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THEOLOGY - A SCIENCE ?

Some years ago Professor Thomas Torrance of Edinburgh University wrote a book² in which he made the claim that theology is a science. Some of us found the book difficult to master and for this reason it was not referred to in FAITH AND THOUGHT. David Kibble, B.D., a former pupil of Torrance, here summarises the arguments and examines the claim made by Torrance.

Theology as a Science

Theology was once called 'the Queen of the Sciences', but its status as such would certainly not be taken very seriously by many scientists today. The title was appropriate in medieval times when theology dominated all other forms of learning in educational establishments ruled by clerics. In recent times, this claim made for theology has been examined closely, in particular by the neo-orthodox wing of the christian church of which Karl Barth is representative. Barth concluded that theology is indeed a science:

If theology lets itself be called and calls itself a 'science', it thereby declares that (1) Like all other so-called sciences, it is a human effort after a definite object of knowledge. (2) Like all other sciences, it follows a definite, self-consistent path of knowledge. (3) Like all other sciences, it is in the position of being accountable for this path to itself and to everyone - everyone who is capable of effort after this object and therefore of following this path.¹

More recently, a thoroughgoing attempt to establish theology as a science was made by Prof. Thomas F. Torrance. It is his account which I wish to examine more closely.

Torrance reminds us at the beginning of his *Theological Science* that theology presupposes God's existence, and that the theologian himself 'knows' God.

In scientific theology we begin with the actual knowledge of God, and seek to test and clarify this knowledge by inquiring carefully into the relation between our knowledge of God and God Himself in his being and nature. Then in the light of this clarification we seek to be more and more open and ready for God, so that we may respond faithfully and truly to all that He declares and discloses to us of Himself. It is through this disciplined obedience of our mind to God as He gives Himself to be known by us that we advance in knowledge of Him.^{2a}

Theology, then, does not start by asking the question 'Is there a God?' or 'How can God be known?' To start by asking these questions would be fundamentally unscientific: we should never 'leave the ground' if we tried to answer them. A similar situation prevails in the natural sciences: in mathematics, for example, one does not start by asking whether a straight line is straight, or whether a point really is a point. One first assumes these premises, and then clarifies them or alters them in the course of the investigation -- the investigation that first presupposed the premise. Similarly in theology we begin by assuming the existence of, and the possibility of, knowledge about God, and then proceed to clarify or alter our knowledge and/or concept of God in the dialogue that ensues. Theology is essentially a dialogue, a dialogue between God and man. Since this activity involves a faith on the part of the theologian, theology necessarily assumes faith. In Torrance's view the dialogue, on God's side, is articulated primarily in Christ. "Christian theology arises out of the actual knowledge of God given in and with concrete happening in space and time. It is knowledge of the God who actively meets us and gives Himself to be known in Jesus Christ -- in Israel, in history, on earth."^{2b} Had God not spoken to man, there could be no theology, only anthropology:

Unless we have a word from God, some articulated communication from Himself to us, we are thrown back upon ourselves to authenticate His existence and to make Him talk by putting our own words into His mouth and by clothing Him with our own ideas. That kind of God is only a dumb idol which we have fashioned in our own image and into whose mouth we have projected our own soliloquies, and which we are unable to distinguish from our own processed interpretation.^{2c}

How then, may theology be seen as a science? Although each of the natural sciences has its own scientific methods which it has developed, so that physics proceeds in a different way from biology, geology from chemistry, and so on, there is nevertheless one thing that all the natural sciences have in common. The common factor is that each particular science pursues its investigations in the way which is appropriate for itself; further, that the appropriate way for each science is itself determined by the object of knowledge of that science, so that we come to know things, or investigate things, in the way which the objects we are seeking to know or to investigate themselves determine. If, for example, I want to discover what paper is made of, I must start with chemical analysis of some kind. But chemical analysis will not explain electricity which demands an experimental approach of a different kind. In such ways objects or entities to be investigated determine the method of investigation. Torrance expresses this idea by saying that an object develops its own 'mode of rationality', i.e. method of reasoning to be used in the investigation.

