, however much Darwin's conclusions may be modified here and there by minor criticisms, his work must always stand as a permanent achievement of human thought.

Moreover, for our present purpose, we are concerned mainly, not with special biological problems, but with the general view of the world to which the work of Darwin has given rise. Darwinism has become a sort of popular philosophy; a philosophy, since it has to do, not with special physical questions, but with a theory of the Universe at large; yet popular rather than scientific, because in expounding it the students of physical science have sometimes left behind the caution and patience which they exhibit in their own sphere. Yet, whatever mistakes may have been made, the influence of such Darwinism on the popular mind has been deservedly great.

The theory of Natural Selection has opened even to the unscientific man possibilities of which

he had not hitherto dreamed. It has shown us how, if time enough is allowed for the process, the most complex adaptations of the organs of plants or animals to their circumstances may take place where there is no conscious design; and also where there is not even an unconscious tendency towards adaptation regarded as an end in itself. The general rule of inheritance is that the offspring closely resembles the parent. But this resemblance is compatible, as we know, with the occurrence of small variations in each generation. An accumulation of such small changes all made in the same direction—all tending, say, towards the increase of the size of a particular organ, or towards its better adaptation to a particular purpose—may, in company with other simultaneous changes produce at the end of a long line of descendants a plant or animal much unlike the original ancestor. The cauliflower, the broccoli, and other garden plants have been developed from the wild cabbage. The bulldog, the Newfoundland dog, and the toy-terrier have all a common ancestry. In these cases we see the result of skilful selection by the human breeder. But changes quite as remarkable as those which the breeder deliberately seeks may be accomplished unconsciously by Nature. For example —to take a hypothetical case which happens to be conveniently simple—the father of many sons may have some sons taller and some sons shorter than himself; but, on the whole, the sons of tall

parents tend to grow taller than the sons of short ones. If, then, the struggle for existence should be keen, should continue for many generations, and should take place in circumstances in which height gives an advantage, the shorter men will gradually die off; and in the whole race, fathered by the taller survivors, the average height will tend continually to increase. Since the qualities which are thus developed and maintained are just those qualities which happen to give success in the particular chance circumstances in which an individual or a race is cast, a collateral line of descendants of the same ancestor may be becoming shorter in one land while their cousins are becoming taller in another. A third line, subjected to no severe competition, may have changed backwards and forwards, and the descendant at the end of centuries may be of the same height as his ancestor at the beginning; while a fourth and fifth line may have become extinct altogether, because they tended the one to height where low stature was an advantage, the other to shortness when it would have served them better to be tall.

If such is, in a general way, the history of the variations by which plants and animals have become suited to their dwelling-places, we can find in these proceedings much evidence of persistence and good luck, but little either of intelligence, or of the influence of a guiding principle of any sort, whether conscious or not. Nature

produces with copious generosity a great variety of types, and those which are favoured by fortune survive the others. Nature makes a great number of bad shots, and it would be strange if she did not sometimes hit the target. Her procedure, indeed, may be justly accused of being blindly conservative, since in many cases she preserves not only the organs which have a useful part to play, but preserves with no less care others which are useless, and sometimes, like the appendix in man, a cause of mischief and danger.

It is clear that the Darwinian theory, even if it had remained a mere theory—a mere brilliant suggestion as to what was logically possible—would have made havoc of many of the religious arguments of old time. Yet, revolutionary though it has been in its effects, it is still not sufficient to justify every opinion which has attempted to take shelter under its name. We have seen how Natural Selection may bring about a gradual ascent towards higher and higher organization, better and better adaptation to environment. The conception of "evolution"—of "gradual ascent" in general—has been developed in forms which find little support in Natural Selection as Darwin himself conceived it.

Professor Karl Pearson, for example, has suggested that Natural Selection* may operate in the

* Karl Pearson, *Grammar of Science*, pp. 422–425.

inorganic world; though he is careful to point out that such Selection would not be the same thing as the Natural Selection of Darwin. He speaks of a "perfectly gradual and continuous change from inorganic to organic substance." "To those," he says, "who have accustomed themselves to look upon organic substance as essentially differing from inorganic only by complexity of chemical and physical structure, the notions of organic and inorganic environment, of the elimination of the unfit, and the destruction of less stable compounds—in short, the notions of biological and physical selection—shade insensibly one into the other." Further, he holds as an "unwavering belief" that Natural History is "at the basis of the history of mankind." "History," he argues, "can never become science" until its "facts are seen to fall into sequences which can be briefly resumed in scientific formulæ. These formulæ can hardly be other than those which so effectually describe the relations of organic to organic and of organic to inorganic phenomena in the earlier phases of their development."

On the basis of such a conception it is possible to state a theory which has a good deal of superficial attractiveness; and in the formation of such theories the genuine man of science, such as Professor Pearson, is soon outstripped by the overhasty eagerness of the popular imagination. If we take as a starting-point particles of matter,

governed by no general principles, but driven solely by individual forces, we may then try to show a gradual ascent at easy stages from inorganic existence to highly organic life: "from a primitive bacillus to the graceful palm-wood, from a primitive micrococcus to the brain of Newton."* "The separate particles," we shall say, "gather into chemical compounds. The chemical compounds join together to form organic bodies. The earliest of these are of the simplest character; cells which propagate themselves by fission. But this simple form of reproduction is gradually replaced by something more complex. Again, at a certain stage, among other chance variations, there appears in some organic body the new property of sentiency, just as other new properties have appeared before. This property—on the principle of Natural Selection—is preserved because of its utility to its possessors. And so again, when as a special form of sentiency there appears intelligence, this is preserved likewise."

The effect of such a theory as this is to suggest that Nature is governed by blind forces and not by general principles. Yet the theory does not really succeed in banishing general principles even from the inorganic world. It is a law † that the

* E. du Bois-Reymond, quoted *Riddle of the Universe*, chap. xiii.

† "We shall do well to remember," says Sir Henry Roscoe, "that the Law of Combination in Multiple Proportions, being founded on experimental facts, stands as a fixed bulwark of the science, which must ever remain true; whereas the Atomic

atoms of Hydrogen combining with those of Oxygen in a certain definite proportion produce water. We reason on the assumption that under the conditions with which we are ordinarily concerned * all specimens of Oxygen and Hydrogen must inevitably proceed in accordance with this principle. If so, then to deny that the principle "governs" the phenomena is merely to reject a word when we have already accepted its meaning. But this principle is as unlike as possible to a blind force. It is general and not individual, since all examples of Oxygen, Hydrogen, and Water obey it. Moreover, the law which governs the smallest particle of Oxygen or Hydrogen involves a reference to something beyond the particle itself. In a consciously ordered design the parts have a mutual reference one to another. In the sphere of physics we have seen nothing as yet to suggest conscious purpose; nothing to suggest that it is "in order that" they may combine with Oxygen that the particles of Hydrogen exist. But so far as a consciously ordered plan is marked by the mutual references

Theory, by which we now explain this great law, may possibly in time give place to one more perfectly suited to the explanation of new facts."

* If the presence of a trace of water, or if a change of temperature, induces the combination of substances which under otherwise similar conditions are practically inert towards one another (see V. H. Veley, *Transactions of Chemical Society*, 1893), this or any similar discovery merely entails upon us the duty of stating our law with the necessary conditions and qualifications. The case is exactly parallel to that of the bell in the vacuum mentioned at the beginning of this chapter.

of part to part, Nature, in this one respect at least, resembles it. For whether we think of the atom as influenced by a tendency within itself, or by a power outside it, in either case the properties of the atom of one gas are such that they cannot even be stated without a reference to another. The most important properties of these gases are essentially relative. Any given atom of Oxygen—if we are to adopt the usual language—is such that in combination with two atoms of Hydrogen it produces water. Thus, even in considering the properties of a single inorganic particle, we find ourselves dealing, not with blind brute forces,* but with a general law of some complexity—a law which involves a reference to something else than the particle immediately concerned.†

There are those, however, who would admit

* "We do not know," says Professor Karl Pearson, "why the particles dance in the presence of one another." But we do know that they move in one another's presence in a definite manner, and that all this movement is in accordance with definite formulæ. However far we push our inquiries, we always find, as an ultimate fact, bodies which, though in a sense they are separate and independent, are yet connected with one another by general laws, i.e. by similar behaviour. Our confidence in the necessity of these laws—which are the bases of our physical predictions—is not consistent with the belief that, if we knew all, we should get behind general principles and find ourselves reduced to a number of separate and individual forces, the force which drives each particle at each moment being ultimately and essentially separate. Although, as Professor Pearson rightly says, we cannot reach ultimate explanations, we do arrive at general principles; we do not end with separate and particular facts.

† In some cases physical laws involve complexity of an elaborate

that Nature is governed by general laws, but would deny that there are any specific principles, such as Vitalism asserts, governing the behaviour of the living organism. May not life be produced by the co-operation of principles which in themselves are purely mechanical ?

Professor Pearson, in the book already quoted, has described with great lucidity three common views on this subject. If we assume that there was a period when life as we know it could not exist on the earth, in consequence of certain conditions of fluidity and temperature, we may conceive life as introduced by special creation ; or we may conceive it as based upon an organic corpuscle, which in suitable environment is immortal—on this theory we must suppose that in the earlier period of the earth's history there

kind—a remarkable union of generality with diversity—and involve also a reference to human sensations. If we take any regularly vibrating body and so treat it as to double the speed of the vibrations, we raise the original note by an octave. This is true whatever the original note may be. But the peculiar character of this musical interval is a fact of consciousness. Only the musical ear can detect it, and except to the musical ear it is unmeaning. Yet apart from this fact of consciousness the law discovered by the physical science of acoustics has no meaning.

In every single case where a movement in nerve or brain produces sensation, and this according to a fixed law, the principle which connects the sensation with the movement is something obviously different from any blind force. The very essence of the principle is to establish generally a connexion between a generic type of movement and a generic type of consciousness. Such a principle cannot be stated apart from general ideas. But further, it is in itself nothing apart from such ideas. See Epilogue. A tendency towards the fulfilment of a general idea can neither be, nor be defined, apart from the idea which is to be fulfilled.

existed forms of life capable of withstanding an environment which no existing form of life can endure—or, thirdly, we may conceive life as generated from a special union of inorganic corpuscles.

The Professor prefers the third of these views, and states the reason for his preference with much force. "The failure," he says, "to produce the spontaneous generation of life in a laboratory has thrown some discredit on the hypothesis": but —as he very justly remarks—"we ought to wonder that any one should have hoped for an experimental demonstration of such a hypothesis rather than be surprised at its absence."

The question, however, which Professor Pearson is chiefly concerned to ask is whether the laws of organic life can be deduced from the physical laws of motion which belong to inorganic matter. Can we describe life and its processes in terms of mechanism? Can we deduce from mechanical laws the characteristic behaviour of organic bodies? *

Now, granted that living bodies are formed of the same materials as inorganic compounds, and granted that life is a function composed of chemical and physical processes, it is clear that, if mere description is all that we want, life might be quite fully described in terms of physics and chemistry. If we know all the movements of matter which take place in a plant, we know its whole history;

* *Grammar of Science*, p. 407, etc.

just as we might know the whole history of an army during a battle by knowing all the movements of the separate individuals of which the army was composed. Yet if we had no conception of the military scheme which these movements carried out, our knowledge, though accurate, would be unintelligent. Behind the movements of the individual soldiers lies a general principle present in the mind of their commander by which these movements are co-ordinated. Is there then any similar principle of co-ordination—conscious or unconscious—in the case of a plant? any tendency to realize its own specific type of life, to "take the physical forces into its service" for this end? This is the question which chiefly concerns us in the present context.

That co-ordination of movements—co-operation towards a common purpose—may take place where there is no active *principle* of co-ordination of any sort, conscious or unconscious, is quite clear. Certain battles in history have been known as soldiers' battles. In these cases for the most part the military conditions have been simple and uniform. Yet it is quite conceivable that a case might arise, at any rate in military operations on a small scale, where an experienced observer might know that the soldiers were a mere savage horde, governed by pure ferocity, without the design or even the instinct of co-operation, and yet might perceive that by chance their movements were exactly those which were

best fitted to carry out a subtle scheme of co-operative attack, that by mere chance they were arranging the fight just as a skilful general would have ordered it. But such happy accidents, though possible, are rare. Co-ordination, where there is no co-ordinating principle, is accident pure and simple. Is the co-operation of the organs of plants a mere accident of this kind? If we watched a long series of military operations all tending to one definite military end, it would not occur to us that these operations could be sufficiently explained by the disconnected impulses of the individual combatants. Is it not equally unreasonable to suppose that the complex co-operations of organic life are fully accounted for by the physical tendencies, and chemical affinities, of inorganic particles? If these particles have no tendency towards organic co-operation as such—just as a civilian crowd (of which each individual is intent on his own purposes) has no tendency towards military co-operation—organic co-operation, if it occurs, will be due either to accident or to some external influence. It is no more likely that we should meet with a long succession of lucky accidents in botany than in warfare. Thus, in the case of the plant, we seem driven to choose between the conception of an external Creator or Artificer on the one hand, and on the other of the influence of an unconscious inward principle of life, co-ordinating the various processes of which the history of

the plant consists. If these processes were co-ordinated without the influence of any central co-ordinating principle whatever, this would be as odd a coincidence as the accidental execution of a complex military movement by a horde of untrained savages.

The argument of this chapter will become plainer if we think of one or two familiar facts. Heredity, for example, is no case of blind *inertia*: it is not a mere continuance of things as they were; it is rather a reproduction. Under certain conditions there occurs, not an exact repetition of the body and mind of the parent, but another embodiment of the same type. Apart from the idea of this type, the most general law of heredity cannot be stated; for the law is simply that, under favourable conditions, another specimen of the type will be produced. Similarly when Darwin relies upon the principle of the reappearance in the offspring of some peculiarity at a period corresponding to that in which it appeared in the parent, he is relying upon a rule which involves in its very meaning the notion of life and growth.* Suppose, then, that the Chemist had successfully achieved the production of a living body. There is another requisite to success besides the Chemist's skill. He must rely on the tendency of the various elements he has brought together to

* *Origin of Species*, chaps. i, iv.

co-operate in a particular way when once they are duly placed side by side ; and this particular kind of co-operation is just what we mean by life.*

* Call the elements which the Chemist puts together, to make his living creature, A, B, C, D, etc. He presupposes that the tendency of A, when united with the rest, is towards the production of life of a specific character.

CHAPTER X

BEAUTY OF LINE AND COLOUR

THE question which is our subject throughout this volume may be stated in a single sentence. Are the laws which govern Nature concerned with its mechanical aspect only; or do they deal with "goodness," "beauty," "life," "knowledge"—that is, with what we sometimes call the "higher" aspects of Nature?

We have just seen that there is in certain conglomerations of atoms a tendency towards that kind of co-operative behaviour which we call life. But if there exists in Nature a tendency towards the production and maintenance of life, is there not also a tendency towards the production and maintenance of beauty? To produce a good colour-scheme is not easy, as every one knows who has tried to do it. Yet Nature surmounts this difficulty daily. The colour-schemes of Nature are not all of equal beauty. But even the worst are good, and stand in strong contrast, as objects of study and imitation, with some of the products of human manufacture and art. Each year the Royal Academy, in spite of the exercise of much selective skill, exhibits many schemes of colour which are worse than any

which a critical observer can find in Nature in a lifetime.

Again, not only is natural beauty felt to possess a distinctive character, similar to the character which distinguishes one style of art from another; but further, there is one characteristic which it shares with the very noblest schools of music, painting, architecture, and poetry, and with these only. Nature, like the best works of art—like the work of Æschylus, of Shakespeare, of Titian, of Bach—satisfies, not the keenest of our tastes, but the most enduring. The contemplation of Nature, therefore, whether in her brighter or more sombre aspects, brings to the soul a sense of refreshment and rest which the majority of works of art are unable to afford us. The Greeks described the baser types of art by a word which literally translated means "burdensome." The burdensomeness of bad art brings out in clear relief the restfulness which is the mark of the greater masters and of Nature. This characteristic of natural scenery must be plain to every one who gives his mind to the subject, unless he is unusually deficient in artistic capacity or experience.

There are those whose suspicions are readily aroused by anything that savours of that cant of art which displeased Sterne more than the cant of religion. Yet even they must admit that Nature produces many beautiful scenes and beautiful objects—vegetation graceful in line as well as

rich in colour, rocks at once delicate in grain and majestic in rugged strength, expanses of green plain and heaving wave, the music of the waters and the woods—and that these things of beauty are too numerous and too frequent to be the work of pure chance.

What, then, is the answer of Naturalism to this obvious argument? It is an answer capable of effective statement. "Our sense of natural beauty," it is declared, "is in essence an illusion. There is no absolute standard of beauty. We have no right, therefore, to speak of things in Nature as really beautiful. Beauty is not a quality of things themselves. It exists only in the mind that perceives them. We call those things beautiful which we perceive with pleasure. The human organs have adapted themselves in the course of ages to the objects which surround them. Our eyes, whether by Natural Selection or by the effect of hereditary habit, have become adapted to perceiving with pleasure the green hues of the trees and grass. And so we find nothing uncongenial which has become familiar to our race. Hence, the charm and the satisfaction which we find in all natural scenes and objects."

There are many facts which may seem at first sight to support this utilitarian theory. As, on the one hand, the green which we call beautiful gives the eye rest, so, on the other hand, it has

been noticed that milliners feel pain in the eye, and an unusual sense of fatigue, when they are engaged for a long time in stitching together ribbons of discordant colour.

Yet it is easy to collect facts on the other side. Few things in Nature give the eyes more fatigue and pain than a near view of snow in bright sunshine. Yet it never occurs to us to doubt that sunlit snow is beautiful. There are many who get a keen æsthetic enjoyment from listening to the discharge of artillery; although the explosion has often produced deafness. Indeed, the theory that the sights and sounds which we call beautiful are simply those which produce health in the organs of perception, and an accompanying sensation of pleasure, is contradicted by facts at every turn. Beauty, pleasure, and health are far from coinciding in the manner which the theory presupposes.

Again, if we wish to see how hard it is to build up a general theory of æsthetics on an evolutionary basis, we have only to turn to the case of music. Here we find uniformities which Natural Selection, and the effect of inherited habit, are equally powerless to explain. There are many of our tastes, no doubt, upon which Natural Selection may have great effect. An animal whose body is suited to a warm environment is benefited if this warm environment is also congenial to his inclinations. Such inclinations conduce to his health and strength, and therefore increase his

chance of long life and plentiful offspring. If he has unwholesome tastes, if he prefers a hotter or colder atmosphere to that in which he thrives best, these tastes will hamper him in the struggle for existence. But Natural Selection preserves those tastes only which are profitable in a utilitarian sense. From the utilitarian point of view many of our strongest musical tastes are entirely useless.

