Revelation and the Scientific Attitude.

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THE claim that the Christian makes for Revelation is that it is God-given, depending on the divine initiative. It is not merely the knowledge of God in an intellectual sense; it is knowledge given in a personal meeting of the Living God with Man, and in Man's response there is created a living fellowship of Man with God within the created order of the World. This fellowship finds its consummation beyond this life, but I emphasise that it is initiated within the created order of the world because this order is the sphere of the pursuit of science. The Creator makes Himself known both in the witness of nature and in His moral law, but as S. Paul shows in Romans i. and ii., this does not create fellowship between God and Man—rather, it serves to underline Man's need of being reconciled to God. The Revelation is the making of fellowship from God's side in His saving activity in the Life, Death and Resurrection of His Son, Jesus Christ. In revealing Himself, God has visited man. The emphasis of science, however, is on discovery rather than revelation; on Man's activity in search of knowledge rather than on a personal meeting with the Living God. As Prof. Horton says[1] "When a man perceives a new planet, or conceives a new mathematical theory for unifying two fields of knowledge, he shouts, 'Eureka! I have found it!' When he meets the God of Grace revealed in the Cross of Christ, he bows in gratitude, and confesses, 'Thou hast found me!'"

In attempting to see the relation between these two kinds of experience, it is necessary to avoid the danger, on the one hand, of losing sight of the value of the created order and the pursuit of science, and on the other, of emptying the Christian revelation of its meaning as Revelation.

I. Historical Survey.

The history of the relation between men of science and the Church is an unhappy story. Since the latter part of the 19th century, the popular impression has been that men of science are champions of the truth while the Church remains obscurantist, and that they are in possession of a body of universal knowledge while the Church remains divided and sectarian. There is a good deal of emotional backwash from this impression—thus dogma is spoken of as 'hidebound' while the pursuit of scientific research is often referred to as 'fearless.' We must admit that the Christian Church has not a flattering record in relation to the pioneers of science, but it is unfair and indeed inaccurate to paint the picture of the relation of Christianity and Science in such lurid colours. It has been made clear by such writers as Alfred Noyes in "The Unknown God" and Dr. Raven in "Science, Religion and the Future" that, in the controversy which came to a head with Darwin in the 19th century, leading scientists were as much in opposition as churchmen. The record of the Church in other controversies also is not simply one of the influence of prejudice;

neither is the record of men of science free from it. As Michael Roberts has put it,[2] "It is natural and almost inevitable that the study of material science should at times produce a metaphysical outlook that leaves no place for doctrines meant to conserve the highest values, and it is equally natural that the forces of intellectual conservatism should from time to time press the banner of religion into their service. But the instances of actual repression and obscurantism are more familiar than numerous, and there are many instances of less blatant but no less effective repression on the part of learned academies. If the Inquisition placed the works of Kepler on the Index, the Royal Society succeeded in losing Waterston's paper on the Kinetic Theory of Gases for forty years, and in never reading Lomonosov's earlier work at all." [3]

The existence of controversy has disturbed the balance of most thinking on the relation between science and the Christian Revelation. Dr. Raven, for example, accuses some historians of science of reading the 19th century struggle into earlier times.[4] It is fair to say, however, that Raven himself tends to read the problem in the light of 16th-18th centuries. Dr. Sherwood Taylor has written of this period [5]: "The philosophers of the 17th and 18th centuries established a world-view based on a universe rigidly conforming to natural law. They rejected authority as a ground for accepting any belief, scientific or theological. They did not, as a whole, reject the existence of a Deity, nor attack the foundations of human morality: they laboured, rather, to show that a Natural Religion arose from the application of reason to human conduct. Their attitude, in England, at least, was adopted by the theologians, who, while accepting the Christian revelation, based their apologetics upon reason, giving but a secondary place to faith." It may be added that Revelation itself was thought of in intellectual terms rather than what would now be called "existential" interpretations, and that the inherent view of Man was not one in which he was regarded as a creature whose primary need is redemption. Dr. Temple says in this connection,[6] "Natural Theology no longer suggested that beyond its reach lay truths which the soul could embrace with an assurance never due to its own conclusions, but rather suggested that it alone offered the grounds of certitude, which are to be found in the realm of possible experiment. . . ."