Only when the correct 'mode of rationality' is decided is the scientist in a position to learn from nature. He will then be forced to start asking new questions about the object of his enquiry: when answered these will raise further questions, and so on, till a body of knowledge is built up. Knowledge gained through the correct 'mode of rationality' always calls into question the preconceived ideas of the investigator. Objective thinking, rational investigation, scientific objectivity, therefore, always lays itself open to the nature and to the reality of the object being investigated, so that it may take new shape from the nature of the object itself. Torrance concludes, therefore, that the way of scientific knowledge:

...is the way of acting and thinking that is no more and no less than the rigorous extension of our basic rationality, as we seek to act toward things in ways appropriate to their natures, to understand them through letting them shine in their own light, and to reduce our thinking of them into orderly forms on the presumption of their inherent intelligibility. Scientific activity of this kind is essentially open and flexible through fidelity to the manifold character of reality and is therefore universally applicable.^{2d}

Such a method, Torrance claims, is applicable to theology. Here too, we must seek to know and to investigate the object in question (God) in accordance with the 'mode of rationality' it (He) itself (Himself) determines. The 'mode of rationality' in the case of christian theology is a dialogue with a God who has revealed His being and nature in Jesus Christ who is His Word

incarnate. Jesus Christ, the incarnate Word of God, is the basic data of theology presented to us through the Scriptures and the christian church. Scientific theology, then, has its own 'mode of rationality': a knowledge of God in and through Christ Jesus which will reveal certain characteristics about itself.

1. God Himself determines our knowledge of Him. Just as in the natural sciences we allow the object of our enquiry to determine how it is to be investigated, so too in theology God Himself must determine theological epistemology. But here we note a curious inversion: we find that we can only know God because God creates in us the capacity for knowing Him. Knowledge of God comes by God's grace and not through man's own efforts, so that in theology discovery is replaced by revelation. In this theological condescension God "...acts critically and creatively upon our ideas, conceptions, categories, analogies, giving them an orientation and possibility beyond any power they have in themselves."^{2e}

2. Theological science involves personal knowledge through dialogue. It is only through conversation that I can get to know my neighbour and my assessment of him will be subject to change, becoming more accurate through successive encounters. An initial impression of stand-offishness might later, for instance, be changed to one of shyness. Similarly, by revision and refining, immature notions we may have had about God's nature will be subject to change. In the end there will result a theological 'model' leading to a deeper knowledge of God.³

3. In common with all other science, theological science has limitations. We cannot, as finite creatures, have a perfect knowledge of an infinite God; or 'peep behind the curtain' of His revelation in Scripture. At best we apprehend God rather than comprehend Him, the word 'apprehend' designating, unlike the word 'comprehend', only a partial knowledge. God Himself must ultimately remain a mystery. "It is because mystery belongs to the nature of Christ as God and Man in one Person that it would be unfaithful for us not to respect that mystery in our knowing of Him and therefore in our systematic presentation of our knowledge. It is upon this fact that every attempt to reduce knowledge of God to a logical system of ideas must always suffer shipwreck" says Torrance.^{2f}

4. Finally, theological science, like any other science, has its own mode of verification. In theology we cannot verify God's existence or His nature -- He verifies himself. In the natural sciences we may verify a theory by demonstrating that it withstands attempts at falsification, by checking that it passes various tests, (e.g. that it passes the test of 'Occam's razor', that it does not violate the laws of thermodynamics etc.) In theology there are no independent tests, for God proves Himself

and is His own verification. St. Paul makes this point when writing to the Christians at Corinth. It was not *his* words, he says, that were authenticating God, but God's Holy Spirit: "When I came to you, brethren, I did not come proclaiming to you the testimony of God in lofty words or wisdom...my speech and my message were not in plausible words of wisdom, but in demonstration of the Spirit and power, that your faith might not rest in the wisdom of men but in the power of God." (1 Cor. 2: 1-5)

To summarize, scientific theology presupposes what it seeks to investigate, makes use of its appropriate mode of rationality, has characteristics peculiar to itself as do all other sciences, involves personal dialogue, has limitations as to its scope and makes use of verification but by God only. A theology which denies these characteristics strays outside the theological mode of rationality and loses its status as a science.