The fact which here confronts us is a certain uniformity of æsthetic capacity. There are certain melodies—Mozart's "Dalla sua Pace," the Toreador Song in *Carmen*—which give pleasure to every one who has any ear for music at all. There are other cases where our tastes are equally uniform if only we have first gone through a preliminary training. The forty-eight Preludes and Fugues of Bach, or the later Pianoforte Sonatas of Beethoven, are not attractive to every one at first hearing; but they seldom fail to reveal their charm to those who study them. Moreover, the charm of all these works is individual and distinctive. We like "Dalla sua Pace," not for the points which it has in common with other music, but chiefly for that very arrangement of sounds which is peculiar to itself. And the fact that when these melodies were given to the world they were received with a general chorus of praise, prove that there lay ready in the human mind a latent capacity to find pleasure in them.

But how could these uniform tastes, or capa-

cities for taste, be produced by Natural Selection? "A grain in the balance," says Darwin,* "may determine which individual shall live and which shall die—which variety or species shall increase in number, and which shall decrease or become extinct." But, in the days before Mozart lived, the latent capacity to enjoy his melodies can never have attained to the weight even of a grain in the balance. It can never have been a factor making for success in the struggle for existence. We must look, then, to some other principle than Natural Selection to explain what is an undoubted fact, this element of uniformity in musical taste. Again, since that which we specially admire in these musical compositions is that element in them which is distinctive and new, it is clear that our admiration cannot be explained on any theory of hereditary habituation.

But the evolutionary explanation, perhaps, may be more successful in explaining our enjoyment of the lines and colours of the landscape. The reader is probably familiar with the impressive argument on this subject in the *Origin of Species*.† Darwin held what he called the utilitarian doctrine of beauty in Nature. On the other hand, he condemned the doctrine that "many structures had been created for the sake

* *Origin of Species*, chap. xv.

† Chap. vi, under the heading "Utilitarian Doctrine, how far True?"

of beauty"—maintained by some of his contemporaries—as "utterly fatal to his theory." "With respect to the belief," he says, "that organic beings have been created beautiful for the delight of man, I may first remark that the sense of beauty obviously depends on the nature of the mind, irrespective of any real quality in the admired object; and that the idea of what is beautiful is not innate or unalterable. We see this, for instance, in the men of different races admiring an entirely different standard of beauty in their women. If beautiful objects had been created solely for man's gratification, it ought to be shown that before man appeared there was less beauty on the face of the earth than since he came on the stage. Were the beautiful volute and cone shells of the Eocene epoch, and the gracefully sculptured ammonites of the Secondary Period, created that man might ages afterwards admire them in his cabinet? Few objects are more beautiful than the minute siliceous cases of the diatomaceæ; were these created that they might be examined and admired under the higher powers of the microscope? The beauty in this latter case, and in many others, is apparently wholly due to symmetry of growth. Flowers rank amongst the most beautiful productions of Nature; but they have been rendered conspicuous in contrast with the green leaves, and in consequence at the same time beautiful, so that they may be easily observed by insects. I have come

to this conclusion from finding it an invariable rule that when a flower is fertilized by the wind it never has a gaily coloured corolla. Several plants habitually produce two kinds of flowers; one kind open and coloured so as to attract insects; the other closed, not coloured, destitute of nectar, and never visited by insects. Hence we may conclude that, if insects had not been developed on the face of the earth, our plants would not have been decked with beautiful flowers, but would have produced only such poor flowers as we see on our fir, oak, nut, and ash trees, on grasses, spinach, docks, and nettles, which are all fertilized through the agency of the wind. A similar line of argument holds good with fruits; that a ripe strawberry or cherry is as pleasing to the eye as to the palate—that the gaily coloured fruit of the spindle-wood tree and the scarlet berries of the holly are beautiful objects—will be admitted by every one. But this beauty serves merely as a guide to birds and beasts, in order that the fruit may be devoured and the manured seeds disseminated. I infer that this is the case from having as yet found no exception to the rule that seeds are always thus disseminated when embedded within a fruit of any kind (that is, within a fleshy or pulpy envelope), if it be coloured of any brilliant tint, or rendered conspicuous by being white or black.

"On the other hand, I willingly admit that a great number of male animals, as all our

most gorgeous birds, some fishes, reptiles, and mammals, and a host of magnificently coloured butterflies, have been rendered beautiful for beauty's sake ; but this has been effected through sexual selection—that is, by the more beautiful males having been continually preferred by the females—and not for the delight of man. So it is with the music of birds. We may infer from all this that a nearly similar taste for beautiful colours and for musical sounds runs through a large part of the animal kingdom. When the female is as beautifully coloured as the male, which is not rarely the case with birds and butterflies, the cause apparently lies in the colours acquired through sexual selection having been transmitted to both sexes, instead of to the males alone. How the sense of beauty in its simplest form—that is, the reception of a peculiar kind of pleasure from certain colours, forms, and sounds—was first developed in the mind of man and of the lower animals, is a very obscure subject. The same sort of difficulty is presented if we inquire how it is that certain flavours and odours give pleasure, and others displeasure. Habit in all these cases appears to have come to a certain extent into play ; but there must be some fundamental cause in the constitution of the nervous system in each species."

Thus he concludes * that "we can to a certain extent understand how it is that there is so much

* Chap. xv, "Recapitulation."

beauty throughout Nature; for this may be largely attributed to the agency of selection. That beauty, according to our sense of it, is not universal, must be admitted by every one who will look at some venomous snakes, at some fishes, and at certain hideous bats with a distorted resemblance to the human face. Sexual selection has given the most brilliant colours, elegant patterns, and other ornaments to the males, and sometimes to both sexes, of many birds, butterflies, and other animals. With birds it has often rendered the voice of the male musical to the female as well as to our ears. Flowers and fruit have been rendered conspicuous by brilliant colours in contrast with the green foliage, in order that the flowers may be easily seen, visited, and fertilized by insects, and the seeds disseminated by birds. How it comes that certain colours, sounds, and forms should give pleasure to man and the lower animals—that is, how the sense of beauty in its simplest form was first acquired—we do not know any more than how certain odours and flavours were first rendered agreeable."

These passages, though it is right to quote them in full, are not in every part relevant to our present question. To say that beauty exists for its own sake is not the same thing as to say that it exists solely for the delight of man. These two statements are not identical, but opposite.* But

* To hold that the things of beauty exist solely for our delight

even if we ignore this confusion, it would still be most unreasonable to argue that if beautiful objects had been created solely for man's delight, there would have been less beauty on the earth before man appeared than afterwards. What could be more inartistic than a world which thus related its beauty to the spectator? Such a jerry-built Universe would deserve comparison with the monument which roused the just wrath of Mr. Ruskin, the portrait carved with minute care on the side which lies outwards, but left deliberately untouched, face and all, on the side near the wall. If we conceive of a good God

is to find their value in something external to themselves—the very opposite of the assertion that each such object is its own end. There are no doubt many men who will at once translate this latter assertion into religious language. They will conceive the beautiful object, which is not seen by man, as existing for the enjoyment of God. When Darwin says that this supposed delight of the Creator is "beyond the scope of scientific discussion," this is really a question-begging phrase. Suppose that we find things of beauty which do not gratify man nor animals —e.g. the shells of the Eocene period. Suppose that their beauty is too constant and too elaborate to be purely accidental. Then there is nothing intrinsically unreasonable—at least for those who do not understand the notion of beauty as an end in itself—in framing the hypothesis of a Creator Who makes them for His own delight. If there are sufficient facts to call for a hypothesis, it is not always a valid objection that the hypothesis cannot be experimentally verified. A more important point is that the notion of an intrinsic beauty can be made perfectly intelligible. There is a sublimity in Mr. Russell's conception of the world as a tragedy in which "blind matter moves on its relentless way," and at length overwhelms us all "beneath the *débris* of a universe in ruins." If we feel the sublimity of this conception at all, we shall feel that the tragedy will be sublime to its very end, although *ex hypothesi* the end will have no spectator.

whose intention it was to endow mankind with the scientific faculty by which men should at length know the past history of their planet, we shall conceive Him as desiring that the history thus unrolled before them should be a worthy object of contemplation; just as, if we conceive Him as an artist, we shall think of Him as delighting in His work.

But such questions are here irrelevant. We are not now concerned with speculations as to the persons, human or divine, for whose sake the beauty of the world was designed. We are concerned solely with the question whether it is a part of the world's order that Nature shall conform to æsthetic principles as such; or whether, on the other hand, the alleged beauty of natural objects is an accidental or illusive appearance. It is sometimes said that, when we call things beautiful, we mean no more than that they please us. But obviously this is not our meaning. Even in common speech we all allow that, if our taste is bad, we may be pleased with what is not really beautiful. The real question, then, is, first, whether the distinction between good and bad taste is a sound one; secondly, whether, when Nature seems to conform itself to right æsthetic principles, this is a mere accident.

It is to these issues that the arguments quoted from Darwin are in the main directed. He mentions the different standards by which different races judge the beauty of their women; and

implies that if there were real beauty, and a fixed standard of truth on that subject, these differences would not exist. Such differences of liking, however, do not even prove any real difference of view. I may be more sensitive to the charm of Rubens than to that of Fra Angelico; and another man may have the opposite preference. Yet we may agree that both are great painters, and may even agree entirely as to the distinctive merits of each. Similarly true beauty in a Negress is not to be looked for in her approximation to the type of the beautiful European, but in a characteristic beauty of her own which only the minority of Europeans can justly appreciate. There is no contradiction in praising one woman for a fair skin, and admitting at the same time that some darker types have a very genuine loveliness.

But even where our tastes come into direct collision, this conflict does not prove that there is no right and wrong in the matter. Our taste may be plainly false. If a man avowed that he preferred Martin Tupper to Shakespeare, he would deserve high praise for his candour; but few would defend his judgment.

Again, Darwin alleges that beauty in many cases is "wholly due to symmetry of growth." Here his argument is that, since symmetry is useful in the struggle for existence, the beauty which we admire is but the accidental result of an efficiency which, in itself, has purely utilitarian value. But

beauty is something more than symmetry. It is not in every case that symmetry is beautiful. The symmetry of a steam-engine is more perfect than that of a flower. If beauty were ever wholly due to symmetry alone, the production of beautiful designs would require no equipment beyond the possession of a pencil and a pair of compasses.

It is essentially the same argument which underlies Darwin's reference to the colours of fruit and flowers. "When a flower is fertilized," not by insects, but "by the wind, it never has a gaily coloured corolla." To many minds this fact has seemed to prove that all beauty in Nature exists for a purely utilitarian purpose. But further reflection will show how halting these Darwinian explanations of beauty really are. Natural Selection may no doubt preserve brilliant and conspicuous colours; but the brilliancy and conspicuousness is only one part of the fact to be explained. Not all brilliant colours are beautiful: nor are all arrangements of brilliant colours harmonious. Yet in Nature the brilliant colours of flowers are not merely in contrast, but in *harmonious* contrast, with their background of leaves. Again, we find a similarly harmonious relation between the parts of some of those humbler plants which are fertilized by the agency of the wind,* and therefore on Darwin's own admission lie

* A good example is the purple stalk and green leaf of the common stinging-nettle.

outside the range of this particular method of explanation. Again, the colouring of birds and butterflies is not merely bright and gaudy. It is the delicacy, and not the mere brilliancy, of the colour-schemes which birds and butterflies exhibit which gives them their æsthetic value. We may infer with Darwin, so far as the simpler elements of æsthetic taste are concerned, that " a nearly similar taste for beautiful colours and musical sounds runs through a large part of the animal kingdom " : but it is hardly reasonable to assume that a nicety of taste which is rare even now in the most highly civilized races of mankind is common among female birds. Yet only on this extreme assumption can we account by sexual selection for the delicate harmony, as distinct from the mere individual gorgeousness, of the colours in the plumage of their males.

Perhaps, however, the most significant of all the Darwinian passages quoted above, is the assertion that " beauty according to our sense of it is not universal," an assertion fortified by a reference to certain animals of peculiar hideousness. This remark contains a whole theory in a nutshell. If we assume with Darwin that the beauty of an object means merely its capacity to produce pleasant sensations through the agency of our nervous system, it will not seem surprising even on the ordinary laws of chances that a certain number of natural objects should possess this

power. We shall then argue further that in many of the most remarkable cases the attractiveness of these objects is fully explained by Natural or Sexual Selection. If man and the insects are derived from the same original stock,* there is good reason why both should possess the same capacity to receive pleasure from colours, and good reason also why the very colours which the flowers adopt because they attract insects to visit them, should produce pleasant stimulation in our senses likewise. And since, while some things in Nature, such as roses, are extremely pleasing, while other things, such as bats and venomous snakes, are extremely hideous, and the rest occupy an intermediate station between great ugliness and great beauty, this—it may be said—is exactly the state of affairs which the laws of probability would lead us to expect.

It is likely that every one who is ordinarily sensitive to natural beauty will be dissatisfied with this theory of its accidental origin so soon as he deliberately confronts it with some of the schemes of colour in certain flowering plants. Others will as readily feel that Darwin has not fully perceived the æsthetic value of the objects which he condemns as hideous. The tragedy of *Macbeth* would be the poorer for the omission of the three witches and the hideous instruments of their unlawful traffic. The *Divina Commedia*

* *Origin of Species*, chap. xv, par. beginning "Analogy would lead me."

would lose much by the omission of the terrible passage describing the tortures of Mahomet.* So the world would be impoverished as a work of art, not enriched, if it were robbed of all those things which in themselves are ugly and offensive. There is more beauty in the world as seen by Shakespeare, where the ugly and the beautiful are combined, than in the pictures in which Fra Angelico with all the vividness of genius paints the beauty of life alone, and altogether omits what is ugly. Few will deny that the former is really a worthier object of admiration.

But a stronger argument against the utilitarian theory of beauty is the universal agreement of Nature with certain æsthetic laws. Granted that the objects of highest beauty are balanced, as Darwin suggests, by other objects of extreme ugliness, we still have to account for what has been already mentioned above: for our impression of the general beauty of Nature as a whole; for the fact that its colour-schemes at the worst never fall below a certain level of beauty †; that there are certain laws of colour-harmony which they never violate ‡; that Nature is felt to possess an æsthetic unity of character similar to that which binds together the work of a single school or

* *Inferno*, canto xxviii, 25.

† Contrast with Nature certain cheap coloured prints.

‡ Though the laws of harmony in music have the advantage in being able to be put into words, the painter will not admit for a moment that his judgment is any more *uncertain* than that of the musician.

individual master; and, lastly, that the contemplation of Nature both in its calm and in its agitation produces a sense of restfulness such as is produced in human work by the works of the greatest masters only.

These are truths which, though they are not much present to the common consciousness of mankind, can be made clear to almost every modern man of good education, if we choose the right examples. Show him the worst sketch from Nature that you can find; show him trees and cattle represented through the medium of gaudily coloured wool-work; and he will understand why you say that these pictures are out of harmony with the spirit of Nature. Show him, if you will, works good of their own kind, which interpret Nature too luxuriously or too severely. If the doubter is still unconvinced, show him where the landscape is interrupted by factory chimneys and slate-roofed cottages. Every one must feel that the factory chimney often introduces into the landscape a grossly inharmonious element; and that Nature itself never violates the laws of colour-harmony in so gross a manner. It is just its obedience to certain æsthetic laws which gives Nature its distinctive character. These laws are plain enough to our emotional consciousness even if we cannot state them in words.

It is this widespread conformity of Nature to æsthetic principle which is the insuperable difficulty for evolutionary theories: as we shall

see if we briefly review the course of the discussion.

Darwinism seeks to explain the beauty of Nature without admitting that it is a law that Nature shall conform itself to æsthetic principles.

Darwin himself shows that many beautiful objects have a utilitarian value. Symmetry is useful as well as beautiful; so are the colours of flowers and male animals. But we have seen that there are many facts which these explanations cannot touch. There is much in Nature that is beautiful but not symmetrical. Sometimes, indeed, it is just in its departure from strict symmetry that the beauty of an object lies. Again, there are parts of Nature where heredity never comes into play; especially that wide field which lies outside both of the animal and the vegetable kingdoms.

Here, then, Darwinism must adopt another form. It turns its attention from natural objects to human taste. It seeks to explain how, by means either of Natural Selection or of Hereditary Habituation, our taste becomes adapted to what Nature offers.

But Natural Selection is manifestly insufficient for this purpose.* An eye which could not look

* It is worth while to point out that the problem is to explain our *taste*—why we like and dislike certain sensations. If pain is annexed to certain deleterious physical processes, this fact may conserve the species by leading the individual to avoid those processes, e.g. a species is the more likely to thrive if an

at surrounding objects without disgust and pain would be an obvious disadvantage to its possessor. An eagerness to look at colours which harm the visual organs would, of course, be physically deleterious. But the mere lack of capacity to find pleasure in the delicate colour-schemes of the landscape is a different matter. What harm could this purely negative quality do to any one in the struggle for existence ? There is no reason why Natural Selection should destroy in us even every taste which rebels against natural colour or form. There is still less reason why it should produce those positive tastes, in harmony with Nature, which we actually possess.

Take a plain little plant like the narrow-leaved plantain. If we look into it minutely we shall find that it is far from being devoid of gracefulness. Stalk and head, especially at the time of flowering, present a humble yet harmonious scheme of colours. Yet, outside the ranks of the botanists and the painters, probably not one man in a thousand has ever noticed this colour-scheme at all. If, then, we or our ancestors had been quite

unpleasant sensation is annexed to the act of running thorns into one's flesh. But here Natural Selection is merely called in to explain why a particular sensation is annexed to a particular physical process. It does not so readily explain why we *dislike* that sensation. Call the physical fact—the nervous or cerebral process—A : call the accompanying sensation B : call our *dislike* for the sensation C. Are we trying by Natural Selection to explain the connexion between A and B, or the connexion between B and C ? The latter stage alone could throw light on our taste for certain colours, sounds, smells, and flavours.

incapable of perceiving the gracefulness of this little plant, or even if we had positively disliked it, there is not the slightest likelihood that this distaste would, at any stage of our evolution, have done us any harm. We need never see this inconspicuous chord of colour unless we specially look for it.

But even if, by some odd chance, a taste for the colours of the plantain had possessed (or had been associated with some quality which possessed)* a utilitarian value, is it likely that the same accident would have happened again and again with the many thousands of different colour-schemes, none of them wholly inharmonious, which Nature offers? The chances are millions to one against it. And, further, even if we accepted this extreme improbability, we should not have explained the facts. Men not merely enjoy these colour-schemes: they perceive in them the specific quality of internal harmony: they see that in spite of their variety they all possess a common æsthetic character, and also certain qualities which they share with the noblest works of human art only.† If we had merely enjoyed these schemes, this would have served every conceivable purpose of Natural Selection. It is really absurd to argue that we should have been killed or weakened in the struggle if we had failed to feel a common sensation of delight attaching

* See *Religion in an Age of Doubt*, p. 151, note.