It is true that the great pioneers of science were deeply religious men. Many spent more time discussing theology than studying nature. Newton may be accused of giving rise to a mechanical deistic picture of the Universe, but he was also a theologian. Robert Boyle founded the Boyle lectures in order to refute Deism,[7] and John Ray, as Raven has shown, had a wonderful sense of the working of God in nature. But while Raven shares this insight into nature, he is so anxious to insist on the value of nature that I cannot help feeling that he does not come to terms with human nature. He may believe in the sinfulness of man,[8] but in "Science, Religion and the Future" his emphasis is on man who must use his scientific and religious insights in order to save himself. In spite of a hint of a theology of redemption in the last chapter, the most significant aspect of the Incarnation appears to be that it is God's word that the created order is good.

For our purpose, at the risk of over-simplification, we may divide

the history of science since the Renaissance into 3 periods during which aspects of the relation of science to revelation become explicit :

(1) Up to the 18th century, when science is the exploring of God's created order which is good. Man's reason is his chief light. Truths of revelation exist side by side with Natural Theology.

(2) The 19th century, when we have a repetition of the earlier controversy over Galileo. Galileo came up against the Infallible Church.[9] After his time, science gained greatest impetus in countries where the Reformation had repudiated this doctrine. It is in the 19th century that Darwin came up against the Protestant counterpart—the Infallible Book. In the Darwinian controversy, science established its right to pursue its own methods within its own domain and triumphed over the accepted view of revelation on a matter of fact. Revelation is no longer identified with a book but with its content and message.

(3) The 20th century, when the humanism of science shows its tragic side. This was becoming clear from the time of the Industrial Revolution, but it is in the 20th century that Bacon's dictum—" Knowledge is power "—becomes fully explicit, and science is most clearly a weapon in the hands of man for the exploitation of nature and the furtherance of man's power over his neighbour. Here, we have exposed for us the fact that science, as an activity of man, is an instrument of his sinfulness. Man himself is the problem.[10]

This is also the age of scientific humanism which denies the possibility of revelation from outside man except in the form of an immanent urge in nature, and this is considered impersonally in terms of process. Also, the scientific method is not confined to science, but is extended in this age to history, sociology and religious experience. It is the method rather than the subject-matter which makes this age a scientific age.[11]

II. Aspects of Scientific Method.

In considering the scientific attitude to revelation, it is necessary to understand some features of the scientific method.

1. It depends on measurement and classification. The emphasis on measurement has led to the over-estimation of the material, while the use of classification involves the neglect of unique conditions or characteristics in the effort to obtain correlation. Thus the method is frankly analytical and ignores the qualities which we associate with the personal—*i.e.* uniqueness and spontaneity. This reluctance to give the category of the personal full place is a consequence of scientific method, but is also forced on the modern world through the de-personalising influence of a machine age, and, we may add, of sin itself.

This method of classification means also the isolation of experiences in abstraction from the wholeness of their situations. It is in the whole situation that the self acts and comes into relation with other selves in what Farmer calls " value-resistance " and " value-co-operation."[12] The abstractions and generalisations produced by reflection are valuable as knowledge : they may illuminate conduct : but they do not " cover " the will in action. They are confined to the impersonal. This method, then, as a dominant mental dis-

cipline, creates a bias against the personal. The acceptance of revelation as the personal self-disclosure of God to man-as-a-person is only possible when a man realises that this way of knowledge by analysis is not the only way. Our knowledge of others in personal relationships is something given in the occasion of meeting, and is not something arrived at by analysis. As Farmer has observed,[13] the scientist " will find his test-tubes and balances singularly irrelevant if, when he gets home, he is unfortunate enough to have a row with his wife." Similarly, on the level of the knowledge of God given in a personal revelation, abstractions and generalisations must give place to the concreteness of personal acquaintance.