The results of scientific investigations are reported verbally, but often with the aid of formulae, graphs and diagrams. The theologian, however, is confined to the use of words in order to convey meaning. Words are used to make statements of two kinds - coherence statements and existence statements. Coherence statements, assuming they are grammatically and syntactically correct, are checked by reference to other statements. For example, "I live in West Yorkshire" might be checked by such statements as, "I live in Leeds" and "Leeds is in West Yorkshire", and so might be classed as a coherence statement. An existence statement, on the other hand, is made and verified by reference to the reality to which it points. Thus 'my car is red' is judged to be true or otherwise by reference to the car itself. Now Torrance claims that theological statements are fundamentally existence statements (although of course they must also be coherence statements in that they must be grammatically correct, understandable, and coherent with other statements). He holds therefore that theological statements cannot be verified by reasoning, but only by reference to the reality to which they point. Therefore, "we can only 'convince' others of the truth of our existence statements if we can get them to see or hear the reality to which they refer...They must be brought to share our *intuition* of the object given."^{2E}

If, then, existence statements are to be verified by reference to the object to which they refer, it follows that the theological language, like other scientific language, must be able to reveal to us the reality in question. Just as a formula written by Einstein might reveal to us the relative nature of time, so theological statements must be able to reveal God to us. As such they are powerful: they point to a reality beyond themselves. Anyone, therefore, who thinks he understands theology when he knows the meanings of the words it uses is mistaken. In a sense the words of theology are transparent:

we must see 'through' them to God. Theological statements then, as existence statements "...presuppose, point to, and fall in with, the objective order in the nature of things which we experience, give it distinction and shape in our minds and by bringing our minds up against the transcendent aspects of form they mediate to us the basic concepts we require in interpretation and explanation."^{2h} The fact that theological statements often 'look like' other statements, yet are models through which God himself may be revealed, puts a severe strain on the language used. Inevitably they appear baffling and paradoxical to those who are unable to penetrate beyond the mere words themselves to the God to whom they point.

The most common criticism that is levelled at Torrance is that if theological science can only be verified by religious faith, by dialogue with God himself through Jesus Christ, then an unbeliever cannot falsify Torrance's claim. Torrance has fortified himself against all opponents by saying that only Christians can verify a christian theological science. Since being a Christian is part of the verification procedure, no secular philosopher can deal with, properly understand, verify or falsify any theological statement. Frederick Ferré sums up the argument thus:

This 'object' [of scientific rationality] is identified as the experience of meaningfulness and truth which Torrance calls the Word of God, and it defies normal reason because it is not of the same order as human mentality but comes to man 'from without.' Philosophers, with their ordinary canons of rationality, are no doubt supposed to refrain even from *examining* this claim, on which all depends, that the experience is in fact an ingression from a supernatural realm of being, meaning and truth.⁴

Ferré is complaining that because one has first to believe (a) that God exists, (b) that He has revealed himself, (c) that he has revealed Himself through his Word, and (d) that we can have a personal dialogue with this Word, the secular philosopher cannot therefore verify whether God exists or not, nor can he examine the claim that theology is a science. He can do neither of these two tasks because, Torrance maintains, he needs a religious faith to do so. There is a sense in which Ferré is right: if God did not exist then Torrance would still be able to put forward his thesis without anyone being able to deny it. Torrance seems to be saying that you can only agree or disagree with him when you have first agreed with him, which is blatantly illogical. If his claim cannot be examined 'from the outside,' then it is useless to examine it at all, because if you deny it Torrance will tell you that you can only judge its truth 'from the inside;' but since because of being 'on the inside' you therefore agree with him anyway, the whole process seems pointless. However,

if there *is* a God, then Torrance's claim is quite meaningful; if there is a God then no doubt He might be one who verifies Himself through a process of dialogue. The stance one takes concerning Torrance, then, will depend on the stance one first takes concerning God's existence.

Further Similarities Between Science and Theology

Torrance's claim, outlined above, is that theology may be counted as a science in that it seeks to know its object (God) by the means dictated by that object itself; theology may thus be said to have its own scientific method. Yet this is not the only similarity between science and theology; other parallels have already been touched upon in passing, but it will be useful to summarize them.