† See above, chap. iv, also p. 112.

itself to all natural scenes,* or had failed to possess these uniform capacities for intellectual insight into beauty which exist as capacities in most men, but for the majority remain undeveloped.

What, then, of the inherited effect of habit? It is not necessary to discuss here the doctrine of Weismann which denies that characteristics acquired by the parents in the course of their lives are transmitted to their offspring. It is enough to say, in the present context, that a theory of the inherited effect of habit if used to explain our æsthetic tastes implies that the various colour-schemes of Nature, though numerous, are at all periods of history substantially the same, and that our race has thus become so well accustomed to them all that we find them all at least tolerable, and some of them delightful. But, as quite a small change of shape or colouring may make a great æsthetic difference, we must not assume too readily that every colour-scheme has appeared very frequently in the past. Again, hereditary familiarity with particular sensations does not always make them even negatively agreeable. The smell of manure and similar odours have been present to mankind

* Our sense of unity of style implies a certain common *feeling* which all examples of the style excite in us. See *Proceedings of the Aristotelian Society*, vol. ii, No. 2, Part II, p. 68 (Williams and Norgate, 1893). That there is in this sensation itself an element of *generality* is an important fact, but hardly bears on the present argument.

in every generation at all times of the year, whereas the scents of spring belong to that one season only. Again, our attitude towards even the less interesting colour-schemes of Nature is not one of mere toleration. Lastly, although all our ancestors have been accustomed to the perception of individual colours, and perhaps also conscious of the transition from one patch of colour to another, there is nothing to suggest that in all generations they were in the habit of perceiving colour-schemes as such. As the dress of many women proves, to a large part of mankind a colour-scheme, as distinct from the separate colours that compose it, is not an object of consciousness. And how could habituation produce a sense that the scenes of Nature possess unity of character? It was remarked by the late Mr. William James that if a race of dogs had lived for generations in the Vatican Galleries, they would still never have become art-critics. Mere habituation cannot produce taste apart from an internal artistic capacity.

The strongest argument remains. The theory on behalf of which these various evolutionary explanations are brought forward, is essentially a theory of illusion. Even if we insist that we know what our æsthetic judgments *mean*—that by the beautiful we do not mean what pleases, but what is worthy to please—the evolutionist

returns to the charge and affirms that in that case our meaning is not *valid*, since there can be no such thing as real beauty.

Now a theory which is to convict us of lifelong illusion must itself be exceptionally conclusive. If it could be shown that all the forms we admire are forms which cause preponderantly pleasant sensations: that if we had not admired them we must manifestly have sustained injury: that all our actual tastes are precisely those which would naturally have resulted from long familiarity with the surroundings in which our race has been placed: we might well say that these were highly suspicious coincidences, and therefore the theory of illusion must not be lightly rejected. But, as we have seen, no one of these assertions can be made good.

And even if they could be made good to the utmost, they would not really be enough to convince us that all our æsthetic judgments are false. The answer to such sceptical suggestions lies for each of us in the progress of his artistic education. Ask each man the question with reference to the subjects he understands. Ask the scholar whether

> O fortunatam natam me consule Romam

is as good poetry as

> Per varios casus per tot discrimina rerum
> Tendimus in Latium

Ask the architect whether the outside of the National Gallery is as good art as the inside of the

Choir at Westminster. Ask the judge of dress whether the fashions of Paris in the Second Empire surpass in gracefulness the costumes of all other periods. Ask almost any one whether the Venus de Milo reaches a higher level of beauty than is attained by those pictures of prize bulls which sometimes adorn the houses of their owners. The person questioned will not be at all perturbed by evolutionary arguments. He will give his own judgment with perfect confidence. To those, surely, who study Nature, their conviction of its prevalent beauty must be as clear as are any of the artistic judgments which have just been mentioned.

It is, of course, entirely right that æsthetic phenomena should be studied in their physiological aspect. It would be absurd to deny the physical basis of mental functions. It would be equally unreasonable to deny that artistic judgments and enjoyments are often associated with what Mr. Grant Allen called "pleasant visceral sensation." The error begins when we confuse what is distinct—when we see no difference between a pleasant thrill, a grateful nervous tremor, on the one hand, and a judgment concerning the Sublime and Beautiful on the other.

NOTE. Some one may perhaps suggest (in view of the evolutionary explanations of our taste and our knowledge) that "good taste" or "a good head for mathematics" may conceivably

be a useful asset in the struggle for existence. This suggestion is quite irrelevant to the present discussion. Good taste, or a good mathematical head, is exactly equivalent to that " tendency to correct thinking " (æsthetic or mathematical as the case may be) which Naturalism on its own principles must deny. The case for Naturalism requires that Natural Selection should account for each separate mental fact, not for a general tendency to correctness as such.

CHAPTER XI

SPIRITUAL EXPERIENCE

We seem, then, to have found that the Universe is no mere machine. Its character is revealed in the laws which govern it; and those laws which govern taste in man and beauty in the world cannot be expressed in purely mechanical terms.

But if the non-mechanical character of the Universe is revealed in æsthetic experience, it is revealed still more decisively in religion. Religious experience is intimately connected with that knowledge of right and wrong which has been discussed above. There are those who regard Religion as a mere department of Morality. But even if they are right, even if it is a department, it is still a special department, of morality; since many who are familiar with morality in general are quite out of their depth in dealing with religion. It is in religious experience, perhaps, that we shall find the full significance of those laws of Nature which we have been considering.

In this special department, then, can we formulate any definite laws? Some of the simplest laws of religious experience have been well expressed by Mr. Matthew Arnold in his reflections

on the religion of Israel, that "wrestler with God" who has known "the contention and strain it costs to stand upright."* Put shortly, Mr. Arnold's law may be summed up in the words that "to righteousness belongs happiness."† He recognizes the "very great part in righteousness" which belongs to the "not-ourselves."‡ "We did not make ourselves and our nature. We did not provide that happiness should follow conduct, as it undeniably does; that the sense of succeeding, going right, hitting the mark, in conduct, should give satisfaction and a very high satisfaction, just as really as the sense of doing well in his work gives pleasure to a poet or painter, or accomplishing what he tries gives pleasure to a man who is learning to ride or to shoot." Israel had indeed known the humiliation of failure, had known what it was for a man to acknowledge transgression and to have his sin ever before him. But his course was not all failure: he knew also the happiness of spiritual achievement. As a Prince he had had power with God and had prevailed. Neither this sense of contact with God as the "Power not ourselves which makes for righteousness," nor the sense of joyful co-operation with this Power which the sincere pursuit of righteousness produces, can be explained away as a by-product of Natural Selection. Those who have followed the discussions of morality and the

* *Literature and Dogma*, i, 3.
† *Ibid.*, i. 4. ‡ *Ibid.*, i, 3.

æsthetic sense in the preceding chapters will not need to have the case stated afresh in relation to religious experience. Those who are still unconvinced may be invited to reflect on the phenomena with which Matthew Arnold deals. We find ourselves wrestling, in truth, with something that is not ourselves or of our own making: a law which we cannot destroy or silence: a power also in our inner life by which this law is reinforced.*

We may take Matthew Arnold for our guide again when we turn to the distinctive experiences of Christianity. He well understood how, in Christianity, it is "no grand performance of a man's own that brings him to joy and peace, but an *attachment*, the influence of one full of grace and truth!" In the language of Scripture the law of Christ's influence is expressed in the statement that "as the branch cannot bear fruit except it abide in the Vine," so neither can the Christian disciple "except he abide in Christ." If we accept this statement as true, then—to use the language of modern prose—we shall expect that so far as we bring ourselves and keep ourselves within the sphere of Christ's influence, we

* Cf. *Literature and Dogma*, i, 5: "In hearing and reading the words Israel has uttered for us, carers for conduct will find a glow and a force they could find nowhere else. If you care about conduct, your heart will burn within you, or at least you will gain conviction of the truth and felicity of this language as you read it."

shall find therein a source of continued strength and inspiration; the power to do what apart from this inspiration is impossible; the power, say, of the Quaker to keep his temper unruffled under unspeakable provocation; the courage of St. Francis to do for the lepers those services the very thought of which had, in his unconverted days, filled him with extreme disgust; and all other such Christian acts as are in themselves most sweet and gracious, and yet to the flesh most difficult. On the same hypothesis, we shall expect to find that if we separate ourselves from Him, if we break the contact, we shall lose the power so to overcome the flesh and to triumph over natural instincts and inclinations.

Now if such claims are true, they ought to be easily verified: if false, they ought to be easily disproved. For obvious reasons they are not in all aspects particularly well fitted for public discussion; they turn too much upon intimate and private matters. But, so far as we ourselves and our closest friends are concerned, the claim lies open for verification or disproof. Moreover, the general effect upon the world of Christ's life and teaching, through the community which He founded, and through the lives of His disciples, can be discussed without any violation of delicacy, both in reference to the past and to the present. It would be much to the good if

every one would inquire into this subject for himself.

There are, however, one or two objections to such a method of inquiry which it is worth while to encounter in advance. "What, after all," it may be said, "is this supposed law but an identical proposition? Are you not arguing in a circle? You affirm that contact with Jesus brings a peculiar strength and grace. But what do you mean by contact with Jesus except living according to His commandments; and what, again, is the peculiar grace of Christianity except a life according to the Christian standard? Thus, in effect, your law amounts to nothing but this, that if a man lives the Christian life he lives the Christian life."

A careful observation of Christian practices will afford us an adequate reply. The types of Christian piety are many and various; but all agree in adopting systematic methods of subjecting the mind to the influence of Christ's teaching. All agree in the frequent and ordered reading of the Gospels with the express intention of taking the Central Figure in the story as a model of conduct and an inspiration for life. These practices are often pursued mechanically, and sometimes even insincerely. Yet, on the whole, the systematic "seeking" leads to a genuine "finding"; and men's lives are brought into some small measure—often into a great and astonishing measure—of conformity to their model. Jesus,

according to Matthew Arnold's analysis, brought into the world a temper of self-examination, of self-renouncement, of "sweet reasonableness" and mildness. Take the first of these, the spirit of self-criticism. Those groups of persons who consciously subject themselves to the influence of Christ do really succeed in setting a good example here.* The political orator seldom takes as his theme the unfaithfulness of his party to its own professed principles. The faithlessness of the Church to the principles of Christ is the constant theme of the Christian preacher. If, then, Christians assert that as a result of following Christ they are conscious of a certain access of strength in the inner life, this is a claim worthy of examination. It is no merely identical proposition to say that those who persistently keep Christ in their thoughts do hereby make progress in Christian virtue.

"But what," it will be said, "is all this but one example of the well-known principle of the influence of a great mind?" We are no doubt right in thinking of the "influence of Jesus on mankind" under the general category of "influence." But the important matters are: first, that influence is just one of those facts which cannot be explained on purely mechanical prin-

* The duty of self-criticism is not, as other duties are, habitually pressed upon Christianity from outside. The world is only too ready to regard it as the duty of the Church to exhibit a faithful but unintelligent conservatism.

ciples; secondly, that the influence of Christ has a distinctive character of its own.

Consider, first, spiritual influence in its widest sense. Take the influence of Greek literature, or more generally of what we call the "spirit" of Greek literature and art, in moulding the style and thought of subsequent generations. Looking back upon it now, we can see that the work of the Greek poets and sculptors, of the Greek orators and philosophers, exhibited one and the same "spirit." In other words, their work conformed to certain principles of taste and realized a certain æsthetic ideal. It is in virtue of our perception of these principles and this ideal that we perceive the unity of character which, in spite of individual differences, pervades Greek work as a whole. It is in virtue of this same insight that we are able to recognize how far the influence of Greek art and literature has extended beyond its own borders.

In such a combination of unity with difference there is doubtless something mysterious. These examples are quite unlike the simpler cases, in which a single principle is consciously applied to varying subject-matter: as when subjects of all sorts are dealt with under the single form of the hexameter verse, a form which any mind can fully grasp and define and communicate to others. The spirit of the Greek style cannot be digested, or taught, in the form of set rules. No rules could be drawn up such that if we obeyed

them we must thereby produce works of art true to the Greek spirit. This spirit is not a principle formulated in a single mind, but a principle stirring obscurely in the minds of many, expressing itself differently in different contexts, yet perceived to be one single impulse by the sympathetic critic who reviews its work. We find that, if we familiarize our minds with what Greek principles of taste have enjoined in one context, we shall perceive by instinct what they enjoin in another. This instinct is stronger in some men than in others. But this fact only makes it plainer that we are dealing here, not with the arbitrary will of individual men, but with a law of Nature. There is some " power not ourselves " which, when we read the literature of Greece, reproduces in us some of the tastes and feelings of its authors, and may actually develop their principles in new and untried contexts. It was said of Keats that he was a Greek himself. By mere acquaintance with the Greek Mythology at second hand he was able to amplify it with a bold originality which was yet faithful to its source. We may distinguish at many points between the spirit of the Greek poets and that of their disciple. Yet the effect of the Greek influence upon his poetry is unquestionable.

No less definite than the laws of the response of Western civilization to the influence of Greece are the laws of the response of the human mind and conscience to the influence of Jesus. Come

under the influence of Greek literature and art, and you will find that you gain, not merely an increasing admiration for the best Greek work, but also the habit of applying the Greek standard of taste in contexts of which the Greeks themselves knew nothing. Come under the influence of Jesus Christ, and you will find an increasing tendency to apply a standard which you cannot fail to recognize as Christian, even to problems about which He in His own teaching has given no explicit guidance. It is obvious, in the light of what we have seen above, that such laws cannot be stated in terms of mere mechanism. The statement must contain such utterly non-mechanical conceptions as the "Spirit of Greek Civilization," the "Christian Ideal."

Again, submission to Christ's influence in particular puts us in a position to judge of its value for, and its application to, the whole human race. It is not every one who has the faculty to understand Greek art. But it is a loss for us all if we lack that spirit of ultimate self-criticism which produces the distinctive Christian virtues of contrition and repentance.* Many noble lives have been lived apart from Christ, especially in pre-Christian times. The typical Christian, like St. Paul, is consciously struggling with a law which

* See Montefiore's *The Synoptic Gospels*, Introduction, pp. cvii–cviii. It is significant that in the passage from Wernle, which the author quotes with so much approval, repentance and contrition are not even mentioned. The spirit in which the author deals with Christianity is, of course, worthy of all praise.

brings perpetual self-condemnation. The contrast between such lives and the unruffled calm, the effortless goodness, of certain good Pagans, both ancient and modern, may seem at first sight all in favour of the latter. Christianity is itself forward to recognize that it is of "such"—of dispositions like these, resembling the natural innocence of children—that the Kingdom of Heaven is partly built up. It is enough, however, for our present purpose, if we can make good the necessity of Christ's influence for those who are adult, not only in years, but in mind; for the awakened modern man replete with the knowledge both of good and evil. For those who gain the conviction that the Christian standard is absolute —who find that there is indeed in our souls a power which makes for righteousness, and that the upward pressure which this power exerts in favour of the Christian standard is continuous and increasing—for them the religious doctrine of the Holy Ghost will at least not seem to err on the side of exaggeration. They find themselves in contact with a power which, even if they do not know it to be personal, they perceive to be perpetually active, and so far to satisfy their spiritual needs that they can without hesitation yield themselves wholly to its guidance.

It is partly through experiences like these that belief in the personality of God is reached. To

this belief—it may be thought—there have been, in relation to its importance, only scant allusions above. The argument as developed in the foregoing chapters seeks to arrive at Theism through Optimism. We may be justly confident that the great majority of those who on reasoned grounds adopt an optimistic conception of the Universe will hold this faith in a theistic form; that they will feel that a world whose central spring is unconscious of its own working is not ultimately satisfactory to reason. Yet it is not always by these indirect ways that men come to belief in a Personal God. The religious man is ever aware that he stands in the presence of a law of right and wrong which he cannot disobey without incurring the condemnation of his own conscience. The thought of such a law is for many minds inseparable from that of a righteous Judge Who reads our thoughts and before Whom all our secret desires lie open. To a large number of our race this conception of a God Who reads the heart seems so natural and obvious that, when it is once put before them, they accept it without hesitation. As our relations with the wills of our fellow-men produce in us from our earliest years the unquestioning conviction that the movements of the human bodies around us are directed by conscious spirits like our own, so—it might be argued—our contact with that law which is revealed to us in conscience produces in the normal mind a like direct

conviction of the existence and personality of God.

The question how the indirect knowledge of God which comes by reasoning is related to the direct knowledge which may be thought to arise through religious experience, lies perhaps a little out of the straight course of the present discussion. Yet it is not altogether irrelevant. Suppose that by arguments like those of the preceding chapters we have arrived at such an Optimism as in normal minds will inevitably lead on to Theism. However well grounded such a faith may be, its meaning must surely become clearer to the man for whom Theism has a more distinctively religious character; for whom the lesson of the moral struggle expresses itself daily in the Scriptural phrase, "Thou God seest me"; for whom the witness of the accusing law remains no mere impersonal Imperative, but seems to make itself heard as the Voice of One Who is about our path and about our bed and spies out all our ways. Such experience, for those who know it, is at the least explanatory of convictions which have been otherwise attained.

CHAPTER XII

THE CLAIMS OF AGNOSTICISM

THE reader who has followed the argument thus far may here wish to give voice to an objection. "I am not altogether unwilling," he may say, "to admit that this argument, though stated in an unusual and somewhat abstract form, is on the whole a fair representation of the essential meaning of the plain man's defence of religion. But here we have a curious fact. This same argument, in one form or another, has been before the world for centuries. If it is in essence sound, why are so many of the best and most honest minds unconvinced by it? What is the cause of the widespread scepticism that we find around us?"

To the latter question we can give perhaps no single answer. The causes of religious doubt are different in different minds. Yet, if we are thinking of intellectual obstacles only, and seeking for the greatest of these, we shall find it, surely, in the achievements, the truly glorious achievements, of Physical Science.*

But this answer leads on to a further question.

* It may be objected that this answer applies rather to the Victorian era than to our own: that Darwin and Wallace,

Why are Natural Science and religious faith believed to be mutually hostile? This belief must have some weighty cause; and we shall see presently what it is. Meanwhile, however, it is worth while to show that many of the common opinions on this subject are clearly and demonstrably erroneous. We shall understand better the real cause why the claims of physical science to a monopoly of systematic knowledge are so readily allowed if we examine these errors one by one.