2. Another feature of the scientific approach is the kind of truth at which it aims. In Mathematics, this truth has a timeless quality. In Physics and Chemistry, the idea of physical law has similar associations. The discoverer of a physical law or a chemical element has discovered something which was there all the time. The element of creativity is missing except in the synthetic intuition of the discoverer. This conception of timeless truth, or of truth in which time is taken up in a generalisation (*e.g.* law of radio-active decay), has no room for the unique event : all events are fitted into a general conception.

Further, the theories of Evolution and Relativity have given rise to notions of wider significance than the theories themselves. The theory of Relativity, which abolished the idea of absolute space and time, has lent an emotional though certainly not rational basis for the idea that all values are relative. The concept of Evolution, which arose primarily to account for the occurrence and mutation of species, has given stimulus to the idea that anything is likely to be superseded. Although this idea of progress arose in mechanistic biology, it has been extended to most branches of knowledge and experience. But it remains largely a mechanical idea for it leaves out the element of uniqueness which marks moral experience and makes a person an end in himself rather than part of a process. Dorothy Sayers has said from the artist's point of view,[14] " We may say, for example, that the power loom has superseded the hand-loom . . . But there is no sense whatever in which we can say that Hamlet has " superseded " the Agamemnon."

Thus, in the ideas which surround the concept of scientific truth, we find a bias against unique events, against an absolute claim from within history. But these are precisely the qualities which the Christian claims for revelation.

3. A third aspect of scientific method which is of importance for our discussion is that it aims at the elimination of bias, while at the same time it presents us with the picture of man in control over nature. I mention these two features together because they illustrate both the greatness and the danger of science. The scientific ideal of the pursuit of truth based on observation, irrespective of the research worker's personal prejudices, is one which is truly noble. The lives of many great scientists bear witness to the beauty of its discipline. But as we move away from the realm of the physical sciences, the elimination of bias becomes more difficult. **Julian Huxley** is aware

of this difficulty when he says, "Bias has also been encountered in natural science, but only when its findings come up against emotionally held convictions—only, that is, when it has had social entanglements."[15] But this is a very big "only." The social entanglements of which he speaks cover the whole realm of personal relationships in which man is involved in the meaning and purpose of his actions. Even in the social sciences, pure objectivity is not possible. "When he starts investigating human motive, his own motives are involved; when he studies human society, he is himself part of a social structure."[16] Thus, when man has to become, so to say, "his own guinea-pig," other considerations are important: valuations, conduct and the acceptance of other persons. Science may be of assistance, but it does not provide man with his purpose and values to cover the whole self in action. This is the reason why there are few scientists who do not introduce some extra article of faith to supplement their search for truth. "An intense and over-riding enthusiasm for their own special study sustains many scientific workers; . . . But for ordinary people who are not likely to enjoy the excitement and fascination at first hand or in their full intensity, this scientific mysticism is not satisfactory; and even for the scientists themselves it often has to be supplemented by some other article of faith—a belief in the greatest happiness of the greatest number, the increase of material goods, the aggrandisement of the nation, or the survival of the human race."[17] This fact makes clear that the scientist makes value-judgments and decisions on other than purely scientific grounds, and the reason for this is that in the sphere of ordinary living, it is not possible to be purely objective. Man cannot remain a spectator of the living scene which is the place of meeting between Man and God. Thus, while the scientific attitude seeks only the kind of knowledge which is free from personal bias—*i.e.* valuation—the revelation of God meets man at a point where he must make a decision: it demands a valuation of himself in relation to God and other men. The "ingraining" of the scientific attitude tends to remove a man from personal decision and makes for a kind of false neutrality about a revelation which carries with it the demand for decision.