1. Both science and theology start with presuppositions. The idea that scientific research is possible in their absence is now dated — a topic that has often been discussed and need not further detain us here.⁵

2. Both science and theology make use of knowledge of a personal nature. Michael Polanyi has investigated this point in some detail.⁶ He compares activity in natural science to the skill of a craftsman passed on from master to apprentice and learnt not by reading but by watching and doing. "By watching the master and emulating his efforts in the presence of his example, the apprentice unconsciously picks up the rules of the art, including those which are not explicitly known by the master himself. These hidden rules can be assimilated only by a person who surrenders himself to that extent uncritically to the imitation of another."⁷ Similarly, much of the scientist's knowledge, Polanyi claims, is gained by actually 'doing' physics, biology, or whatever; the scientist will assimilate, just as the craftsman does, a body of knowledge which he may not always be able to define or articulate. Such knowledge, which includes many of the unverifiable assumptions of science, Polanyi calls "tacit," since the knower may not actually be aware of that knowledge, and may be unable to articulate it. Like a craftsman, the natural scientist will tacitly know, through his scientific 'apprenticeship', when a scientific report is sufficiently sound for the collection of data to be concluded. Such a decision is an essentially personal one; it is one that can only be made on the basis of experience. There is no way in which an (impersonal) computer could come to decide when the collection of data should cease; only the scientist, with his craft knowledge, can make that essentially personal decision.

In initiating a line of scientific research a scientist must make decisions of a personal nature. He must decide what will be of interest and of value to the scientific community. Were he to investigate any and every scientific fact the process of scientific discovery would end in what Polanyi has called a "desert of trivialities." Polanyi stresses that this decision is based on knowledge of a highly personal kind; it is outside the capability of a computer primarily because the question is one of value rather than of fact.

Personal decision also enters the picture when data are to be evaluated. Facts may support differing theories and a decision, 'a leap of scientific faith', may be needed to decide between them. Prosaic reasoning is not enough. As Polanyi puts it — "Major discoveries change our interpretative framework. Hence it is logically impossible to arrive at these by the continued application of our previous interpretative framework. So we see once more that discovery is creative, in the sense that it is not to be achieved by the diligent performance of any previously known and specifiable procedure."⁸

3. Natural science and theology both respect the objectivity of fact. It is only by 'dialogue' with fact that the correction of false preconceived ideas is made possible.

4. In natural science free use is made of what are called *models* of reality. These are not, or are not necessarily, replicas of what they represent. The chemist who represents atoms as billiard balls does not imagine that a super-microscope would reveal real microscopic coloured billiard balls, nevertheless the billiard ball *does* effectively mirror certain aspects of the atomic world, notably structure. Sometimes in science more than one model is needed to describe a single phenomenon; for example, both waves and particles may represent light.

Models can, of course, be misleading. There is always a temptation to 'overextend' a model by assuming that all the characteristics of the model will be present in whatever is being described. Thus the idea of light waves, a model originally suggested by the phenomena of sound and water waves, led to a fruitless search for the 'ether', the assumed medium of propagation corresponding to air or water.

Theology also makes use of models. There is a sense in which we may say that Jesus Christ is a model, for it is He who 'represents' the Father in incarnate form, (Jn. 1: 18; 14: 8-9; 2 Cor. 4: 6 etc.), yet there are features of the human Jesus (His physical body etc.) which need have no parallel in the Almighty God. To see Jesus is not to see God in His entirety. It is through Jesus, our theological model, that we penetrate to the reality of God Himself and apprehend but do not comprehend

the Deity. A useful description of the model-like nature of theological language has been published by Ian Ramsey.⁹ In theological statements Ramsey discerns the use of everyday language (e.g. 'good') which is then qualified in some way to make it appropriate to God (thus 'good' becomes 'infinitely good'). Theologically, the qualified model is understood, not by projecting the model directly on to God (so that God is then seen as being good in a similar way to man, but in greater degree), but by letting God, from His side, disclose Himself to us through the model (so that God's goodness is then seen as differing from man's goodness). In this sense, whether the model is ever understood properly is something outside our control.^{9a} Neither in natural science nor in theology do models exhaustively represent what they refer to -- rather, they are means by which we penetrate to the reality that lies beyond them and to which they point.

Differences Between Science and Theology

Despite the resemblance we have outlined there are significant differences between science and theology, to which we must now turn.

Firstly, ordinary scientific statements are testable by observation.¹⁰ Now it is of course true that observation involves a certain amount of interpretation: for example, what may be a 'flash' to a schoolboy will be an electrical discharge to a physicist; what may be simply 'weight' for most people will be complicated by the concept of gravitational pull for the scientist, and so on. Yet it still remains true that scientific assertions are normally testable by observations.