First, there are those who speak as if Natural Science denied everything which it does not affirm; who, in fact, treat Natural Science and Naturalism as if they were simply identical. This is a very evident blunder. We have only to define the two positions to see that they are distinct. Physical Science assumes merely that if we watch the phenomena of Nature intelligently we can find the rules by which they proceed. Naturalism adds that only that which direct observation of Nature can verify should be accepted as true. Physical Science, indeed—far from demanding Naturalism as its basis—is per-

Mill, Spencer, and Huxley are no longer the oracles of our advanced thinkers. It is only right that these changes of intellectual fashion should be respectfully and sympathetically observed. Yet, after all, we must not take them too seriously. It is never the strongest heads who are most affected by them.

fectly compatible with Supernaturalism of the very crudest sort. So long as the inquirer is an accurate observer of facts, and is quick to formulate the rules which his observations establish, he may attribute these rules to the arbitrary will of God, or even of a syndicate of heathen deities, without losing his usefulness as a man of science. Naturalism has been, perhaps, the favourite creed of the physical observer in all ages; but that it is not the only creed consistent with high physical attainments would be proved, if we had need of such proof, by the mere mention of the name of Newton.

Imagine, then, the havoc which a ruthless debater might make with those moving and impressive sentences of Mr. Russell's which have been already quoted.* "Mr. Russell alleges," he might reply, "that the world which Science presents for our belief is a world without purpose, since—among other evidences of this want of purpose—man is 'the product of causes which had no prevision of the end they were achieving.' That man is the product of many unintelligent causes—of the particles of which his body is composed, of the chemical forces that move them, and so forth—we shall all agree; but this is not what Mr. Russell means. He means that our existence in the world is not due to the action of intelligence at any point. If we weigh Mr. Russell's words with care, we shall find that they are merely an

* See chap. ii, pp. 15–16.

eloquent elaboration of the simple statement that there is no God and no future life. But why does Mr. Russell tell us that it is 'Science' which presents these two propositions for our belief? By 'Science' he plainly means 'Natural Science'—Science pursued by the method of experiment and observation. What department, then, of Natural Science proves that there is no God? In what department of Natural Science is this subject even dealt with? In Chemistry, or Physics, or Biology, or Psychology? Perhaps we shall be referred to the modern science of Anthropology. Anthropology shows the growth of religious ideas from very humble beginnings in our savage ancestors; just as it shows the gradual development of other ideas, political, moral, or physical, likewise. But it does not always disprove a belief to show its history. It is a curious piece of arbitrary behaviour to assume that, if we can show the origin of the belief, say, in uniform causation, we are proving it true, whereas to show the origin of the belief in God is to prove it false. Again, which of the many subdivisions of Natural Science sets itself to prove to us—in language which it must be admitted is hardly redolent of the physical textbook—that 'no heroism, no fire, no intensity of thought and feeling, can preserve an individual life beyond the grave'? Observation, it is true, never shows us a disembodied spirit*—a conscious mind acting

* Even this will not be admitted by all members of the Society

independently of a material body. But the fact that body and mind are always observed together does not prove them essentially inseparable. Empirical psychology is hardly concerned with the essential nature of the soul as distinct from its changing experiences. Certainly psychology has not so clearly defined the soul's nature as to prove that conscious personality must necessarily be extinguished 'under the *débris* of a universe in ruins.' Again, Physical Science does not even disprove the impossibility of restored bodily existence. Before now it has happened that a physical investigator, who was at the same time an orthodox believer, has held that far away a world of matter already exists under laws different from those which we investigate: or at least that a time is to come when the present system of Nature will be swept away in favour of a new heaven and a new earth wherein dwelleth righteousness. Such beliefs have not checked his physical investigations. The man who regards 'this present world' as part of a wider system will calculate his eclipses with a proviso: 'So will it be unless the end of the world comes first.' The believer and the unbeliever alike can employ the methods of physical observation; and the question at issue between them does not belong to Physical Science as such to decide. Do

for Psychical Research. Whether the eminent men of science who have engaged in these researches will have thereby enhanced their reputation is still an open question.

the physical laws as we know them hold good through all space and through all time? Whether we say Yes or No, or that we cannot tell, we have already passed beyond Natural Science to Philosophy. It is Metaphysics, not Physics, which deals with the infinite and the eternal; with what in an absolute sense is everywhere and for ever. And this Mr. Russell, except in his lyrical moods, knows well. When therefore he tells us that Science presents for our belief a Godless and purposeless world, he knows, or will know if he reflects, that he is not correctly describing the subject-matter of Physical Science, but merely indulging in a brilliant flourish of sentimental rhetoric." *

This criticism, as we shall see directly, would not really be quite fair to Mr. Russell. Yet it is hard to see what defence he could make against it on his own principles. Still harder is it to see what answer he could make, say, to Lotze when he warns us †—in words which might almost have been written with Mr. Russell in view—against "crediting as a prophetic announcement with regard to the future" those "ingenious calculations which draw conclusions as to the final state of the world from our experimental knowledge of

* These words are not written in forgetfulness of the admirable work Mr. Russell has done. Mr. Russell has, perhaps, never written with more splendid eloquence than in the essay now before us: but he has sometimes written with more philosophic caution.

† *Metaphysic*, Bosanquet's translation, vol. ii, p. 160.

the economy of heat." It is no doubt important to consider "to what end the processes which we now see in operation would lead, supposing them to continue unchecked and to follow the same laws." But Mr. Russell's pessimistic conclusion follows only "if we assume that the given conditions are the only ones to be taken into account," and not otherwise. This assumption, as Lotze points out, is perfectly arbitrary. A physicist may demonstrate convincingly what would happen if a certain hypothesis were fulfilled. But obviously the success of his demonstration does not prove that the hypothesis will be actually realized. "Two things," our imaginary debater might continue, "need to be proved in order to make Mr. Russell's conclusion. First, he must show what would happen on the hypothesis that the physical conditions operative at present are the only conditions to be taken into account; secondly, he must show that that hypothesis will be realized in fact. The complete success of the physicist in dealing with the former point disguises his total failure with the latter. So far as Mr. Russell is concerned, the latter question is not dealt with at all. That is where the real issue lies between him and the Christian believer; and he quietly assumes what he does not attempt to prove."

Thus Naturalism may be true or false; but it is not simply identical with Science. Physical Science—we may say—has founded the business;

the " goodwill of the business " is silently transferred to the credit of a Naturalistic philosophy. Against this transference we may justly make our protest.

We meet, secondly, with an exactly opposite mistake. While some, as we have just seen, look to Natural Science for a complete theory of the Universe, others speak as if it confined itself strictly within the limits of experience. " Our knowledge of Nature," they argue, " rests on experience alone, while Religion is concerned with what goes beyond experience altogether." " We shall be wise," they conclude, " to confine ourselves to beliefs which can be verified, and so to accept Natural Science and reject Religion."

But while the former conception of Natural Science is too wide, the latter is too narrow. Natural Science, no less than Religion, takes us far outside the limits of experience, and tells us of what eye has not seen nor ear heard. Natural Science no less than Religion rests on an act of faith. Our knowledge of Nature extends both into the future and into the distant past, where direct experience cannot take us. We can calculate the eclipses of the coming years, and we know something of the processes by which the earth became the home of the human race. If the ignorant sceptic tells us that next year's eclipses are not yet come, and that when the earth was without human in-

habitants we were not there to see, his assertion is right, but his sceptical conclusion is wrong. The eclipses of the future, and certain events of the far past, may be quite within our knowledge, though quite outside our experience. Further, as the future and the distant past lie outside the limits of experience, so, too, they lie outside the limits of strict demonstration. There is a type of demonstration, employed in pure mathematics, which admits of no possible doubt; but this—as is well known—cannot be employed to prove the occurrence of past or future events. Thus, in trusting the conclusions of Natural Science, we are believing in something which we have not seen and cannot in the strictest sense demonstrate.

"But it is no great act of faith," it may be replied, "when you see a stone rapidly falling towards the ground, to infer that a moment ago it was high up in the air, and that in a short time it will touch the earth; or, if you see water cooling in a vat, to conclude that an hour ago it was hotter than it is now. Yet it is only by relying on simple inferences of this kind, and following them out step by step, that we build up the stupendous fabric of our physical knowledge." True. The implied comparison is a just one. If we take a wide enough survey, we may seem to see vast physical changes taking place before our eyes; and the movements of the moon as clear and certain as the path of the falling stone. But it is just in this confidence that such methods of

inference may be safely followed step by step into remote regions of space or time, that the act of faith consists. The future path of the falling stone is made plain to us by an easy—we may call it an instinctive—act of imagination. We need faith, however, when we soar into remote regions where sight and imagination alike fail us. How do we know that the gravitative pull, on which the moon's motion depends, will continue for all time? It is due—so some have held *—to a "strain in the medium in which all matter is immersed." But even on this theory this medium is unknown to us except in its effects. How then can we know that it may not at any moment break up, or wear out, or float away? Why, at some future time, should not part of our world be immersed in this medium, and part immersed in it no longer? The effect of the change would be subversive of all our expectations. It might cause the wildest sequence of physical events. But who can show by express demonstration that the change is not possible? Who can prove that it is not imminent? On such a hypothesis, it is true—as we saw in the case of a similar hypothesis suggested above †—no one of our common expectations would be worth a moment's purchase. Such a change would involve a relapse from Order into Chaos. We

* See Sir Oliver Lodge, *Elementary Mechanics*, published 1888, p. 15, note. Cf. Epilogue, Note II, at end of this volume.

† Chap. iv, p. 40.

therefore reject it, and rightly; but such belief in the prevalence of Order, in regions which are beyond the limits both of our experience and our demonstration, is unquestionably an act of faith. We have not seen it; we have not proved it: yet we do not doubt it.

The fact is that the attractiveness of the orderly picture of the world which Natural Science presents to us, and the agreement of all our friends to accept it, disguises from us the boldness of the step we are taking, in advancing so far beyond the limits of our direct experience. We treat as a matter of course what is really a stupendous venture. The physical sceptic might well ask us why we assume that Nature as a whole must be orderly and not chaotic. "Order" is an ideal of the human mind. "Uniformity," too, is one of our conceptions. Why should we assume that the actual Universe must agree with our conceptions and ideals? If we answer that unless the world is in some measure uniform throughout, we could not make scientific predictions, he may reply that the trustworthiness of these predictions is the very thing upon which he is throwing doubt.* So far as mere argument is concerned, the position of the sceptic is strong. Our one unanswerable retort to him is that he, as he shows by his conduct, believes in Natural Science and its predictions just as we do. He

* Cf. Mr. Russell's remarks about the chicken, quoted above, p. 77.

knows that he lives in an orderly Universe. It is this knowledge which marks him as a sane and rational man. It is his duty, then, as it is ours, to analyse the principles on which this venture of faith is based.*

"But the venture of faith made by science," it will be said, "is totally different from the gratuitous inventions of Religion. The doctrines of Religion are invented sometimes because they are in accordance with our hopes; sometimes they are the reflections of our fears. But in any case there can be no evidence of their truth. So far as pure purposes of knowledge are concerned,

* It may be objected that the theory advocated above is itself an ultimate scepticism, since it makes all our scientific and other knowledge rest on an unproved principle. But a principle may be certain and well founded in reason and yet may be neither a self-evident axiom nor capable of the kind of demonstration which belongs to mathematics. The rationality of the world is as certain as anything in mathematics, though not certain in the same manner. If we say to the purveyor of sceptical arguments, "You cannot believe in the absurdities of pagan mythology: *you cannot believe in absolute rubbish*"; he will hardly answer, "Oh, yes, I can." Absurdities are logically possible, but not really possible: logically conceivable, but not actually conceivable. See p. 237.

Again, if it be objected that the principle that "absurdities do not happen" is insecure—since to many minds everything unfamiliar seems absurd, so that, e.g. Darwinism was laughed at as incredible by many quite well-educated men for a generation—the answer is that, while every sane man believes the world to be a rational order, many men have false *standards* of order and rationality. Again, in the case of a new theory, it commonly happens that we do not at first take in what sort of a world it is which the theory presents to us. See pp. 236–237.

we do not need these religious doctrines; and if we accept the common-sense 'principle of parsimony'—that is, the rule that we should not invent hypotheses except for the purpose of explaining facts—then we are justified in denying them outright. Why suppose the government of the world by a God, or by any rational principle, conscious or otherwise? If matter and its powers had been just what Physical Science conceives them to have been, then the Universe must have been just what the Universe is. Granted the matter and the forces, the world, as we know it, is the necessary result. The individual particles of matter, and the individual forces by which each is moved, would have done all that has been done; and no general principles, whether acting consciously or unconsciously, are required to assist them. The introduction of such principles is a pure piece of gratuitous invention."

This objection has been answered in advance in the preceding chapters. The answer may be expressed by means of a comparison. Certain vibrations of the air produce that succession of sounds which we call the Ninth Symphony of Beethoven. Granted that these vibrations take place and that we hear them, then, however they may have been produced, we have the Choral Symphony. But is it therefore "gratuitous" to infer that these sounds presuppose the influence of definite æsthetic principles? Given the vibrations, you have all that is necessary for the

æsthetic effect. But still, apart from the influence of æsthetic principles, this collection of sounds would not have occurred. If the orderly arrangement of the Universe is no more an accident than is the connectedness of Beethoven's music—if there are certain principles of order by which the Universe is dominated—then there is nothing gratuitous in predicting that whatever follows from these principles will actually occur. Such predictions are made both by Religion and by Naturalism. Religion and Naturalism differ, not because Naturalism is cautious and scientific while Religion is irresponsible and romantic, but because they interpret differently the principles which are embodied in the Universe as it presents itself to our mind and senses. Is it, then, that Religion sees aspects of the world to which Naturalism is blind, or that Religion imagines what Naturalism perceives to have no existence ?

It is a common view that certain aspects of the world excite our wonder because we interpret them wrongly. " Wonder," it is said, " here as elsewhere is the offspring of ignorance. Grasp the self-evident principles of the indestructibility of matter and the persistence of energy—once perceive that it is impossible that something should become nothing*—and you will see that

* Spencer, *First Principles*, Part II, chap. iv, p. 177. It might very naturally be said that even though *we* cannot *show* it necessary that matter and its fundamental powers should remain unchanged, this necessity may quite possibly exist. Such necessity would explain much of the uniformity of Nature, but not the largest part.

all the order and uniformity which amazes you so much follows directly from this simple principle."* But this is a piece of extremely fallacious reasoning. Even if we granted that the indestructibility of matter and energy was a self-evident truth, which it is not, still this is quite distinct from the principle of uniformity. It does not follow, because each piece of matter retains for ever its fundamental qualities, that therefore a great number of separate pieces of matter must all be similar to one another. The *unchangeableness* of *each* is not the same thing as the *uniformity* of *all.* Again, it would still be quite a new point that Nature is not merely uniform, but admirable; that it adopts just those uniformities which cause it to be a thing of sublimity and beauty. It is not true, then, that Herbert Spencer's principle that "something cannot become nothing" renders all wonder needless and irrational.

The fact is that we are confronted with a persistent but unsuccessful attempt to set

* The principle of the permanence of substance is treated as self-evident. It is then illegitimately identified with uniformity. The assumption is then made that all the orderliness which we admire follows from uniformity as a matter of course. Spencer is right in saying that every empirical proof of "permanence" presupposes it. It is an *a priori* assumption, but not self-evident. Annihilation is not inconceivable: it is not even unimaginable. "It is here now and will be here to-morrow" are *two* truths, not one. The principle that something cannot become nothing would forbid the evanescence of feelings.

Naturalism upon a pedestal. "The supporters of Naturalism," it is suggested, "differ widely from the upholders of Religion. They promulgate no arbitrary fancies: they rely on observation and not on authority; they modestly confine themselves to statements which can be verified; they do not deal in mysteries."

No one of these claims can be made good, not even the claim to absolute independence of authority. The masters of Natural Science, it is true, have set a most noble example of fresh and independent investigation. In this matter the theologian cannot do better than humbly take them as his models. But reliance on authority is a matter for individual self-examination. Have we not all relied much—have we not most of us relied too much—on the authority of those very masters who taught the lesson of free inquiry? Are we aware how many of our physical convictions have been adopted without any personal investigation at all, but simply because the educated men of our generation agreed to accept them? We are apt to despise the Middle Ages for their reliance on Aristotle. He was the greatest observer of Nature with whom they were acquainted. Have we never exhibited an equally uncritical trust?

Again, though there are few virtues more attractive to this generation than intellectual modesty—a fact to which Agnosticism has owed much of its popularity—it must be remembered

that Agnosticism does not say merely " I do not know." It declares positively that on certain subjects knowledge is unattainable. There is no special modesty in affirming that everything in heaven and earth can be described in the terms of one's own philosophy.

Nor is it true that Naturalism succeeds in eliminating all mystery from the world. When Haeckel tells us that " the Universe or cosmos is eternal, infinite, illimitable," and that " its substance with its two attributes (matter and energy) fills infinite space and is in eternal motion," he may be right or he may be wrong. But unquestionably he is speaking of subjects difficult to grasp. The assertion that God existed from all eternity, whether true or false, is admittedly difficult. Why should less difficulty arise with an eternal movement, an infinitely extended substance ? That which is illimitably extended—which possesses size and yet is of no size in particular—will seem to some to be, not merely mysterious, but self-contradictory.

Again, is the elimination of mystery always a proof of correctness ? Can we lay it down that nothing can exist except what can be readily understood ? A prejudice exists against the belief in a fixed objective standard of right and wrong, beauty and ugliness. " If the distinction between good and bad exists in our minds only, then," it is said, " it is merely a mental fact, and quite easily intelligible. If, on the other hand,

we hold that there is a real goodness and a real beauty, independent of conscious minds, then the question arises where and how this distinction exists. It is not a fact in the material world; it is not a fact of conscious experience; what then is it? Had we not better say with Huxley that except material facts, and mental facts, and the relations between them, there are no other objects of knowledge? Had we not better reject such mysterious figments as an objective standard of goodness and beauty?" But the interesting fact is that common sense refuses to make this rejection. Whatever difficulties may be subsequently raised, we all understand quite well what is meant by saying that a thing is really right or wrong. The supporters of Naturalism themselves have given noble witness to this doctrine. They maintain the duty of a Galileo to stand firm against a world of persecutors. Could you hold to an objective standard of duty in a more absolute form?

Much, then, of the common defence of Naturalism rests on prejudices which will not bear examination. Thus, when Naturalism limits the Universe to those facts which can be investigated by Natural Science—when it denies God and a future life—it must surely have something better to go upon than the purely negative principle that these things have not come within

our experience, and therefore they cannot be. It must be tacitly employing some principle of limitation of a more positive character.