This factor throws into prominence the other feature of scientific method—that it is individualistic and puts man in the place of control. The conventional picture of the scientist bent over a microscope, or controlling delicate apparatus or machinery, is not inappropriate; it conveys the thought of man controlling natural forces, even people. The pursuit is individualistic: it does not carry with it the impulse to community. The fact that men of science have a community sense arises from other considerations—their sense of the worth of their pursuit and of its value for mankind. Science is a weapon for good or evil, and the problem of its application throws us back on man himself. Now applied science has made such material advances as to lessen man's sense of need. This is a fact to which revelation appeals. Fortunately, men are aware of the dangers of mis-applied science. So long as science was the goose that laid the golden eggs, there seemed to be no need to worry; but now the eggs have hatched out such possibilities for evil, it is clearer that man's conquest of nature does little to help his conquest of himself. Man remains in need of the

power over the self-will, which the message of redemption in Christ alone can meet.

III. Trends in Scientific Thought and the Pastoral Problem.

In the present situation, we can discern, broadly speaking, four trends in scientific thought: (i) an increased awareness of cosmic design. This is mainly due to modern physics and its interpretation by Jeans and Eddington, although some doctors and biologists have made good contribution from their side.[18] The philosophies of Creative Evolution[19] are, as it were, half-way houses on the way to a full cosmology in the Christian sense. (ii) More recently, a widespread movement among younger scientists to see that their work is devoted to constructive social ends. This has brought in its train a discussion of science and values, and a concern for the social function of science.[20] On the whole, these workers have looked to Marxism for their inspiration. And we may note in passing that the Marxist view of history is that of a process which is self-explanatory, and that the Marxist view of man is liberal in so far as man is regarded as being perfectible by the removal of economic frustrations. (iii) The general movement which may overlap the other trends of thought—scientific humanism. Julian Huxley defines it thus, "Scientific Humanism is a protest against supernaturalism: the human spirit, now in its individual, now in its corporate aspects, is the source of all values and the highest reality we know."[21] This movement is eclectic. Since man is made the source and judge of all values, great faith is placed in his ability to improve his lot by loving the highest when he sees it. He is confidently expected to make use of all that he judges good in art and religion; and, above all, to employ his ever-increasing power over nature for the greater comfort and good (whatever that may mean in this context) of his neighbour.[22] This paragon-man is in no need of outside help, but it is assumed that he can live by a "Religion without Revelation." This religion appears to involve worship of the vastness of the universe and of the great unknown which, if it is called Reality even with a capital R, is impersonal. Speaking of religion, Huxley says "the universe and human personality being what they are, this way of experience will always involve some feeling of sacredness."[23] But his optimistic view of man and of the possibilities of his science empty the word sacred of most of its meaning. Moreover, as Prof. Dickie has pointed out, "the one thing science clearly cannot do is to *know* that the unknown impersonal is an object suitable for worship. There is not such a thing as Religion without Revelation."[24]

(iv.) The fourth trend in modern scientific thought is a re-valuation of religion. It is accepted as a fact of human experience and as something to be valued. Thus, Dr. Needham says we can learn a lot from Confucius,[25] and Aldous Huxley attaches supreme importance to mysticism. In this, however, the scientific bias remains for Confucianism is a man-centred moralism and the neo-Buddhism of Aldous Huxley abhors the idea of a personal God and emphasises man's work in saving himself by spiritual discipline.

All these trends indicate that scientists are not "case-hardened": they are seeking meaning and purpose in existence and in their work.

This must inevitably lead them out, away from the purely scientific outlook. Therefore the next question to ask is: "Is there any point of contact between this seeking, combined with this attitude of mind, and the Christian Revelation?" I know it is a question of debate whether there are such things as "points of contact,"[26] but I want to indicate briefly that this situation is one in which the appeal of the Gospel can be made. To a certain extent the soil is prepared.

When men have some idea of purpose and design in Nature and existence, the claim of the personal God can be brought home. Resistance to such revelation may be intellectual, but more often it is the resistance of man to submit to God's judgment and accept reconciliation. In this respect, the scientific mentality is one particular case of the general pastoral problem of bringing the message of the Gospel to man.