With religious statements it is otherwise. Thus, the statement that 'Jesus is the Son of God,' whilst it involves evidence from the Biblical documents, rests to a large extent on the faith of the believer who, in his own life, acknowledges Jesus as alive today. Again, the statement that 'Jesus rose from the dead,' whilst it too involves public evidence from Biblical (or other) documents, also rests to a large extent on the faith of the religious believer.¹¹ Such statements are not logically provable, which is as we should expect since we have already acknowledged that it is God who gives knowledge of Himself. Science then, begins with the assumption that there is a real, knowable world: theology begins with the further ontological assumption that there exists a divine Being.

Secondly, the role of interpretation is greater in theology than in natural science. When, in natural science, an experiment fails to give an expected result, the fact is usually, though by no means always, accepted as an indication that the theory which

predicted it is wrong. In theology God's failure to answer prayer, say for healing or for a coveted promotion at work, may be regarded as a positive answer intended to teach us in some way. Similarly, when prayer is answered in the expected way (say, prayer for healing) the Christian's attitude is probably less empirical than that of the natural scientist, for he at once interprets what has happened in terms of his belief in God. (Here, however, the difference seems to be less marked. Scientists often describe what they observe in terms of a relevant theory, gravitation, electromagnetic laws, evolution etc.)

Thirdly, in natural science every effort is made to check results which have an important bearing on theory, for science is undertaken within a scientific community which checks scientific claims: scientific memoirs to be published in journals are submitted to referees. Similarly theologians work within the community of God's people. But when one theologian checks the theology of another, it is assumed that he accepts the faith of the theological community. In the sciences no formal agreement as to faith is required. [It might fairly be argued that it must be there nevertheless: a nonbeliever in the laws of thermodynamics would not be asked to referee a paper on astronomy, or a flat-earthist one on geophysics, or a disbeliever in atoms one on the structure of an organic compound. - Ed.]

Another difference between natural science and theology concerns their respective claims to truth. In natural science hypotheses and theories are stepping stones to the discovery of scientific truths.¹² It is often said, however, that the practitioners in natural science can never be sure that no further stepping stones lie ahead, so that he can never know, for sure, that final truth has been discovered. Barbour expresses this view as follows: "No theory can be proven to be true. The most that can be said for a theory is that it is in better agreement with the known data and is more coherent and comprehensive than alternative theories available at the moment."¹³

No Christian would speak of theological truth in this way. Theology does not advance by the method of conjecture and refutation; the truth it knows is revealed in the person of Christ and is known to be true in a once-for-all sense.

Conclusion

Despite the differences between natural science and theology, Thomas Torrance claims that the resemblances are sufficient to justify fully the claim that theology is a science. Ultimately, of course, the claim is semantic and, by laying stress upon the differences rather than the resemblances, many are led to reject Torrance's claim.

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- 3 Cf. T.F. Torrance in *Science, Medicine and Man*, I, 1974, p.164ff.
- 4 F. Ferré, *Language, Logic and God*, (Fontana) 1970, p.135.
- 5 For discussions see this JOURNAL, 88, 64f, 74f.
- 6 M. Polanyi, *Personal Knowledge*, 1958.
- 7 Ref.6, p.53. See also J.R. Ravetz, *Scientific Knowledge and its Social Problems*, Harmondsworth, 1971, ch.3.
- 8 Ref. 6, p.143. Cf. I.G. Barbour, *Issues in Science and Religion*, 1966, pp.151f.
- 9 I.T. Ramsey, *Religious Language*, 1957, (a) p.79.
- 10 In writing this section I am indebted to D.D. Evans — in I.G. Barbour (ed.) *Science and Religion*.
- 11 A few theologians claim that the resurrection of Jesus *can* be proved independently by normal historical and archaeological tests, e.g. D.P. Fuller, *Easter Faith and History*, 1968. For myself I believe that the absence of Jesus's body can be proved in this way, but not His resurrection.
- 12 See K. Popper, *Conjectures and Refutations*, 1963, esp. chs. 1 and 10; *Objective Knowledge*, OUP, 1972, chs. 1 and 3.
- 13 Barbour, ref.8, p.147. Cf. Popper 1972 ref.12 ch.1; Polanyi, ref.6, ch.10.