In the writings of eminent Agnostics we may learn what this positive principle is. They are impressed with the æsthetic unity of nature as they conceive it. Huxley in an eloquent passage compared the course of Nature to the changing scenes of a kaleidoscope; and opined that if we could only forget our individual sufferings—as of unregarded animalcules who had somehow got between the bits of glass of the kaleidoscope—the spectacle of these changing scenes, of which each is the logical result of the preceding one in accordance with those principles which we call the laws of Nature, would fill us with complete intellectual satisfaction, with the *Amor Intellectualis Dei.* To every one who has ever felt the sublimity of that iron necessity, by which in Nature events appear to follow events in inevitable sequence, this enthusiasm will be readily intelligible. He will understand the resistance which is provoked by the doctrines of religion. In such a mood it is no welcome thought that this iron law may be but the will of a Power Who can change it, Who can suspend its operation by occasional miracle, Who intends to bring the whole stately procession of events to an abrupt end at the Day of Judgment. The modern reader, even if on reflection he is still a believer in miracle himself, must feel some sympathy with the youthful heroine of Bret

Harte's tale, who when a canting divine tries to check her astronomical enthusiasm by the reminder that astronomical laws were for once suspended, when at Joshua's command the moon stood still in the valley of Ajalon, exclaims with an oath that it is a lie, and that she does not believe it. The breaking of natural law seems an offence against æsthetic congruity; and therefore the very suggestion of such a breach is received with indignation. It is as though since "the first seeds whereof the world did spring" had agreed (according to the poet's mythology)*

> To leave their first disordered combating
> And in a dance such measure to observe
> As all the world their motion should preserve,

we had got the measure so beaten into our souls, that even in thought we can hardly bear to break the rhythm.

"But," the agnostic may reply, "though these æsthetic comparisons are in their way quite apt, though I perceive that the unchanging order of Nature is sublime, it is not because of its sublimity that I believe in it. Nature, as I conceive it, agrees with my ideal of a rational order; but I utterly reject the principle that what is demanded by this ideal must therefore occur." We can only ask him whether this answer will survive a searching self-examination. Our agnostic rejects God and the Supernatural. Why? Not because

* Sir J. Davies, *The Antiquity of Dancing.*

these beliefs are directly opposed to experience. No one can claim to have experienced God's non-existence. Nor can experience show us that there is no future life. On these matters sensible experience and mathematical proof (as we have seen) are alike silent. Nor, again, can our denial rest upon the supposed self-evident principle of the indestructibility of matter and energy. Grant this principle to be as self-evident as you will, it does not prove the continued regularity of Nature.* By this process of discovering the inadequacy of the reasons commonly given, we may arrive at the real reason on which the denial of religious beliefs is based.† An immense number of modern men are so much impressed with the sublimity of Nature that they cannot conceive it to be but a

* See above, chap. iv, p. 40; cf. p. 228.

† See Mr. Russell's *Problems of Philosophy*, chap. vi, p. 99. He says very truly that "the belief that the sun will rise to-morrow might be falsified if the earth came suddenly into contact with a large body which destroyed its rotation; but the laws of motion and the law of gravitation would not be infringed by that event." But he is surely wrong when he continues that "the business of science is to find uniformities, such as the laws of motion and the law of gravitation, to which, so far as our experience extends, there are no exceptions." This at least is not the *sole* business of science. The further you advance along this path, the nearer you come to the purely formal principles, such as that nothing happens without *some* cause, that there is *some* order of Nature. Our aim in Science is not merely to get to principles so general that they cannot be contradicted, but to discover what is likely to happen. Science is a study of reality —of the actual. Thus it may be of more importance, scientifically as well as practically, to know that the sun will rise, than to know that even if it didn't the more general laws of Nature might still remain unviolated.

part of a wider whole. Their imagination utterly fails to construct an artistic Whole worthy to include "this present world" as a mere episode within itself. "A very pretty poem, Mr. Pope," said a critic of his *Iliad* or *Odyssey*, "but it is not Homer." "A very charming imagination," say many, speaking of the gorgeous visions of the Apocalypse, "but it is not Nature." Such minds, when they speak of a rational Universe, think of such a Universe as filled Professor Huxley with the *Amor Intellectualis Dei*.

It is obvious that on such grounds a vigorous defence of Naturalism may be made. But it is equally clear that, defended on such grounds, Naturalism must descend from its pedestal. Or —to change the metaphor—if the Universe as conceived by Naturalism and the Universe as conceived in Christian Theology are both defended as embodiments of the ideal of reason, Naturalism and Theology enter the fight on equal terms. Both are forms of Optimism, and our decision in favour of one or of the other depends ultimately on the particular standard of good and evil which we adopt.

CHAPTER XIII

SPECIAL DIFFICULTIES

RELIGION, however, as we must still admit, has special difficulties of its own.

First, there is the difficulty of imagining a Future Life. It is not easy to frame such a picture as will satisfy the mind; and yet it is unsatisfactory if Religion presents us with the prospect of a life which no one could really desire.

The difficulty arises when we try to conceive the Future Life in a form at once attractive and complete. The heavenly scenes described in certain Mediæval hymns, and painted in certain Mediæval pictures, are full of beauty. But we cannot seriously regard the heaven which they depict as a home in which we could ourselves be happy. The man who has come into contact with the varied spiritual interests of modern life—with the many subjects touched on, say, in Goethe's *Faust*—cannot be, and ought not to be, satisfied with a state of bliss adequate to simpler needs:

> **The shout of them that triumph**
> **The song of them that feast:**

yet if we attempt to fill out the Mediæval representations of heaven with additions drawn from the distinctive experiences of modern life, we sacrifice the unity and congruity which gave these earlier representations their charm, and produce a mere jumble of discordant features.

There is an element of truth, then, in Matthew Arnold's criticism of the conception of heaven in "our English popular religion." The garlands, the trees, the fountains, the flowers, the harmony of falling waters, human voices, and musical instruments—of which according to him the popular picture of heaven is composed—may justly be described, he thinks, as "poor fragments all of this low earth." In the wording of this criticism we have some ground for complaint. It is strange that a poet should have nothing to say of roses, lilies, trees, and falling waters but that they are low and poor. As elements in a perfect human existence, if such an existence is conceivable at all, these natural objects must surely have their place. We should miss them if they were absent. But the critic's real objection is not to the separate features, but to the picture as a whole. "Yet who," he asks, "can devise any conception of a future state of bliss which shall bear close examination better?"

Now, if by devising a conception of a future life he means constructing a detailed programme,

we may admit that this is beyond our powers. If some one had actually partaken in the heavenly life, and then returned again to earth, even so he might well be unable to describe heaven in terms intelligible to those who had not seen it. An intelligent foreigner who had graduated at a Continental University, decided to spend a year at Oxford. Meeting an Oxford man who knew something of the difference between England and the Continent, he asked for a description of Oxford life. The description was given with some wealth of detail; but the foreigner could not understand it. He was able to form no conception of what Oxford could be like. It was only after he had lived there himself that he exclaimed, "You told me, and I could not understand your description. Now I come here; and it is all exactly as you said."

The moral of this story is plain. The believer in a future life may be suffered to describe his faith in general terms. It is unreasonable to ask for details. Each age as it passes brings to mankind new forms of activity and enjoyment. In a perfect life we may be convinced that every one of these will be present. Heaven, if it is to be heaven, must be the home of wide human sympathies: a place where we shall all understand, even if we do not all engage in them, all the manifold functions both of active and of contemplative life; where our heart will not be closed even to those delights which are not specially

congenial with our natural temperament; where we shall share, at least by sympathy, the special joys of the saint, the scholar, the thinker, the lover, the sportsman, the warrior, the man of business: where, looking back with more intelligence upon our earthly life, we shall find the very divergence of taste which has divided us on earth to be but a closer bond of union in heaven. Just as it is often the travelled man who best understands his own country, so an association with all the types of humanity which have inhabited this globe from the days of the palæolithic man onwards, might well lead us to understand better the peculiar gifts which are individually our own. We may even hope to gain such increased sympathy with others that it is no longer a pain, but a pure delight, to look into happiness through another man's eyes. Even in this life our isolation is far from being complete. We may often—perhaps always except when the thought of his happiness turns our minds to our own privations—receive genuine happiness from the happiness of another. We can almost feel the pain of a man who, standing close beside us, is hurt or wounded. Men have been known to swoon at the breaking of another's bone. Thus, if in heaven we could enter as much into our neighbour's pleasure as we do here into his pain, then a type of existence is at least conceivable which shall contain every element of perfect happiness. Yet we may be still able to frame no

artistic picture of a life uniting such immense diversity of good things.

But apart from this general difficulty there are more special ones. Since new difficulties are sure to occur to the human mind in each generation, this subject can never be treated with completeness. The utmost we can do is to examine one or more of the objections which sound most formidable, and to show that they are not so unanswerable as they appear.

Take this modern rendering of an ancient problem. "The thing I loved," says the hero of Miss Schreiner's admirable story,* "was a woman proud and young; it had a mother once, who dying kissed her little baby, and prayed God that she might see it again. If it had lived the loved thing would itself have had a son, who, when he closed the weary eyes, and smoothed the wrinkled forehead of his mother, would have prayed God to see that old face smile again in the hereafter. To the son heaven will be no heaven if the sweet worn face is not in one of the choirs: he will look for it through the phalanx of God's glorified angels; and the youth will look for the maid, and the mother for the baby. And whose then shall she be at the resurrection of the dead?"

The difficulty here raised may at first sight

* *The Story of an African Farm*, Part II, chap. xiii.

seem insuperable. If the longings of all three hearts are to be satisfied, then at the Resurrection, it is argued, the woman must appear at once as new-born baby, grown-up girl, and aged mother.

But is it certain that the longings which are really felt can be satisfied only under these impossible conditions? What the mourner desires above all is to meet again the identical person whom he has lost, not that person in the last phase in which he knew him. It happens often that the great joy of meeting an old friend is to find how entirely, in spite of changed opinions and changed appearance, he is at heart the same person whom we knew long ago. With persons of shallow character it is otherwise. The boy who seemed so chivalrous and original has his soul now fettered to the routine work of his office. The girl who was such a good companion has now no characteristics except the manners of her set, and no interests but the usual interests of her social class. Yet even in these cases it is conceivable that there may happen in heaven what sometimes happens on earth. There may be a re-emergence of the soul as we knew it in youth. The freshness of individuality may be restored. It may even be restored in a form which shows that the intermediate period of conventionality and worldliness had its own value in the development of the personality. For, though it is the person as such that we value most, each separate phase has its charm; the mellowness of our age, the vigour of

our prime, the freshness of our infancy. These distinct charms—so Miss Schreiner's hero argues—cannot be present together. The son, the youth, the mother, must one or other of them be disappointed. But are these various qualities essentially incompatible? It has been held that the dead are to be restored at the Resurrection in full vigour of mind and body as in the prime of life. The man who has lived to old age, and then has been restored to full strength at the resurrection of the dead, need not be conceived as losing in that restoration all the special charms he has acquired during the patient weariness of declining years. There is nothing monstrous or unexampled in the union of youthful fire with the broad judgment of old age. There are some men who cannot but recognize that they themselves retain in mature life in a quite unusual degree the feelings and instincts of their youth. Again, there is nothing monstrous and unexampled in the restoration of vigour after a temporary eclipse. Men who have sunk into premature old age through ill-health have sometimes regained all their powers when health has come back to them. Yet it is not in the least needful that as strength returns they should forget the special experiences of their time of weakness. There is, in fact, ample earthly analogy for things which, when alleged of heaven, are said to be contradictory and inconceivable. Thus, it is far from certain that in every case a son must experience dis-

appointment at the Resurrection if a mother rose again as in her prime ; if that which he had sown in weakness was raised in power. In the case put by Miss Schreiner there is nothing essentially inconceivable in a resurrection which should satisfy the heart's desires both of the lover and the son.

The case of the dying mother parting from her infant is no doubt more difficult. All depends upon what she actually hoped and thought ; and in such matters there is little uniformity in human feelings. Her chief desire may have been that the child too might die, so that she might take it with her. Or, again, she may have dwelt chiefly on the hope that she might be permitted to watch over the child, herself unseen, during the progress of its early years. In God, it is sometimes said, the dead are nearer to us than the living. But, whatever wide variety of feeling is conceivable, it must surely be extremely rare that any mother should feel the desire which Miss Schreiner's argument requires. A mother can hardly wish that, after growing up on earth, the child should be put back to a state of infancy in heaven. If a woman has once accepted as inevitable the parting from her child, whether through death or through mere absence, the very last thing she can seriously desire is that its development should be arrested at the moment of parting. In those families where the generations have succeeded each other rapidly, a man may still be thought of by his mother primarily as her first-born, the

child she has reared—and towards her he may still retain the affectionateness of boyhood—to his wife he may be primarily the lad who won her love, while to his grown-up sons and daughters he may speak with the mature authority of a father. In this case there has been no parting. "He has changed," his friends may say, "but we have not lost him. Yet if we had lost him, and if at the Resurrection he were restored to us much as he is now—if his mother had died when he was a child, if he himself had died when his children were young, leaving his wife a widow—need any one of his family, mother, wife, or children, feel any element of disappointment in such a restoration?" The mother, it is probable, would not so much wish for a different restoration from this, as complain that, even in the best restoration she could hope for, there is something which she has lost for ever. "It is others who nursed him. By my early death I lost what not even heaven can give me back again."

Thus the real difficulty is not that which Miss Schreiner suggests—namely, that the joys which the three friends would chiefly desire are mutually incompatible—but the sense that there are some losses which nothing can make good. This is a very common feeling in many varied relations. To attain the object of one's desires later on is not always as good as attaining it at first. There are some men with whom the greatest triumphs of adult life have been no compensation for failure at school. It is not every one to whom the

highest parliamentary honours in his later years would really make up for the disappointment of losing his first election. Yet, even so, we may ask whether there is any one thing in the world about which we can say, " If I miss this good thing now, it is absolutely inconceivable that it can ever be restored to me in any context whatsoever " ? The experience of life has shown most of us that the disappointments of youth are not always so irremediable as we thought at the time. It is not only that we forget. The very joys of which we had said, " It is now or never : unless I can have it in this form I can never have it at all," have sometimes come to us with complete satisfaction in a new and unexpected context ; so that at the end we exclaim, " The compensation here has in it no element of disappointment. If I had known in my keenest fits of despair just what awaited me later, even then I should have felt that, when the time came, the reversal of my ill-fortune would be complete." The wheel sometimes, even in this life, turns the full circle ; and the whirligig of time brings in full its revenges and compensations. Perhaps, then, all our difficulties arise because we limit the possibilities of heaven unduly. The answer of Christ to the Sadducee conveys the very opposite moral to that which has been perversely drawn from it. We err if we attribute to heaven the exact limitations of this earth.

" Still," it may be said, " you have not touched

the most significant element in the pathos of human life. There is always the fading of the past. Even if our children live, their childhood dies. That which gave us delight exists nowhere in the world. We have in its stead the growing boy or girl; the substitute we have learned to accept in its place. But it is only thoughtlessness which sees no loss in this substitution. The sadness which fills the mind which contemplates the vanishing beauties of Venice or of Nuremburg—this, if we look below the surface, gives the character to human life in general; a character from which not even heaven could escape, unless for the joy and movement of life as we know it were substituted the lifeless repose of the Byzantine mosaic."

Lamentations in this vein are characteristic of an age that loves history. Yet it is worth while to point out that the passage of time is not always felt to bring loss. The sense of loss, therefore, is due, not to time and change as such, but to special circumstances. At the end of the performance of some favourite Symphony, the First Movement has already faded into the past. If this is the last performance we shall ever hear from the same conductor and the same performers, the conclusion may bring feelings of melancholy and regret. But under ordinary circumstances we have no such feelings. The music has ended, but it has not vanished. It is present and accessible; a working element in the life we live. And so it

is with all those elements of our past life and history which are fully preserved for us in records or in pictures, in common and public memory, in their social and political effects. The victory of Waterloo must have been as fully present to the victor to the last day of his life as at the moment when the battle was won. In such cases the past lives in the present. To every mind to whom the word "God" has any meaning—indeed, for all who conceive that there is in the world any such element of permanence as is implied in our admission that statements which concern the past, if true once, are true for ever—it is at least an intelligible assertion that our whole past may conceivably be as really present to us for all eternity as the crucial events of our personal or national history are present to us now. If the opening notes of a melody had become nothing to us before its close, we should never hear a melody as such. The notes are still present and effective, though they have ceased to sound. There is, in principle, nothing difficult or unfamiliar in the hope that in God every single incident in the earthly history of our race may be present and accessible, a living and working fact for all eternity in the heavenly life of mankind.

Yet we must not leave this subject without recurring to the note of warning. If we wish the belief in a future life to be taken seriously, the

whole question must be handled with boldness. There is no attractiveness in a hope of heaven which ignores our real aspirations. It is wise, however, neither to give too free a rein to our imagination, nor to be discouraged at the failure of the imagination to deal adequately with these matters. The great artist, as we see in the case of Milton, can weld into a harmonious whole what to us would have seemed beforehand to be but a chaos of discordant elements. Things which have seemed to us irreconcilable, the artist may unite by a flash of his intuition. And Nature is an artist of the first rank. For the greatest artists her work is the model. But not only are the artists her scholars and her copyists; they are also her creation. She produces them from the storehouse of her inexhaustible resources. If we continue to use the word " Nature " in its widest sense, our very hopes of heaven themselves are of her making. What, therefore, she has blended in our hopes, she may blend yet more harmoniously in our fruition.

CHAPTER XIV

GOD

ANOTHER class of difficulties is concerned, not with Heaven, but with God. "The God to which the argument points," it may be said, "is certainly a God with plenty to do.* What could be a more laborious undertaking than the ceaseless planning of delicate effects of colour in every part of the material Universe? No less laborious, and much more unsavoury, must be His superintendence of the processes of birth and of digestion, of the circulation of the blood, of the chemistry of respiration. Thus the Argument from Design or any variant of it, so far as it gives us a God at all, represents Him as devoting a great part of His attention to menial tasks. Such a God cannot say with Teucer in the *Ajax*† that He practises no base mechanical art; and this difficulty has been felt acutely by religious men themselves; as is shown by the attempts of the Gnostics and others to frame a theory of God which shall remove Him as far as possible from contact with material things."

The answer to this objection is that mechanical

* Cf. *De Natura Deorum*, Bk. II, 23, 59; cf. Bk. I.