But the problem takes on this form: Is it possible to bring the Gospel to minds trained only to think inductively? Whitehead insists that "induction pre-supposes metaphysics" and requires for its rational justification a faith in the order of Nature.[27] But Whitehead is also responsible for the idea that science proceeds only by induction: he does not emphasise the role played by experiment.[28] Reliance on experiment is an additional factor, and it depends on the objectivity of nature which, as Whitehead points out, passed into science from the objective outlook of medieval theology.[29] Now such an outlook implies that before a myriad facts, choice is involved, and that the attainment of truth is largely experimental. The Christian builds his life on a not dissimilar basis. He accepts the significant fact of God's Word in Christ and lives a life of faith which is experimental. Forsyth has said "What Nature is to Science, that is Christ to positive faith."[30] Conversion occurs when a man sees the fact of Christ as *the* significant fact which judges him, which embraces all experience and brings him into personal fellowship with God, His Creator.

The place where the purely scientific outlook comes nearest to meeting revelation, as it were, "on its own ground" is in the discipline of its search for truth. I have already outlined the way this search is affected by bias, but nevertheless, the ideal is one which comes from outside. The discipline of following the ideal is a voluntary spiritual obedience. Surely the truth in the contention that science has to do with values lies simply in this: that as it unfolds the greater vista of truth about Nature and experience, then the obligation to follow the truth is laid more heavily upon us. But this obligation is not something which comes from within science. The discipline of the scientific life is a response to the claim of the value of truth. It may well be the place where a man meets God. But when he does meet God, it is a personal meeting. The abstract scientific truth is taken up into the larger personal truth of relationship to God in which science is seen as the product of reflection upon God's work in Nature.

IV. The Christian Critique.

We come now to consider the Christian critique of the purely scientific attitude. First we must distinguish between the kinds of criticism. There is the philosophical criticism based on Ideals or Values, which

may or may not be consciously Christian. Such a book as T. E. Jessop's "Science and the Spiritual" is of this type. Then there is the criticism which proceeds from experience which is the fruit of the Christian Revelation. Thus, a criticism based on the category of the personal owes a great deal to Christian faith, for Prof. C. C. J. Webb has shown that the concept of personality has developed by stimulus from the development of Christian doctrine.[31] Similarly, Prof. Farmer's criticism of the psychological and sociological theories of religion on the grounds that they do not do justice to religious experience is a criticism which proceeds from the experience itself.[32] But the kind of critique of the position which concerns us is the critique by the Gospel itself of man in this situation. Revelation is a criticism of Man. It is saving Judgment as well as saving Knowledge. The aspects of the historic Christian revelation which are relevant are (i) that the life, death and Resurrection of Christ reveal to Man his need before God as a sinner, who nevertheless is addressed by a word of reconciling Love; (ii) that this revelation has happened once and for all "under Pontius Pilate"; and (iii) that the Creator-God is only known fully in His works because of His work of redemption which involves the whole natural order. Let us take these points in turn.

1. The understanding of man as sinner. The Gospel reveals to man his true nature for it declares man's dignity in asserting that God so loved the world that He gave His only-begotten Son, while at the same time, the necessity of the Cross for the Incarnate Son of God exposes the tragedy of the corruption of Man's nature. The Biblical view of this corruption is that it consists primarily in asserted independence of man over against God. This hardens into active rebellion. Man sets himself up to be his own arbiter, and the self-centredness involved in this is something which taints his nature and activity. Thus, in our context, the activity of the critical and scientific method, which places man in the position of spectator and judge of events, panders to this side of his nature.[33] It could only occur because of man's dignity as created in the image of God, however defaced the image may be. Yet its occurrence is the occasion of man's asserted independence of God, which is Sin. This independence shows itself also in the love of abstraction, for it is to a certain extent true in experience as a whole that love of abstraction represents a retreat from living on the level of personal relationships. It is in the realm of the personal that man meets wills over against his own. His autonomy is challenged: and supremely so, when Man's Creator and Redeemer confronts him with His claim that he is bought with a price.

