

0. Christianity claims to universal competence, to account for all that a man experiences. Science makes almost as great a claim. There is need to relate the two. To do this one needs to analyse a) the influence of science on modern thought b) the resulting tension with theology and c) Christians' reactions to these tensions.
1. Influence of Science on Modern thought and the Resulting Tensions.
 - 1.1 Science has molded modern mind and is forcing the pace. Change has been rapid since the 19th century. Consequently it has been hard to keep re-evaluation of its relation to theology current. Science has replaced tradition as the molding force.
 - 1.2 Rise of the conviction that science has such an understanding of man and his place in the scheme of things, such power to create and destroy, such magnificence of pattern and splendor of success that it can fulfil the deepest urges and longings of a man's spirit in a way which established religion has not been able to do.
 - 1.3 In its origin science was wholeistic and integrated to the Christian world view. eg. Bacon, Boyle, Newton, Wren, Ray. This has broken down with the atomization of knowledge and differentiation of function. God was found an unnecessary hypothesis. He was often viewed as a concealed confession of ignorance and a bar to genuine research.
 2. Christians' Reactions to the Impact of Science.
 - 2.1 Cling to the past. Exclude science dogmatically or the use of metaphysical arguments to impose God on science. This reaction was born of fear, and has been largely unproductive. It makes dialogue and communication impossible and has brought about no reduction of the tensions. Danger in pronouncements made by well-meaning Christians in areas where they are not competent. There is no elasticity of mind. This reaction failed to take the opportunity of progressing with science and has built a barrier of mistrust and ignorance.
 - 2.2 Use God to explain the unexplainable. God of the gaps. This has two weaknesses. 1) There is the question of two allegiances. 2) Invites science to gradually take possession of the "theological" fields.
 - Can not find "room for God" in modern statistical basis.
 - Gosse's Omphalos - God created the universe with fossils and different aged trees to give the appearance of continuity is to say God planted a deliberate lie.
 - Nor can we hold only that God intervenes now and then to set things right.

Either God is in the whole of nature or He is not there at all.
 - 2.3 Incompleteness of science is a proof of religion. Two spheres of authority. Problem: the "incompleteness" constantly changes and the religious area declines. Science is "material and temporal" while religions is "spiritual and eternal", but since seeking is believing the obvious corollary is that science is relevant and religion is not. In this we can not use Heisenberg's Uncertainty principle or E.S.P. to include God.
God must be found in the known and not the unknown.

Must bring God in, not at the end of science but at the very start and right through it. Science itself must be seen as a religious activity.

3. Scientific method, a religious activity? This is Coulson's crucial premise. If this is proved the tension becomes a phantom problem and our discussion is lifted to another plane of thought. Basic harmony is established though individual tensions must be resolved. Through this meaningful communication is restored between the two sides.

3.1 What is science trying to do? What does it mean by truth?

3.11 Old. to discover nature's laws and control it. To do this one had to become de-personalized to deal with an objective world.
- This was broken down by the revolution in Physics in Relativity and Quantum from 1900 to 1925. In seeking to pattern 'objective reality' it was found that this was impossible and the world of "reality" became the world of "observed fact", observer centered.

3.12 Modern. This brought in the observer. Now seek to pattern the observations or experiences, observer centered. The aim became Model building - seeking to correlate experience into grand conceptual schemes. Objective reality is not needed and is replaced by mental constructs. Truth is tested by consistency and non-contradiction and scope or comprehension. Isolated facts are of little use, it is the pattern that counts.

3.2 Parallel to Religion:

3.21 Luther: A God is simply that whereon the human heart rests with trust, faith, hope and love. If the resting is right, then the God is right; if the resting is wrong, then the God, too, is illusory."

3.22 Coulson: "It is becoming clear that, whether in science or history or religious experience, facts are never ~~fully~~ known fully and can never be completely correlated. As a result our models - in science, the atoms, the genes, the complexes and repressions of the mind: in religion, the nature of God and His mode of working in the world - can never be wholly satisfactory. For at very least they must suffer from one of two complaints. Either they are overdefined, ~~of/that/it~~ leading to internal inconsistency and contradiction or they are underdefined, leading to "fuzziness" and imprecision." p. 54

Men in the areas of religion and science share a common ignorance and a common hope.

Mature Christianity is relating the "facts" into a meaningful coherent pattern. (The subjective or "observer centered" aspect of theology). Mature science is also relating the "facts" into a meaningful coherent pattern. Both are methods of treating common data and forming patterns of interpretation. The test (subjectively) is the "fit of the model" and "does it work".