† Line 1121.

work is base when it is divorced from thought, but not otherwise. To the mountain-climber the overcoming of material obstacles is an end in itself. Again, there is nothing servile in the work of the skilled gardener. In all ages Achilles would have been reckoned a nobler type of the heroic warrior than the man who merely devises successful campaigns in his study. Untiring activity, and a mind bent on mechanical details, are consistent, not only with dignity, but with mental repose. Beethoven intent on the execution of the runs and arpeggios of his own *Sonata Appassionata* * is a figure neither restless nor undignified. Indeed, religion might well take him as an earthly parallel to those who, receiving the rest that remaineth for the people of God, nevertheless rest not day nor night in their thanksgivings and praises. There is nothing inconsistent with dignity in activity as such, nor in attention to a multiplicity of details, so long as the details do not distract the mind from its complete unity of purpose, feeling, and conception. There is nothing inconsistent with freedom in the task of superintending the perpetual repetitions which occur in Nature ; since these repetitions resemble, not the meaningless iterations of insanity, but the significant iterations of the Fine Arts. It is the Fine Arts, again, which afford us an analogy for understanding the relation of God to human life in its obscener aspects. The tragedy of *Macbeth*

* Op. 57.

is a greater and fuller work of art, as we saw, in virtue of some of its less pleasing incidents. The *Divine Comedy* of Dante would be impoverished beyond description by the omission of the *Inferno*; and some of its details which are individually most offensive contribute to the poem as a whole an element which we could not spare.* It cannot be said that here æsthetic parallels are out of place; since the whole objection we are considering is based on considerations which are predominantly æsthetic. The obscene elements, whether in a work of human art or in the Universe, can only be judged justly when seen in relation to the purport of the whole.

"But," it may be said, "the chief burden of the difficulty, as most men feel it, lies not in the thought of a God engrossed in unworthy activities; but in the thought that He inflicts manifold sufferings upon those whom He calls His children and His friends. This objection is twofold. First, the actual sins and sufferings of mankind are such that it is hard to justify the God Who allows them to happen. Secondly, if even for our own good God inflicts such evils upon us, does there not arise an intolerable personal relation between God and man? We could no more make friends with such a God than with the angel in the poem who steals his host's silver cup to cure him of his excessive attachment to

* *Inferno*, xxviii, 22–30; xxi, 137–139; xvii, 74, 75.

worldly possessions. Such acts, however well-intentioned, are utterly averse to the spirit of friendship. They must utterly destroy both confidence and sympathy. The same objection holds against all Providential explanations of evil. Life becomes a sort of play or game; a sort of obstacle-race with obstacles which need not have existed, but are planned to give our faculties exercise, to test or develop our endurance. Can the God Who forms such a plan look His own suffering creatures in the face without shame? Can we conceive that the God of the New Testament—the Father of Jesus Christ—could avow such a policy even to the meanest of human beings? Can we conceive Him as saying even to King Bomba of Naples, 'It was I Who deliberately placed you amid strong temptations: it was I Who gave you a nature prone to yield to them; the result is a career of shame and failure; but the reprobation of mankind which has followed has been a witness to the dignity of the Moral Law sufficient to justify the experiment.' If the Creator, after so describing His policy, turned to exhortation—if He said, 'Now repent: trust Me, and I will save you:' must not the answer be, 'I can never trust One Who has made me the victim of an experiment so cruel and so wanton'?"

It is well that difficulties that are felt keenly should be expressed frankly. They are perhaps

less unanswerable than they seem. With regard to the first objection—the difficulty of justifying the various evils that exist—we ought always to ask ourselves in respect to each one, Do I really wish it away? Should I seriously think the world better if it had not existed—if it had lacked the heroic sufferings of Socrates, the manly patience of the poor and the oppressed? In each individual case it is our duty to restrain oppression and to punish the oppressor. But if by a word we could make sure that all oppression should henceforth vanish from the earth, are we certain that this is a word which we should be doing right to speak?

It is often the very men who are most sensitive to individual evils who are most conscious of the goodness of the whole. The poet, whose highest function is in tragedy, yet makes life the theme of his praises. St. Paul, who seeks deliverance from this present evil world, asserts that nothing is unclean of itself, that the earth is the Lord's and the fullness thereof. The saint who has fought a lifelong battle against sin, exclaims on his deathbed, "Glory be to God for all things." Thus if we are asked, about any one evil thing, whether we are absolutely certain that the world as a whole would be the better for its removal, it is rarely easy to give a positive answer. There are some, no doubt, who hold that the world would be better if it contained no evil at all. The ablest upholder of this view at the present time

is Dr. Rashdall. But what would Dr. Rashdall feel, if he learnt that there were serious grounds for suspecting that, though the dialogue narrated in the *Phædo* took place much as Plato reported it, yet Socrates in fact was not under sentence of death, but merely believed himself to be so, while his friends humoured his delusion? If the delusion was quite complete, Socrates would still be a noble figure. Yet if, after all, he was the victim, not of persecution, but of persecution-mania, this theory would sadly spoil the story.* The decisive refutation of the theory would surely be as gratifying to Dr. Rashdall as to the rest of the learned world. He must surely, for once, find himself rejoicing in the reality of evil.

The second objection is in effect that Providence —so far as it consists in the infliction of evil—is a wanton playing with souls, a wanton trifling with serious interests. The God—it is said—Who brings about a European war because men have "forgotten Him" is a God Who cares for nothing so long as His own vanity is satisfied. He is like the tyrant who should desolate a province because its inhabitants had omitted to pay him the customary acts of polite acknowledgment. If we look at the matter from this point of view it is natural that we should exclaim with a modern writer, "Strange that believers in a

* And cf. p. 191.

divine revelation seem unable to conceive a decent God ! " *

But such a view misconceives the meaning of religious language. To " forget God " means, in the mouth of the religious man, to forget *righteousness* ; to forget just dealing, mercy, and truth. If God vindicates righteousness—in which we on the rational side of our nature have interest as well as He—He is at least not inflicting pain for a trivial reason. The punishment of the Pharaohs and the Bombas is richly deserved. If they go unpunished too long, it is the natural instinct of mankind to demand that God shall show His power ; and the dead weight of indifference which is the chief enemy of every reformer—the indifference of the multitude which is careless of truth, careless of human suffering—is an object of just wrath, no less than are the crimes of the more conspicuous sinner. If, further, we once perceive that apart from evil certain of the best of good things † cannot be realized—that the permission of evil by God is the only way to the full attainment of victory by the spirit of man—then there can no longer be any suspicion that God's providential dealing is a mere play, a cruel experiment of which we are the suffering victims. If this is the only way by which the fullness of good may be attained, if moreover God Himself shares with us to the full in all the sufferings we

* See *Religion and the War,* Charles T. Gorham, p. 11 (Rationalist Press Association). † See chap. i.

endure—if He is ever " afflicted in the afflictions of His people " and feels as His own the sufferings of the least of His brethren*—then there is no justification for the impression that God is treating men as mere pawns in His game. Only through the overcoming of the opposition of that which exalts itself against righteousness—only through the evil will of man subdued after success by failure, punishment, repentance—can righteousness gain its complete triumph. This triumph is far from being merely spectacular. No one had deeper insight into the need of such spiritual victory than Dante ; yet we shall hardly suspect that Dante found merely spectacular enjoyment in his own sufferings. As religion conceives the matter, all is done in deadly earnest : suffering and temptation are the only means by which the perfecting of the human spirit can be achieved ; and God is at all points Himself our fellow-sufferer.

Thus the difficulties that we are now considering arise, in the main, from an arbitrary and mythological conception of God, which is not that of the religious man, and is not the just outcome of any reasonable theistic argument. This mythological conception is presupposed in the dialogue which our supposed objector imagines

* Isaiah lxiii, 9 ; St. Matt. xxv, 40, 45 ; cf. Judges x, 16 ; Romans viii, 26.

between the Creator and King Bomba. God, however, as religion conceives Him, is not to be identified with the Divine Father of the poets. He is almost as unlike the God of *Paradise Lost* as He is unlike the Homeric Zeus. The God of religion is no mere character in the drama of history, external to us as are the other persons with whom we come in contact. He is rather the author of the whole; the poet Who is at once each of the characters and more than any *; the God in Whom we live and move and have our being; our own inmost self †; the very principle of life on which our own life and individuality is based, Whose will is at the root of all our most personal activities; the Giver even of the very strength by which we resist Him.‡ At the basis even of the flagrant rebellion of a Bomba or a Pharaoh there lies some thought, some ideal; something therefore which must be conceived as having its place among the conceptions of the divine reason, something which is not utterly outside the sympathy of the Divine Artist. Again, the true Moral Law is not entirely absent from the mind even of the worst of criminals. The wrath of God speaks to them as something not wholly alien from themselves, but in the accusing voice of their own conscience. Thus they do not stand

* That the poet should be in turn each of his characters is quite consistent with the recognition that *one* of them may speak the poet's own ultimate view in a special sense.

† Cf. St. John, xvii, 2, 21, 23; xiv, 1, 4, 5.

‡ Exodus ix, 16; Romans ix, 17.

towards God in such a purely external relation as is implied in our imaginary dialogue. In falling under God's wrath they fall also under their own. They trust His accusing Voice because it speaks within themselves: because it is the true language of their own heart. And this trust is not always destroyed, even if they come to hold that the Inward Voice speaks the will of the same God Who also in His Providence has hardened their hearts. For proof of this we need only turn to history. The prophet is speaking the language of piety, not of rebellion, when he asks, "Why dost Thou make us to err from Thy ways and hardenest our heart from Thy fear?"* Again, the Founder of Christianity recognizes the reality of evil and God's power over it, recognizes God as the sender or withholder of temptation, in the very prayer in which He teaches us to regard God as our Father.

Let us, then, but feel to the full the wickedness of oppression, and the justice of the oppressor's doom: let us but feel that the great stories of the oppressor's overthrow can stir the soul more deeply than almost any episode in history: we shall then perceive how the oppressor himself, from a changed point of view, may come to rejoice in his own defeat, and even indirectly in the sins and errors which gave occasion to this sublime vindication of the Moral Law. "The truth of God hath more abounded through my lie

* Isaiah lxiii, 17; cf. xlv, 5, 7; Amos iii, 6.

unto His glory." Such a rejoicing is far from making light of evil; for only to the penitent who has renounced evil can such a view of the indirect value of evil have any serious significance.*

We are dealing here with difficulties which lie within the religious beliefs themselves. The suggestion we have to meet is that, even if on general grounds we were inclined to believe in God, the internal difficulties of the conception of God are an insuperable obstacle to faith. We must ask, then, what the nature of that conception is. If the Theism of the plain man is based upon Optimism; if the belief that the world is a rational whole is the foundation of his belief in God; if the plain man's God embodies the plain man's ideal; to what sort of a Theism does his Optimism lead him? The answer must surely be that, though the God of popular religion is a

* We may compare here the case of the man who feels that but for his youthful disobedience he would never have really known his parents' strength of character. "In a sense," he may say, "I can't regret my faults; for but for them I should never have known the patience and forbearance of my father." If he added that the memory had always made him feel how differently he would have behaved to his father if he could have had his time over again, this remark would be perfectly natural. If some one—Mr. Bernard Shaw for example—told him that in strict logic he ought to feel that, if he could have his time over again, he would behave at least as badly, or if he thought that his father's patience could have borne yet greater strain, then *still worse*, this advice would be taken for a joke. This comparison, if thought out, is sufficient to refute the usual objections to the view expressed above.

Person, He is never a Person merely. "God," it has been said, "is everywhere present in human life, but He is not a character in history." If we conceive of the ultimate law of the Universe—the ultimate necessity by which men and all things are what they are—as something fundamentally good, and also as conscious of itself in such a sense that we may enter into communion with it and make it the object of our love and worship,* then we have the personal God which religion sets before us. It is not in this form that the conception of God gives rise to the chief objections which are brought against it.

* See Epilogue, below, p. 218.

CHAPTER XV

CONCLUSION

We may now draw together the heads of our argument into a single view.

There is a story, now forgotten, which some few years ago was often told in religious circles. A certain atheist, it was said, had a friend who possessed an Orrery.* The unbeliever, catching sight of this machine, asked who had made it. His friend answered him ironically. No one, he said, had made it. It was a mere collection of bits of wood and metal which had somehow come together at haphazard. For why not? If it is impossible that the mechanism, by which the Orrery copies on a small scale the movements of the planets, should be the work of chance, is not this still more obviously impossible in the case of the planets themselves? If it cannot be chance that brings together the parts of the Orrery, how can it be chance which brings together the parts of the Universe?

Suppose that a conversation on this subject should happen to arise, among a group of men of

* Cf. Cicero, *De Natura Deorum*, Bk. II, § 88; and see chap. v, above.

ordinary education, in a railway carriage or a smoking-room. If a believer in God countered the attacks of a sceptic by telling this story of the Orrery, the company would probably feel that the believer had had the best of the argument. The man of deep religious experience, it is true, seldom cares much for such reasonings. They seem to him to establish the existence rather of an almighty Watchmaker whose ingenuity we can admire, than of a God whom we can worship. Still the common sense of the plain man finds in them something attractive, and it is well worth our while to inquire whether it may not be that, here as so often, the plain man is partly right.

The unbeliever has at the outset an obvious retort. "This argument," he will say, "is purely ignorant. It can carry weight with those only who know no Physical Science; since it ignores the Principle of Uniformity on which Physical Science is built."

But—as we have seen above—we have no right to take the uniformity of Nature as a matter of course; nor as a self-evident truth. It is mere confusion of thought—though a very common confusion—which identifies the uniformity of Nature with the principle of *inertia*,* the principle that things must remain unchanged until something changes them. Those who compare Nature with the Orrery do not ignore uniformity. Rather, it is much in their minds. It is just

* See p. 163 above.

because they see this and other examples of order, and perceive that such order is not a matter of course, that they ask the perfectly reasonable question—Is all this order and uniformity an accident? Their argument is a naïve way of asking this question and giving the answer No. If the uniformity of Nature is an accident, what right should we have to use it—as we all do use it—as a principle of prediction?

But this question and answer do not carry us far on the road to Theism. When we compare the Orrery and the Universe, we are thinking of other things besides Uniformity. We may therefore pursue our questionings. Is the beauty of the landscape a parallel case to the various examples of accidental beauty already given? We call the chance-formed colour-scheme on the palette an accident, because the æsthetic principles to which it conforms have had nothing to do with its production. If æsthetic principles have equally little influence upon Nature—that is, none at all—natural beauty would be equally an accident. Is it, then, sheer accident that Nature never violates the laws of æsthetic harmony, as these are often violated by the dressmaker, the gardener, or the architect?

Especially we must ask whether beauty can be explained away on Darwinian principles. The attempts at such explanation rest chiefly, as we saw, on the notion that the sense of beauty is an

illusion: that when we profess to discriminate between what is more or less *beautiful*, we are merely thinking of what we have found to be more or less *pleasant*. It is probable, however, that Sullivan's *Pinafore* has given more pleasure in a decade than the Passion Music of Bach has given in a century. Yet the admiration we express for classical music is not all of it insincere. Most men have the faculty to perceive that the melodies of Mozart are more truly graceful than a ball-room waltz, even though, in our lower and more normal moods, the waltz may please us most. And most men, too, can be made to perceive that Nature produces many forms as truly graceful as the best of Mozart's tunes, even though some of these forms pass unnoticed and give little pleasure except to the chosen few who love them. Thus, distinguishing the beautiful from the pleasant, we shall see how little of the world's beauty can be explained by natural selection.*

Again, can natural selection explain that tendency to correctness which we find in human thought? It would be well that those who think so should try their skill on some of the laws of permutations and combinations. Any man of normal intelligence can be made to see that on three bells we can ring six changes and no more. Yet at what stages in our development can this

* See chap. x, above.

knowledge have been of service in the preservation of the species ?

But suppose that we acknowledge in Nature a tendency towards physical beauty and mental correctness. We still cannot state these tendencies in the form of unqualified laws. Not all thinking leads to true results. Not all forms in the world are beautiful, as is plain from the extreme hideousness of much recent architecture. Is there, then, any wider or more fundamental truth than these, which, being true universally, is fit to be used as an absolute principle of prediction ?

" The ultimate principle of scientific prediction," it may be said, " is that principle of uniformity which we have already considered in another connexion." But uniformity is not absolutely universal. Some things in Nature remain the same ; others become different. History repeats itself sometimes ; it does not repeat itself always. The sunrise is repeated daily ; the changes of the seasons every year ; the brain of Shakespeare never. When and where, then, are we to expect uniformity ? Mere unthinking observation will not decide the question. If we reflect, we shall see that the mind requires to grasp some general plan or scheme of the world's procedure, to enable us to decide when to expect uniformity and when to expect change.

That our predictions are thus based upon our

conception of a plan, rather than on rules or laws in the narrower sense of these terms, will be more readily admitted if we remember that the power of predicting natural events belonged to mankind before the growth of the systematic science of modern times. Our modern prediction of eclipses is not a whit more rational than the confidence of our ruder ancestors in the regular return of spring. Our systematic science is built upon a foundation of sound, though unsystematic, knowledge. This unsystematic knowledge was not based on the special formulations which are new—the Law of Uniformity, the Permanence of Substance, the Conservation of Energy—but on that ancient insight into the world's order which, when compared with our more modern formulations, is seen to be at once more comprehensive and less abstract than they.

Can we state this confidence in the world's order in the form of a law true without exception? We hold it a universal law that no utter absurdities can find a place in the Universe. If we ask why the Pagan myths are incredible, the distinctively modern principles in science do not help us to an answer. The Greek gods are no more inconsistent with the bare principle of uniformity than any other exceptional personalities. The story of the Olympian hierarchy does not in its entirety conflict with any of the formulated principles of chemistry or physics. If we know nothing of the universe except

what direct experience tells us—if we have no knowledge of its character as a complete whole—then, as we saw above,* there may be beyond the reach of our telescopes particles of matter of unknown powers, rushing towards us in unknown numbers at an unknown speed. Given so many unknown factors, who can say that such an incursion might not repeat at any moment the alleged miracles of Orpheus or Amphion ? Thus if any one chose to put up a defence of the Myths, the formulated principles of Natural Science could by themselves do little against him.†

Still we should not accept the Myths : we should continue to reject them. We are convinced that the Universe agrees with our conception of a rational world, not in respect of uniformity only, but in all other respects likewise. If, then—pursuing our interrogations—we ask, " Is the observed agreement of the world with this standard of rationality an accident ? " we shall answer that the world *must* agree with this standard, and that it is on this conviction that we base our predictions. We are not infallible ; but just so far as we are convinced that an alleged occurrence would make the world utterly grotesque and absurd, so far are we convinced that the alleged occurrence did not take place. And the negative principle, that absurdities do not happen, is not really separable from the positive one that the Universe must conform

* Chap. iv, p. 40. † See Note II at end of Epilogue.

itself as a whole to the ideal of right reason. Here we find the thought which the popular arguments are seeking to express. When men compare the Universe to an Orrery—when they argue that if we saw a fair city we should know that it was built by men, not by mice or weasels,* and therefore *a fortiori* that the Universe is not the product of blind forces and unconscious atoms—what lies behind such arguments is the conviction that the world is governed by rational principles. The comprehensive law that the world agrees with the ideal of reason, can cover all such minor laws as those which prescribe uniformity and beauty in Nature, and some correctness in human thought. The full realization of the ideal of reason is the supreme end which includes the realization in due measure of these lesser ends within itself.