The idea of knowledge in the scientific sense also reveals Man's pride. It has always been knowledge in the intellectual sense rather than knowledge in the personal sense, but the emphasis has changed during the last century or so. Whereas the early scientists, with their faith in the Creator given to them by Revelation, could study Nature with the confidence that the knowledge was worth while in itself, the aspect of knowledge which is uppermost to-day is that it confers power. Things are worth knowing because the knowledge of them may be useful. Thus Julian Huxley can say "the concept of God has reached the limits of its usefulness"; or, as a young munition-worker asked me more bluntly, "What is the *use* of God to me?" The attitude

of mind which puts all knowledge on this level is clearly in opposition to that knowledge of God, which comes in a personal meeting involving a demand for obedience, for this will dethrone man from being in the position of a law unto himself. It would be unfair to suggest that this attitude to knowledge is universal. As Brunner says, "The real opponent is not science but a false estimate of science, a scientific monism, *i.e.* the superstitious belief in one science including all possible forms of knowledge in itself . . . Even to the critical man of science reality appears to consist of degrees or strata, only one of which is the subject-matter of a particular fundamental science. By their nature the phenomena of life rise above the science of physics, those of consciousness above biology, those associated with spiritual values or normativity above psychology."[34] It remains true, however, that the pursuit of the maxim "knowledge is power" is the full-blooded expression of man's independence of God, which is the essence of his pride. This pride is only broken when man sees his need and finds God through His redeeming work. Thus, we pass on from the understanding of man as sinner, to the uniqueness of God's work of redemption in Christ.

2. The second issue of the Gospel in relation to the scientific outlook is that God's Word is given once and for all in Christ: a fact to which the Holy Spirit bears witness.[35] Christ meets man, submitting Himself indeed to man's acceptance, yet to be judged by no comparisons. Brunner puts it in this way: "Revelation is not a datum in the natural order, but is logos, meaning, word. Yet even this meaning is really given; for we are not summoned to pass judgment ourselves or to verification by self-contained logical or ethical standards. We cannot 'judge Jesus to be God.' By what standard are we to test the nature of the mystery of God?"[36]

It is in the acceptance of God's Word in Christ that many points in this discussion fall into place. There is a relative quality about our values till we find Christ, the Word of God to us. In Karl Heim's phrase, Christ becomes the Man of Destiny for us.[37] The importance of the category of the personal in this discussion arises from the fact of Christ as God's Personal Word to man as a Person. Likewise, the meaning of truth becomes fully the truth of personal relationship to God, inside which, as it were, truths of reason and truth about Nature find their proper setting. This has been summed up finely by J. H. Morrison: "Here is the Word of God, final, authoritative and revealing, a Word which must take precedence over all the discoveries of science, not in the sense of invalidating them or depreciating them, for in so far as they are true they should be found in harmony with it, but in the sense of providing a light which they cannot give and a spiritual dynamic which they confessedly lack. Here is something more than a spiritual interpretation of Nature. From the first it was hailed and proclaimed as something specifically divine, the master light of all our seeing and the power of God unto salvation."[38]

3. Finally, the third issue of the Gospel in relation to Science is that the Creator-God is only known fully through His work of redemption, which includes the whole natural order. Since God has revealed Himself in redeeming activity, the natural order is part of the whole redeemed order.[39] Both history and Nature have value in themselves

as the place of God's working.[40] It is this aspect of Nature which gives to the pursuit of science its value, for the man to whom God has revealed Himself as " just and the justifier of him who has faith in Jesus " can delight in the works of His Creator.

But to proclaim the goodness of Nature and the work of the Creator pre-supposes the whole Christian revelation of God's redeeming work in Christ. Man's primary need is reconciliation. The " recovery of Nature " which Prof. Raven desires can only come through the recovery of Man ; and man is recovered by the Creator-God Who reveals Himself in Love as Redeemer.