3.3 Characteristics of Truth.

3.31 Role of imagination. Truth is perceived by "insight". The great advances of science have largely come through the creative use of imagination.

- 3.32 Role of doubt as expressed in a sense of humility before the incompleteness of our knowledge and resulting in a search for fuller understanding. There is no stopping place, it is a quest. There can be no extreme dogmatism which stifles growth.
- 3.33 Role of "wholeness" & "relatedness".
Whitehead, "The notion of the complete self-sufficiency of any idea of finite knowledge is the fundamental error of dogmatism. Every such item derives its truth and its very meaning from its unanalysed relevance to the background which is the unbounded universe . . . Every scrap of our knowledge derives its meaning from the fact that we are factors in the universe and are dependent on the universe for every detail of our existence."
- 3.34 Role of conviction. Otherwise it becomes an empty game!
- 3.4 Uniqueness of the Scientific "Method" of interpreting data.
- 3.41 There are several answers, all essentially equivalent.
- 3.411 Realization that cause and effect are a relationship which could be studied in a small way without relating to Final Causes. Science does not rule these out but at present doesn't deal with them.
- 3.412 Asks simple questions where progress might be expected, not the hard ones where solution can hardly be expected. Science deals with elemental experiments not "ultimate realities", mysteries of life and death. It attacks a problem piecemeal.
- 3.42 Contrast with the Arts - The scientist seeks for some law within which the particular is lost in the general, the artist is pre-eminently concerned with the particular aspect of some general relationship.
- 3.5 Resemblances to other disciplines such as the arts.
- 3.51 Facts are of little importance in themselves. It is the interpretation we put upon them which is central. This is a creative art. Imagination plays a central role in all. It like art is an advantage of the mind, in which beauty, elegance and thrill link it with wider experience and the feeling of mankind in diverse ways.
- 3.52 Science, like art, history and religion are profoundly subject to and influenced by the thought-forms of their age. Science is based in definite presuppositions. e.g. integrity, enthusiasm, identification with the experiment, humility before created order of things, singleness of mind about the search, co-operation with fellows, patience, judgments of value, common search for a common truth. This tradition is ultimately based on, and derives its final sanction from, moral convictions which are often unrecognised, but none the less imperative.
- 3.53 Conviction that there is an "order and constancy in Nature without which the patient effort of the scientist would be only so much incoherent babbling. This was derived from the Christian tradition of the rationality of God and created universe.
- 3.54 Search for the simple. Convinced of a basic underlying simplicity in all of experience.
- 3.55 Dedication to truth - rugged individualism. Following the search despite the cost.

- 3.6 Science is a religious activity: both in its actions and search for truth, and also in its mode of working and presuppositions. It is one of the ways in which God is revealed. It finds its general parallels in Protestantism:
- hold the worth of reason
 - rejects complete subjectivism and insists on relatedness to the actual world.
 - rejects superior personal conceit and upholds universalism - Christianitie s brotherhood.
 - insists on individualism and conviction despite cost.
 - insists on the value of every separate soul.
 - believes in progress or meliorism and activism.
 - insistance on integrity

Planck: "Religion and natural science are fighting a joint battle in an incessant, never relaxing crusade against scepticism and against dogmatism, against disbelief and against superstition and the rallying cry in this crusade has always been and always will be: "On to God."

4. Inter-relationship of all experience: Premise - every experience is an encounter - an encounter with some reality to which we can give no other name but God.
- 4.1 All experience is place into alternative patterns such as art, poetry, history, science or philosophy. Are these alternative patterns all equally valid? And if so, what is their mutual relationship?
- 4.11 Analogy: blueprints of a building are all two dimensional and all reveal certain aspects, but not all of the building. The modes of description vary greatly, and may sometimes even appear to be wholly different from one another; but at other times will be common elements. No onepicture is sufficient to describe the building completely, though a good "feel" for it may be obtained from a complete account according to one particular discipline. Not all revelations will be the same, and in a very real sense each of us bound to have his own.
- 4.12 False claims:
- 4.121 One diagram alone describes the building. Answer, many fellow scientists have experienced the other frameworks and failure to admit the possibility is a closed response based not on learning or ability but attitude.
- 4.13 Complementarity: use of several modes of description, each complementary to the other, to explain the same set of facts. eg. light in Physics. This is a great and liberating influence. Makes into account different vantage points of observation.
-Both sides are right, but they have no real contact with each other.
- Many classic debates are due to failure to differentiate modes of description. Resolution of this shows the problem spurious.
- 4.131 Mind and Matter: How can "mind" as a concept be correlated with the physico-chemical "brain". These are different modes of reference, categories used to ~~cor~~relate certain sets of experiences. They are different ways of looking at the same phenomena. Mind is not the "ghost in the machine". Man is matter or mind according to the situation you are describing and the pattern within which you give it meaning.