Our questions have brought us to a point at which we can deal with several difficulties that may already have occurred to the reader's mind. We can see, for one thing, why men who have held a materialistic creed sometimes swing round, and accept some form of thoroughgoing orthodoxy, with an apparently uncritical haste. We saw that no one really believes in a Universe which is in conflict with his own serious ideal. To many a man the orderly Universe presented

* *De Natura Deorum.*

to him by Naturalism seems wholly satisfactory. The strict orderliness of the physical events appears to him as the sole rational interest. But if such a man comes to see that reason has other interests no less rational: if he comes to feel that the ultimate defeat of morality and justice—the ultimate triumph of dead matter over life and reason—is no less a blot on the world's rationality than a plunge into physical chaos, that the ultimate victory of right is no less demanded by reason than is physical order, the whole foundation of his naturalistic creed is shaken. The prospect that, as the sun burns out and the earth cools, civilization must be overwhelmed and at length conscious life must itself perish, affords no hope that the defeat of our best spiritual interests can be averted. Nor, when we come to this point, is it easy to see how the hope of full spiritual victory can be realized apart from a future life and bodily resurrection, or, at least, apart from something which to Naturalism must seem supernatural and miraculous. But if once the rationality of the world seems to involve the future life, what difficulty is there in principle in accepting occasional miracles during our present existence? Few of us have the mental energy to think out a creed for ourselves. Why, then—it is asked—should we not accept, as at least approximately correct, the traditional beliefs of the churches?

What, again, are we to say of those who profess

belief in a God of limited powers ? Our argument rests on the conviction that the many agreements we perceive between the actual world and our ideal of what a rational world should be, are no accident. But if the principle which orders the world in accordance with the rational ideal is not the ultimate law of the Universe ; if this principle is but one tendency among others which may at times overpower it ; any agreement there may be between the world and the ideal of reason is but an accident after all. On such a theory the principles of right reason may be overpowered at any point whatsoever. On this theory, why should not God be destroyed, or grow weak, or go mad ? Our one guarantee against absurdities —against the utter triumph of unreason—can be found only in the certainty that the world is rational as a whole. Hence, the importance, which common sense has always perceived, of the problem of evil. If in the whole scheme of the Universe any single event occurs which, in view of its place in the Universe at large, is ultimately and absolutely indefensible, the whole basis of Optimism and religious faith is destroyed. What other principle have we behind right reason to regulate the departures from the rational standard ? Our real God, on such a theory, is the ultimate principle which keeps a ring in the battles of Ormuzd and Ahriman. Since *ex hypothesi* this ultimate principle is not subject to right reason, what guarantee have we as to its action ?

If the demands of right reason are not the last word, who can say whether these demands will be fulfilled mostly, or often, or but seldom ?

Again, we see how to answer those who deny religious beliefs on the simple ground that they are contrary to experience. They are no more contrary to experience than is the state of the world in the days when (as some have held) the " glowing ball of the earth was formed out of a gaseous mass."* It is only the ignorant man who limits his beliefs within the bounds of what he has seen. Reason, starting from a basis of experience, builds up a theory of the Universe as a whole, including the far past and the future. And every such theory, materialistic or religious, must lead us to believe in events which are unlike anything we have ourselves experienced.†

Lastly, we learn how to meet the criticism of popular and traditional religion implied in Mr. Russell's phrase, " The Free Man's Worship."

* Haeckel, *Riddle of the Universe*, chap. xiii, 11 : " Monistic geogeny."

† The man who says that he cannot believe, e.g., in a future life, because it is " contrary to experience," is at one with those who interpret the principle of uniformity as equivalent to the statement that " the future resembles the past " or that " all parts of the world are alike." So interpreted, the law is simply untrue. If, again, we interpret uniformity as equivalent to " universal causation," we have here a principle so purely *formal* that it could never by itself be the basis of any prediction. Reflection as to what the uniformity of Nature *means* will deliver us from many errors.

We must meet it in part by confessing that it is in part just. Religion has at times dwelt too much upon rewards and punishments. It has spoken the language of bondage rather than of freedom. It has degraded the service of God to the prudential avoiding of His judgments.

Yet the degradation has often been in words rather than in thought. Even on the punitive conception of religion we must not be unfairly severe. It has been the foe to sentimentality, which is in religion a deadly enemy to the soul. The frail woman who loves to conceive herself under sentimental categories—"a charming sinner," a "fair penitent"—may learn by the Puritan's stern lesson to see wrongdoing as it is. Nor is false sentiment a vice of one sex only. But sentimentality has no place in a religion of true freedom.*

The whole course of this argument should have served to bring to light the relation between religion and morality. The sudden passage from unbelief to orthodox faith is often the direct result of a newly acquired sense of the absoluteness of moral obligation; just as the opposite change from orthodoxy to unbelief is often the result of some moral disillusionment. Moral insight can give men grounds for belief—sound, if not explicit—apart from evidential reasoning. And it is good that so it should be. It is the few who can follow chains of reasoning; but moral obligation, in which true freedom lies, is intelligible to all.

* Cf. Preface, p. xxii.

EPILOGUE

A *PONS ASINORUM* IN PHILOSOPHY

THROUGHOUT the course of the fifteen chapters which make up the body of this volume, no use has been made of the technical language either of the Philosopher or of the Theologian. Technical language is useful as a sort of intellectual shorthand. But there is always a danger that it may conceal obscurity and inconsequence of thought. And even where it does not tend to confuse the mind of the writer, it often leaves the reader with a needless sense of difficulty where the subject in itself is quite plain. It is therefore good for every writer to practise himself in putting his thoughts into plain untechnical English, even though technical language may save space and labour.

In the few words, however, that still remain to be said, this self-denying ordinance need no longer be maintained. As the philosophical reader will already have noticed, an important part of the argument has been in essence an attack upon the doctrine known as Conceptualism. Conceptualism asserts that the only real things in the world are those which are individual and

separate; and treats all the *relations* between them, and all the *general notions* under which we conceive them, as nothing better than mere creations of the mind. "Terms," said Newman, "sometimes stand for certain ideas existing in our own minds and for nothing outside of them. All things in the exterior world are unit and individual, and are nothing else; but the mind has the gift of bringing before it abstractions and generalizations, which have no existence, no counterpart, out of it."*

Now Conceptualism is in this curious position that, though no intelligent man who really faces the argument against it can continue to hold it, yet it was as a matter of fact the creed, not only of Newman, but of the great majority of intelligent men through the whole course of the nineteenth century. We may be sure, too, that it will crop up again and again in the future. The doctrine seems, at first sight, both attractive and convincing. It is also one of those doctrines which men are tempted, when they have learnt them, to expound in a rhetorical and vituperative manner. "Do our pundits at Oxford still need to be taught the self-evident truth that general ideas exist, and can exist, in the mind alone?" "Is it really necessary at this time of day to correct the erroneous fancy of the Mediæval Schoolmen that Universals can have an ex-

* *Grammar of Assent* (Longmans, New Impression, 1916), p. 9.

istence independent of the mind which knows them?"

Among the philosophers, however, of the present moment Conceptualism finds few defenders. The case against it is strong and plain. The sun and moon, for example, are unit and individual—two separately existing things. The knowledge of the relation between them—that one is larger than the other—is open only to the mind that compares them. Hence, says the Conceptualist, this relation is a purely mental fact. It is based upon the mental act of comparison.

But this is to put the cart before the horse. For let us suppose that no mind had ever compared them. Their difference of size would not be the less real. The relation, then, which is expressed when we make a mental comparison of their sizes, is not purely in the mind. Only a mind can perceive it; for only a mind can perceive *anything*. But it is not the mental comparison which creates the relation. It merely recognizes a relation which is there whether recognized or not.

And if the truth that the sun is larger than the moon holds good apart from our knowledge of it, it is so with other truths also. Take the highest number that has ever been individually conceived by any mind, divine or human. Suppose it multiplied by the next highest number. *Ex hypothesi* the product of this operation has never

dwelled in a mind. Yet obviously there is a right answer to this long sum; though no one may ever take the trouble to find it. Similarly it was true, before the time of the early geometer who first discovered it, that the interior angles of a triangle are equal to two right angles. The geometer merely discovers the truths with which he deals; he does not invent them. They would have been just as true as they are now, if no one had ever known them. That two straight lines cannot enclose a space must be clear to every rational mind which faces the question. But this impossibility would have been just as absolute as it is, if no mind had ever faced the question at all; and it is equally valid for Theist and for Atheist.

But here we may take a further step. If we see that certain truths are prior to their discovery by a thinking mind, it follows that the *ideas* which these truths involve have a like independence. They are not the mind's own creation. The mind recognizes that they have meaning: but it is not this recognition which gives them meaning. If in the nature of things two straight lines cannot enclose a space, then in the nature of things there must be such a thing—such an idea—as straightness. This truth is hard to express in suitable language; for language has grown up among men unaccustomed to specifically philosophic think-

ing. But the thought with which we are here concerned has in itself no special difficulty, if we will face it. If the axioms are prior (as we have seen) to our thinking; the ideas which these axioms imply are prior to our thinking in like manner. The meaning of ideas is something fixed and firm; something which no thinking can think away. It is conceivable, perhaps, that nothing need have had actual existence; it is not conceivable that "being" should have had no meaning; nor that "equality" and "inequality" should have had no meaning, nor that there should have been no difference between them.

Thus we are brought by simple stages—or stages which, if difficult, have no difficulty except because such thought is unfamiliar—to the Platonic doctrine which makes ideas the ultimate basis of the Universe; the ultimate basis of all truth and of all reality.* The idea cannot be thought away. If the Universe rests on ideas, it rests on a foundation which cannot be shaken. Popular Materialism rests on an unexplained atom. Popular Theism is, philosophically, in no better case.† It rests on an unexplained Mind. Only so far as we conceive the world as resting on ideas—as following from what these ideas are and mean—have we any true finality. We need

* Cf. *Religion in an Age of Doubt*, pp. 158–160, 190–194, especially p. 158, note.

† It is in his *religion*, not in his *theology*, that the plain man exhibits his deepest thought. His theology is often curiously shallow. Cf. *Religion in an Age of Doubt*, pp. 161, 191, etc.

explanation; and explanation can come through ideas only. But we can only explain *through* ideas that which, in its own nature, follows *from* them. In Geometry our explanation is complete. We can show every link in the chain of sequence. In other cases our explanations are incomplete. We can *show* some links of the chain, but have to *assume* others. But unless we took this assumption seriously—if we thought that, wherever there are gaps in our knowledge there are also gaps in the real sequence of connexions which our explanation presupposes—the whole explanation would come to nothing.

The assertion that not only truths, but actual things, can be conceived as following from the meaning of ideas, may at first sight seem extraordinarily difficult. Yet it may be illustrated for the unphilosophical man from his own beliefs. He conceives Space as a really existing thing—the receptacle within which all matter dwells—really extending indefinitely on all sides. If asked why he thinks that it thus extends on and on without limit, he can only answer that it *must* do so, since the notion of a limit is contradicted by the very idea of Space itself. Therefore he holds (though he would not say so) that this infinite extension, which he takes as a hard fact, follows from the meaning of an idea.

This Platonic thought has had curiously inadequate recognition by subsequent philosophers.

But we may make a favourable exception in the case of Hegel. In spite of his doctrine of the Subject-Object,* Hegel is probably in his inmost thought far less subjective than most of his disciples. At least he protests strongly against the view that an idea is something in our heads.

From this protest, if we accept it, there follows a result of great importance to philosophy. We get rid, in the first place, of a way of speaking that has done harm in England to the cause of a sane Idealism. We shall eschew such phrases as that "*mind* is the only ultimate reality," that "whatever exists, exists for mind and in mind alone." Such language arose because, first, men saw clearly that every existing thing could exist only under a universal idea, and further, that every existing thing implied the reality of relations; while, secondly, they assumed erroneously that both Universals and Relations are dependent for their existence upon a mind that knows them. This erroneous assumption is but a form of Conceptualism; and it illustrates well the difficulty which many minds feel, even among the philosophically trained, in rejecting Conceptualism entirely. We may thus fairly regard the total rejection of Conceptualism as a *Pons Asinorum* for the philosopher. If we fail to make this rejection the failure may confuse all our further thinking.

For with Conceptualism there should perish at

* See, e.g., *Encyklopädie der Philosophischen Wissenschaften*, 1st edition, § 162, p. 112.

least one famous chimera, the Universal Ego; and perhaps also another, the Unconscious Self.

The doctrine of the Unconscious Self has, for psychology, a certain value. It enables us to recognize certain familiar facts. We wake on the eighth stroke of the clock, and recognize the cumulative effect of the seven strokes that have preceded it, of which (as it is said) we have been "unconsciously aware." "I cannot paint," says Keble,*

> to Memory's eye
> The scene, the glance, I dearest love—
> Unchang'd themselves, in me they die,
> Or faint, or false, their shadows prove.

But is the language which is now usual any more satisfactory than phrases which avoid the palpable contradiction involved in speaking of an "unconscious knowledge"? If we say, rather, that we were *not* aware of the seven earlier strokes, when they fell on our sleeping ear, but became aware of them when the eighth stroke waked us—if we say that we are so far aware of the real nature of the scene, or the face, which we love, that we recognize the falseness or inadequacy of the picture which is all that our imagination presents to us—is this expression any less true than the phrase "unconscious knowledge" as an account of the phenomena which we are seeking to describe?

The "Universal Ego," identified with God, lands us in more serious error. Like the phrase

* *The Christian Year*, Fourth Sunday in Advent.

" unconscious knowledge," it involves the assumption* that truth can have no existence outside a mind. But as an attractive short cut to Theism it has special dangers of its own. The argument implied is, briefly, that since there are many truths and many relations which are not yet known, and may never be known, to the mind of man, these—since truths and relations imply a thinking mind—must exist in the mind of God. But, since truth (as we have seen when we renounced Conceptualism) is prior to the mind that knows it, such an argument is not really valid. The Universe involves a scheme of relations; but it is not therefore a self-conscious mind. This argument could never give us such a God as religion can seriously accept. If God is a mere Knower, He has but a secondary position in the Universe. He is posterior to, and dependent on, the truths which He, like us, is aware of. If God is—as religion maintains—the " all in all," the Source of Truth, we must revise a conception which represents Him as merely dependent on truth, dependent on ideas, as knowing them. Necessity — necessary truth — implies a truth which cannot be thought away; which *must* hold good; which cannot without open or hidden

* This doctrine of an " unconscious self " (except so far as it is merely a convenient *façon de parler* for psychology) may be taken to rest on the following argument: There are certain truths which, though my knowledge presupposes them, I do not know. But truths cannot exist outside a mind, therefore (if I do not wish to drag in the divine mind) I will say that they are in my mind, but unconsciously.

contradiction be denied. For if without contradiction it may be thought to be otherwise, what right have we to call it necessary? If this argument is rejected, how can we distinguish between necessity and mere fact? The necessary is that which not only *does* exist, but *must* exist, because it cannot without contradiction be conceived as non-existent. Thus all necessity—whether of general truth or of individual fact—is in its own nature *intelligible* necessity—necessity which could be seen to be necessary if we had sufficient knowledge—even though we may not as yet understand the necessity nor see the contradiction involved in this denial. A God Who is to be the "all in all" must be conceived as not merely knowing this truth, but as including it within His own Nature.

The Platonic theory conceives the world as following from the Idea of the Good, somewhat as the truths of Geometry follow from the idea of straightness, of line, of circle, or of triangle.* This Platonic doctrine may be interpreted perhaps in more ways than one. But some such conception—some belief that the world must follow from what the "Good" means—is involved in any such optimistic theory as we have seen to be implied in our practical faith in the world's rationality. We have seen how we assume in all our predictions that the world is a rational whole, and how we can give to this rationality no definite

* See references at foot of p. 212.

meaning unless by interpreting it in an optimistic sense.

Is such a conception of God consistent with the belief in a conscious God Whom we can worship? Can the ultimate necessity of all truth and of all things be conceived as conscious of itself? If the ultimate necessity in virtue of which all things are what they are is fully conscious of itself, can such a distinction between God's mind and our own be drawn as the relation of the worshipper and the Object of worship demands? In a Universe so conceived is there any place for human freedom?

Such are the questions we must dare to ask: and it is worth while to consider here some possible answers. Suppose that some one says, "Your real God, on your own showing, is the 'Idea of the Good,' or the 'ultimate necessity of things': and even if, in some mysterious way, this necessity could be conceived as conscious of itself, still this consciousness—this mere knowledge—is, as you admit, but secondary and an offshoot, since every being who knows the Universe is posterior to the Universe which he knows. How then can you worship such a God as this?" It is possible here to call to our aid certain definite Christian conceptions and experiences. The Christian who, with full consciousness of what he is doing, has been driven by irresistible spiritual attraction to worship One Who grew in wisdom

and stature—One Whose humanity and finitude we acknowledge even in the very act of worshipping Him; One Who even as eternal Son is distinguished from the Source and Fountain of Godhead—will at least understand how God, the ultimate reality, may be felt to be in such sense identical with a conscious person (although in this identity there is still distinction) that in worshipping that Person, we are in contact with the ultimate reality itself. It is not needful to develop this argument here. The question of worship can only be raised intelligently by those who have themselves worshipped. The subject does not lend itself to contentious treatment. The type of mind which most naturally raises this question will see, in what has just been said, at least the germ of an answer.

A more difficult question concerns the relation of God to the mathematical axioms. As we have already seen, it is not natural to speak of God as laying down these axioms—as ordaining by His supreme will that two straight lines should be unable to enclose a space. Are the mathematical axioms, then, conditions, existing externally to God's own will, to which His will has to submit? The view, expressed in Platonic language above, seeks to avoid Dualism by regarding the world, all its laws and all its contents, as following from the Idea of the Good. But can all the laws of the Universe—can the axioms of Geometry—follow from this supreme idea? Is it conceivable that,

even if we became omniscient, we could deduce Geometry from this supposed central truth? What has "the Good" to do with Geometry? And—even if some one replied that we have no right to assume that there *is* no connexion between two ideas, merely on the ground that we ourselves cannot *see* any intermediating links between them—still we should be disposed to say, "This deduction of geometrical truths from the Idea of the Good is unmeaning, because the axioms are ultimate and self-evident, and so cannot be deduced from *anything*." This perhaps might be our considered reply.