We must beware of two over-simplifications. First, not all men are Christians. But we dare not be cut-and-dried. We cannot divide men into the sheep who know their Creator and the goats who do not. As Hodgson has warned us,[41] many, who do not see the things that we have seen because God has opened our eyes, may possibly be found to be more faithful to their vocation. Secondly, we cannot simply draw a distinction between Nature and Human Nature and say, in effect, that " only man is vile." The goodness of Nature is not always apparent, and evil exists in Nature. As S. Paul saw, the process of Redemption is a cosmic one. Thus, our faith in the Creator depends upon the resolution of the problem of evil for us : it depends finally upon His revelation of Himself as Holy and Triumphant Love. When God is known as Redeemer, we may begin to pierce the veil of Nature and know Him more fully as Creator and " Our Father."

1 Revelation, ed. Baillie and Martin, p.244.
2 Recovery of the West, p.259.
3 For an account of Lomonosov, see Journal of the American Chemical Society, 1912, Vol. 34, p.109.
4 See " Science, Religion and the Future ", p.11.
5 Short History of Science, p.139. Dr. Sherwood Taylor is the Curator of the Museum of the History of Science at Oxford.
6 Nature, Man and God, p. 15.
7 See A. D. Macdonald, " God, Creation and Revelation ", pp.5 and 97.
8 Gospel and the Church, p.196.
9 It is interesting to note that scientists pay much more attention to Galileo's fight with the Church than the historians do. Thus, the Cambridge Modern History, Vol. 2 contains but one reference to Galileo, p.707, whereas three times the information is given in a school certificate textbook such as Mackenzie's " Hydrostatics and Mechanics " pp. 225-8, where the case is very fairly discussed.
10 Compare Brunner, " Philosophy of Religion from the standpoint of Protestant Theology ", p.183.
11 Tennant, Philosophical Theology, Vol. I, p.333.
12 The World and God, pp. 21-25.
13 Towards Belief in God, p.139.
14 p.33, The Mind of the Maker. Compare O. C. Quick, Doctrines of the Creeds,—p.43.
15 Uniqueness of Man, p.228.
16 *op. cit.*, p.226.
17 Michael Roberts, *op. cit.*, p.108.
18 *cf.* " Design and Purpose " F. Wood Jones, and Osborne Greenwood's " Christianity and the Mechanists," and " Biology and Christian Belief."
19 Bergson and Lloyd Morgan. See discussion in Matthews' " God in Christian Thought and Experience," pp.141-9.
20 J. D. Bernal, Social Function of Science.
21 *op. cit.*, p.274.
22 Huxley, What dare I think ? p.161-3.

23 Uniqueness of Man, p.275.
24 Revelation and Response, p.26.
25 Science and World Order, ed. Crowther, Howarth and Riley (Penguin Special), p.21.
26 *vide* Appendices to Brunner's " Man in Revolt ".
27 Science and the Modern World, pp.55, 4 and 23.
28 Compare Wolf, History of Science, Technology and Philosophy in 16th-17th centuries, pp.2-8.
29 *op. cit.*, p.175.
30 Person and Place of Jesus Christ, p.195.
31 God and Personality.
32 Towards Belief in God, Chaps. 9 and 10.
33 *cf.* Niebuhr, Nature and Destiny of Man, Vol. 2, pp.156, and 216-7.
34 *op. cit.*, pp.173-4.
35 St. John, xvi., 13-14.
36 Philosophy of Religion, p.79.
37 see Dickie, Revelation and Response, p.208-9.
38 Christian Faith and the Science of To-day, p.101.
39 *cf.* Romans, viii. 21, Ephes. i. 10. Also the article in Sanday and Headlam's Romans, pp.210-12. " The Renovation of Nature ".
40 Compare Temple, Nature, Man and God, Chap. 19, " The Sacramental Universe," and Farmer, The World and God, Chap. 4, " The World as Symbol."
41 Doctrine of the Trinity, p.30-37, esp. 36.
Towards a Christian Philosophy, 147-8.