- 4.132 Free-will and determinism: Observed from without, the will is causally determined; observed from within it is free. The difference lies in the point of view. For man as actor the best concept is freewill; but for man as spectator it is determinacy.
- 4.133 Teleological principle: between "the absolute empire of accident and a living, immanent, ever-working God." We can use non-teleological concepts and teleological to describe a given experience, neither is exclusive. e.g. radiation of light rays described by partial differential equation or by Fermat's principle.
- 4.14 Selection of conceptual patterns. Not all are equally suitable for a given purpose. Wisdom consists in knowing which concepts to use for any required purpose. Concepts out of context are disastrous. ill. Contrast "I was listening to a man blowing air through a hole in his head." with "I was listening to someone speak."
- We must be ready to change our mental framework as the need demands.
 - Failure to include more than framework is basis for atheism. Astronomer exclaims: "I swept the heavens and found no God" is like the Biologist who says "I have examined the brain and found no trace of love." The great revelations of God lie in certain frameworks and moreso in the inter-correlation of all the frameworks.
- §.2 Religion as the total response of man to all his environment.
- 4.21 Science is a religious activity but it is not religion. It remains one framework among many.
- 4.22 Religion is the correlation of all these into one whole. e.g. Just as two eyes use different vantage points to give the benefits of stereoscopic vision when the two images are co-ordinated, so religion co-ordinates all the frameworks into a meaningful whole.
- 4.23 Though God may not be needed to explain a particular framework, He becomes the central figure in a co-ordinated whole.
- 4.24 Man lives in two or more worlds, but these are not disparate, they impinge. The Act of reflection brings them together. To refuse to make this co-ordinating act and to stick to one view, one discipline, one "section of the building" is bound to lead to dissatisfaction, and this will be most deeply felt in our understanding of men.
- 4.3 Man's role as observer yet observed. Man is the observer exploring the world around him, yet he himself is also part of this world. Thus he fills a strange dual role. As examiner he analyses his experience, and as examinee is himself under analysis. A large part may be the "examinee" but there must always be a bit left over to be the "Examiner". Science can describe the first but not the second.. More precisely, it can not describe the first only in the past and not as it is.
- 4.4 Christian view: Physicist describes man as a machine for doing work, the Chemist as a means of converting chemical energy into other forms of energy, the biologist as at latest product of evolution, but the Christian describes him as in the image of God. The physicist, biologist and chemist give each one answer, but the Christian gives them all. He can agree with them all but in putting the different pictures together comes out with the whole view of man.

5. Man's Encounter with God.

5.1 As approached from Natural Theology:

- 5.11 Beginning with experience, there is a conviction of pattern and reality, a sense of "given-ness". These patterns are not only figment of the imagination, but real.
- 5.12 Conviction that the separate patterns express a unity and simplicity.
- 5.13 This unity has a quality about it which can only be described as spiritual. The pursuit of truth is not disinterested nor unemotional. It has the religious quality of involvement and existentialism. Without this science becomes a sort of "ballet of bloodless categories."

5.2 Place of God in the framework. God is not one of the images in the picture of the world, He is rather the canvas on which the picture is painted, the frame in which it is set.

- 5.21 Our contact with God must be in personal terms. Nature can only be given in personal terms. This is the cement which holds our various disciplines together in one unity. We must view nature as the expression of a personal God.

5.3 Man's role in nature.

- 5.31 Cogito, ergo sum. I think therefore I am.
- 5.32 Respondeo, ergo sum. I respond therefore I am.
- 5.33 Respondeo, etsi mutabor. I respond, although I shall be changed (by this very act of response) - existentialism.

There is one road to coming to an understanding and encounter with God. It is not the only one. Lancelot Andrewes - "If by knowledge, by reason, and by works, we could come to God, then none should come but they that are learned and have good wits, and so the way to God would be as if many should go on one journey, and because some can climb over hedges and thorns, therefore the way should be made over hedges and thorns. But God hath made His way "viam regiam" - the King's highway."

- 5.42 Path of religious experience. Verification from experience. The incarnation is the peak of this experiential, personal manifestation of God; Christ is the representative person, the archetype in whom the truths of nature and the truths of people find their meaning. Science has no dealings with the I-God meeting; but with the Me-God situation it has much to say. Science becomes part of the religious activity whereby I feel myself confronted in some utterly personal way by the spiritual quality of the whole Universe. Truth, wonder, worship, and faith form a quartet, in which the fullness of each separate element lies in its relation to the rest.