But let us reflect further. Is it certain that every truth which seems independent, on the ground that we can see its evidence without looking beyond it, is therefore so absolutely independent that it could not conceivably be subsumed under any truth or law wider than itself? Take the case of some of the principles with which we come in contact in our æsthetic experience. Any man who has advanced beyond the notion that art-criticism is all mere moonshine can be made to recognize that there are certain laws binding upon the artist which are not the arbitrary creation of the human will. For example, it is true that the trombone-player who in playing the *Lobgesang* wished to amend the opening theme of the Symphony by substituting an F, preceded by a turn, for the first E Flat, was not improving the music, but spoiling

it.* And this is not merely a truth, but a necessary truth. Such an alteration of the passage, whenever repeated, must inevitably and always spoil its beauty. This again is a truth which a musical man, even if we imagine him unacquainted with the rest of Mendelssohn's work, can at once perceive. The character of the movement demands the rejection of the trombone-blower's emendation. Indeed, if this variation had been by some accident introduced into all the printed copies, there are probably many musicians who would have had the insight to restore the true reading on purely *a priori* grounds; and if this had happened—so clear is the witness of æsthetic necessity and suitability in such cases—it is pretty certain that the restoration would soon have won its way to general acceptance. This probability will be admitted by those who know the history of the restoration of corrupt passages, and of artistic emendation and restoration in general.

Yet whenever we can say, "This emendation or restoration is imperatively required by the *immediate context*: we need not go beyond the immediate context to see its necessity," we can also recognize the same æsthetic requirement as

* The proposed emendation was as follows:

See Stainer and Barrett's *Dictionary of Musical Terms*, under Cadenza.

connected with the *general character* and law of the style to which the work we are restoring belongs. The incapacity of Mendelssohn's phrase to admit without loss the suggested alteration is connected with the whole character of Mendelssohn's style. It is by recognizing what is and what is not possible in various passages, by recognizing their distinctive character, that we evince our knowledge of the character of his style in general. The special æsthetic demands, whose force we feel in particular passages, fall into their place in our conception of the style. These particular demands, and the law of the style as a whole, mutually throw light on one another. Without following out this comparison into details, we may see in it enough to show that a law, which carries its own evidence within it, may still be subsumed under a law wider than itself. Each passage in a sense stands alone; its character and its beauty is within itself, so that it cannot be said to derive its charm wholly from outside. But this independence is not complete. The phrase gains some of its beauty and significance from its context: some from other works of the same composer and other composers of the same period. This is why the accomplished musician sees in almost any good work charms that will be unperceived by the beginner

This same musical example throws light, for those who will reflect upon it, upon the other problem of combined dependence and indepen-

dence which has been already mentioned. It does something to help us to conceive how our will may have independence and freedom—how each act of choice may have within itself its own necessity and *raison d'être*—and may yet be conceived as subsumed under that wider necessity which dominates the whole Universe; how (if we prefer to employ the language of religion) our wills may be our own, and we may be responsible for our own choice, while all the time it is God that worketh in us both to will and to do.

It is not desirable that any of these analogies and suggestions should be here worked out in full. Still it is good that something should be said to suggest that, in the argument stated above, there are philosophical implications which might be dealt with at full length on a fitting occasion. No harm will be done if the reader has carried away the belief that Theism has its difficulties. If we can grasp firmly the conviction that the rational appearance which the world wears in so many and varied aspects is no accident, we then have a positive ground for faith. For a faith so grounded, intellectual difficulties will be rather a stimulus than a discouragement.

NOTE I

THE name of Kant, sprinkled freely over the pages of a religious book, tends to give the impression that the book is difficult and obscure. In the above arguments, therefore, Kant has been but very rarely mentioned. Two of his criticisms, however, must be quoted before we leave the subject.*

(I) "According to the physico-theological argument," he says, "the connexion and harmony existing in the world evidence the contingency of the form merely, but not of the matter—that is, of the substance—of the world. To establish the truth of the latter opinion, it would be necessary to prove that all things would be in themselves incapable of this harmony and order unless they were, even as regards their *substance*, the product of a supreme wisdom. But this would require very different grounds of proof from those presented by the analogy with human art. This proof can at most, therefore, demonstrate the existence of an *architect of the world* (*Weltbaumeister*), whose efforts are limited by the capabilities of the material with which he works, but not of a

* Meiklejohn's translation (pp. 384–386) is somewhat free, but it will serve for our present purpose. German paging, 654, etc.

creator of the world, to whom all things are subject (*aber nicht einen Weltschöpfer, dessen Idee alles unterworfen ist*).

(II) "It cannot be expected," he continues, "that any one will be bold enough to declare that he has a perfect insight into the relation which the magnitude of the world he contemplates bears (in its extent as well as in its content) to omnipotence, into that of the order and design in the world to the highest wisdom, and that of the unity of the world to the absolute unity of a Supreme Being. Physico-theology is, therefore, incapable of presenting a determinate conception of a supreme cause of the world, and is therefore insufficient as a principle of theology—a theology which is itself to be the basis of religion."

With regard to the former of these criticisms, the reader should observe that the teleological argument as stated in the present volume does not confine itself to a comparison between natural beauty and human art; but goes on to insist that all our prediction (of eclipses and other natural events) implies the belief that the *agreement of the world in general with the ideal of right reason* is no accident. Yet this—we saw—*would* be an accident, unless it be a necessary law that everything in the world—matter itself no less than its arrangement—should be subject to this ideal. If the supreme law of the Universe were that "all things *with certain exceptions* must be in accord-

ance with the ideal of right reason," these three qualifying words * would make the law self-contradictory, and absolutely useless as a principle of prediction.

The opinion expressed in the second of these quotations is an opinion so natural to man that we can only rejoice that it should have found expression in such impressive language. Yet it is not too much to say that Kant in this passage is stating the very principle of all unbelief in its opposition to faith. He asserts, in effect, that while we recognize the world as *good*—even as astonishingly and immeasurably good (see Meiklejohn, p. 385)—no one can dare to say that it is *perfect*, or can dare to say how much needs to be *added* to the world as we know it, to bring it to the point at which it would comprehend "all possible perfection and completeness." Now faith exhibits just this audacity which Kant condemns. Not in detail, but in outline, it presents to us (under the conception of a Universe in which all things in heaven and earth are subjected to Christ) the ideal of a perfect world. The "mind of Christ" is imperfectly fulfilled in this present world; therefore, it is argued, this world is but part of a wider whole in which His ideal is fully realized. Faith lives among these absolute standards of value which Kant in this passage is denying our power to set up. And

* See chap. xv, pp. 204–206; cf. also *Religion in an Age of Doubt*, pp. 156–158.

here faith has the support of common sense. If some one said that absolute perfection lies so far beyond our ken that (for all we can know to the contrary) there may be a type of humanity as far superior to that exhibited by Christ, as Christ is superior to Nero—or that there may be an intellectual attitude as far superior to the honest search for truth as the honest search for truth is superior to wilful obscurantism and sophistry—the plain man would soon declare himself an Absolutist, as against such consistent Relativism as this.

For the rest, Kant's criticism of the Argument from Design depends mainly upon his doctrine of the impotence of " mere ideas " to carry us beyond the limits of experience. The examples given in the course of the preceding chapters are enough to show how even our common everyday knowledge disproves the limitations which Kant would put upon our faculties.

NOTE II

On the Possibility of a Collision which should threaten Disaster to the Whole Solar System

An astronomical friend, who has been good enough to read the present essay in proof, makes objection to the phrase on p. 40: "*If* immense masses of matter of unknown powers *might*, for all we knew, be rushing upon us at an unknown degree of rapidity." He objects to the hypothetical form of the sentence. "The possibility," he says, "is a real one." "I really think," he writes, "that there is some probability, more or less remote, of the suggested catastrophe. The phenomena connected with 'new' stars suggest collisions amongst stars, one or both being previously dark stars. There is ample evidence for the belief that multitudes of dark stars exist—viz. stars too cold to be luminous and therefore visible. There may be such a star on its way towards the sun in a sufficiently direct line to threaten disaster at some future date. Celestial bodies possessing very great speeds are known, and a body such as is here suggested might possess a speed great enough to ensure its existence and proximity remaining unrecognized until it was within a few days' journey of us, at

any rate. Viewed in the light of an observational knowledge of the solar system and the stellar universe, however, the probability of such an occurrence can be estimated, and is found to be extremely small, even during a period of millions of years. Hence, while the possibility, in my opinion, cannot be dismissed, it need not seem alarming." "Such a catastrophe," he adds, "would not in the least invalidate the laws of Nature."

The same critic has made many very valuable suggestions which I have gratefully followed. But here, I venture to think, he has misunderstood the character of my hypothesis, and has confused it with a more sober one. He has not noticed the word "unknown"—"of unknown powers," "If we knew *nothing* of the world outside," etc. (p. 40). He is thinking simply of the supposition that a dark star might come into collision with the sun, while the properties of matter in general remained unchanged. Now even on this hypothesis, surely, it would be too much to say that "the laws of Nature would not be invalidated *in the least*." The catastrophe as conceived must seriously affect the well-known law that the sun rises daily: though here an astronomer would doubtless reply that what he chiefly means by a law of Nature is not that an individual material object should behave in its accustomed way, but that any natural object should behave in a way calculable from the general laws of physics and

chemistry; and thus he will rightly insist that an utterly unprecedented event may be as much in accordance with natural law as what has happened daily without interruption since human memory began. This is mainly a question of words.

But if we are at liberty to suppose a dark star in collision with the sun, why are we not at liberty to frame also, purely for purposes of argument, a still more violent hypothesis? Why may we not ask what would follow if we knew *nothing*—literally and absolutely *nothing*—about the special nature, powers, and properties of such material bodies as may lurk beyond the confines of the known universe? Suppose that we knew nothing of these bodies beyond what is involved (1) in the negative truth that we cannot show the existence of such bodies to be impossible, (2) in the definition of a material body as such, and (3) in those demonstrable or self-evident truths which must hold good everywhere and always. On this hypothesis, particles of unknown character—with unknown and unexampled powers of influencing other bodies which they may approach—might be moving upon us with unexampled speed from any conceivable variety of directions. Their behaviour when they arrived might be as fantastic as anything which—to use the phrase of Hume—the "most whimsical imagination can invent." They might make their way harmlessly through great distances within our

known world, and then, like bombs provided with a time-fuse, might suddenly produce unprecedented movements, and so by assailing the smaller particles might change the behaviour of the larger bodies. "The electron," says a modern writer, "is one hundred thousand times smaller than the atom, and the spaces between electrons perhaps one hundred million times the diameter of an electron. This suggests an arrangement like a planetary system." If we accept this view of the contents of space—or even if we go no farther than to regard it as possibly and conceivably correct—then, under the effects of such a bombardment as we have been imagining of our known world by particles from outside, the physical world which we know might be so much changed that almost any law we can think of might be swallowed up in its exceptions.

The legitimacy of a hypothesis depends upon the purpose for which it is constructed. The main purpose of the present volume is to show—(1) that we all believe that the whole universe is framed on some intelligible scheme, and, further, that it is ordered according to some ideal which we can recognize as rational; (2) that apart from this act of faith we should have no basis for those predictions on which our daily life depends, since the few self-evident or demonstrable principles which our minds possess are not enough to give us any working knowledge of Nature, or to rule out

as impossible even some of the grossest absurdities. To support these two conclusions we may point to one absurd hypothesis after another, and may ask with regard to each—How could you disprove this absurdity, apart from that act of faith we have mentioned ?

The only valid objection to this procedure in this connexion would be if it could be shown that —quite apart from any faith in the general rationality of the world—these various absurdities must be held impossible each on its own merits ; that in framing such hypotheses we are advancing something which is unmeaning or internally self-contradictory, something which contradicts principles the truth of which is evident *a priori.*

With a disputant who adopted this method, it might be worth while to challenge his supposed *a priori* principles one by one. But another method of reply would be to grant them all for purpose of argument, and then to show that, in spite of them, fantastic hypotheses can be invented which, if accepted, would make our everyday predictions insecure.

This task might be carried out in detail. But for any one who has understood the point at issue it is hardly necessary that this should be done. The *onus probandi* lies on the objector. Will any one have the boldness to maintain that he can show—on *a priori* principles such as that " matter cannot be annihilated," that " nothing can act

but where it is," that "two pieces of matter cannot simultaneously occupy the same place," etc. (even if the truth of all those principles be granted)—the impossibility of every absurd hypothesis which the most ingenious imagination can suggest ?

Take the extreme case alluded to in chapter xv, the supposed miracles of Amphion and Orpheus, when

> **Trees uprooted left their place**
> **Sequacious of the lyre.**

"The ultimate nature of gravitation," wrote Sir Oliver Lodge in 1888, "is not at present known, and it *may* turn out to be a property really inherent in matter. But it is more probable that it is not a pulling property inherent in matter at all, but a pushing property of some external energetic arrangement not at present understood, due probably to a strain in the medium in which all matter is immersed."*

This statement may be open to many criticisms. Yet we are at any rate on safe ground if we say that the gravitative tendency of gross matter is either due to "some external energetic arrangement," or is *not* due to this. In the former case, this external energetic arrangement may in its turn be influenced by some other arrangement external to itself, and so on. How, on such a theory, could we possibly be sure that the gravi-

* *Elementary Mechanics*, p. 15, note.

tative tendency of gross matter may not be destroyed in consequence of the irruption into our world of particles of unknown character arriving from a great distance, that this irruption might not occur in such a way that some particles retained their attractive power while others lost it? If anything of this kind happened, we should be dealing with the *destruction* of the gravitative tendency, as distinct from the familiar cases where it is merely *overpowered.*

Suppose, on the other hand, that we reject the notion of this external energetic arrangement altogether. The mere fact that gravitation had no such physical explanation behind it would not prove that the gravitative property was "inherent" in matter in the sense of being permanent and unchangeable. But if, apart from our general faith in the rationality of the universe, we can have no guarantee of the unchangeableness of what we are accustomed to regard as the fundamental properties of matter, then—apart from this same faith—we can have no assurance that we may not any day witness the very miracles that are associated with the names of Orpheus and Amphion.

If the man of science is indignant at being asked to discuss these nonsensical possibilities, his very indignation is a tacit admission of the conclusion we are seeking to reach. It shows that he rejects these suggestions simply because they

are in themselves fantastic. His ultimate conviction is—exactly as we are maintaining—that the world in which we live is not an "unsubstantial fairy place," but a rational Universe. He feels that these fantastic hypotheses are not worth the trouble of refuting, just because, being fantastic, they cannot be true.

But if, apart from our faith in the rationality of the Universe, we cannot show these wild suppositions to be *impossible*, may we not at least show them to be highly *improbable*? An impressive answer to this question may be found in the following quotation from Lotze*: "The one supposition of there being a universal inner connexion of all reality as such, which alone enables us to argue from the structure of any one section of reality to that of the rest, is the foundation of every attempt to arrive at knowledge by means of experience, and is not derivable from experience itself. Whoever casts doubt on this supposition, not only loses the prospect of being able to calculate anything future with certainty, but robs himself at the same time of the only basis on which to found the more modest hope of being able under definite circumstances to consider the occurrence of one event as more probable than that of another."

This quotation helps to show the difference

* *Metaphysic*, Book I, Introduction, iii.

between the two hypotheses which we are here concerned to distinguish. I—for purpose of argument—am venturing to think away the "one supposition" of which Lotze speaks. My critic, in *his* hypothesis concerning the dark star, is maintaining it: for otherwise how could he speak of "probabilities" in reference to that part of the Universe which lies beyond our observation?

My critic denies that he finds the prospect of possible collision alarming. There is a certain type of scientific thinker who, in the shock of such a collision, would be anxious only to find evidence that the fundamental laws of physics were not contradicted, and when satisfied on this head would exclaim, like Wolfe at Quebec, "Then I die happy." Of such a one we may quote the noble words of Horace:

> Si fractus illabatur orbis
> Impavidum ferient ruinæ.

But, for most of us, the real ground of confidence which keeps us calm is the conviction that we know enough of the Universe at large to be pretty sure that the suggested catastrophe will not occur, and to be absolutely * sure that, if it does, it

* My critic objects to this word "absolutely." He admits that science rests upon the "act of faith which we all make with regard to the rationality of the material Universe," but denies that, even on this fundamental question, he himself would ever rise to absolute assurance, such assurance as would exclude all possibility of his being mistaken. He refers to Poe's "Thousand and Second Tale of Scheherezade" to show how men may be

will only occur as part of a world-scheme which as a whole our reason must approve. This latter conviction is common to the scientific

mistaken in rejecting as utterly incredible what may after all turn out to be true.

Now the belief in the rationality of the Universe may be expressed, negatively, in the assertion that "absurdities cannot happen." We are tacitly using a syllogism of which the major premiss is "Absurdities cannot happen," the minor premiss "A or B is an absurdity," and the conclusion "A or B cannot happen." The Sultan in Poe's tale is incorrect in his minor premiss only. He thinks that his friend's accurate prophecies of modern life are fantastic and incredible merely because the life they depict is unfamiliar to his mind. (See note to chapter xii, p. 160, above.) We are all liable to similar errors. But even in face of such warnings—even with a vivid memory in our minds of our own mistakes and those of other people—there are still certain particular suggestions which we should reject as absurd; there are certain "tall stories" (to use the colloquial phrase) that we should absolutely refuse to accept.

It is the major premiss, however, which most concerns us here. Surely, if we remember (1) that this act of faith in the rationality of the world is presupposed in all our ordinary proofs, physical, historical, and legal, (2) that, as Lotze points out, apart from our general conception of the Universe as a whole, we have no ground for regarding even the "tallest" of "tall stories" as *in the least degree improbable*, we must admit that our belief in the world's rationality is a matter of absolute certainty in our minds. We *know* that certain absurdities will not really happen. It is an interesting fact to the philosopher that there are certain connexions of thought in which we are all tempted to say, of these very same absurdities, "Of course I cannot disprove their possibility: they *may* happen after all," while at the same time we should be indignant if our friends seriously attributed to us the credulousness which these words imply. To say, "These events are not in the least impossible, and yet I know that they cannot really take place," is an obvious piece of inconsistency. If we are tempted to speak in this inconsistent manner, we ought to inquire very carefully into the meaning of our own words. In what sense are we alleging that these things, which we do not at all believe, are nevertheless quite credible?

man whose faith in physics would not be disturbed by the overthrow of the solar system, and to the religious man who would still trust in God, though the heavens should pass away with a great noise, and the elements melt with fervent heat.*

In these discussions it is always worth while to remember that the advance of science will in all probability continue in the future as it has in the past: that new hypotheses will be suggested, while theories which are much in our mind to-day may pass into oblivion. It is even possible that in some future day the necessity of each physical event may be demonstrated, so that the behaviour of matter may be as clear to men's minds as are the properties of circles and triangles. Men would then no longer need to rely upon a general faith in the rationality of the universe.

Yet, even so, the argument of this essay would not really be out of date, except for those who should have the hardihood to maintain that all the methods which we to-day employ are totally incorrect, that our results when right came right by mere accident. So far as our present methods are sound, an argument is valid which rests upon a correct analysis of the principles which those methods presuppose. And it is well worth while

* See 2 Peter iii, 10.

detaching in our minds such general reasoning from the special hypotheses which may happen for one reason or another to be prominent in the discussions of the present moment. The former may well have more permanent value than the latter.

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