

# [Thomas kuhns concept of a paradigm shift philosophy essay](https://assignbuster.com/thomas-kuhns-concept-of-a-paradigm-shift-philosophy-essay/)

I have been asked to write a short paper on Thomas Kuhn’s concept of a paradigm shift and if this could be applied to theology. In this assignment I am going to include some definitions of a paradigm shift, theorists work on paradigm shifts, Kuhn’s concept of a paradigm shift and whether this concept can be applied to theology.

Definition’s of a paradigm shift are as follows; Barbour (1998, p. 125) Thomas Kuhn defined paradigm as ‘ standard examples of scientific work that embody a set of conceptual and methodological assumptions’. Another definition of a paradigm shift Southgate et al (1999, p. 72) ‘ Kuhn’s central thesis is that scientific ‘ progress over the long term shows more a pattern of occasional dramatic and total transformation in our understanding of the world’. Encarta dictionary definition of a paradigm is ‘ in the philosophy of science, a generally accepted model of how ideas relate to one another, forming a conceptual framework within which scientific research is carried out’. All these definitions suggest that, it is to do with the world, and when a theory fails to prove its ideas, it will be replaced by another theory found to be more accurate.

Karl Popper theory on paradigms – Falsification a hypothesis is scientific, if it has the potential to be disproved by observation. For Popper, science is the method of trial and error, of conjectures and refutations. Criticism is important to the scientific method of objectivity. Scientific rationality is founded on the latest project of reason, rationality, doubt, criticism. For science to be able to have reason I will needs its ally and foundation, scientists must adapt a critical attitude and must be open to criticism. Scientific theories are hypotheses from which can be deduced statements testable by observation; if the appropriate experimental observations falsify these statements, the hypothesis is disproved. If a theory survives efforts to falsify it, it may be uncertainly accepted. No scientific theory, however, can be decisively established. Popper (1992) state that ‘ my point of view is briefly, that our ordinary language is full of theories; that observation is always observation is light of theories’. An example of this could be all swans are white, but one day this statement can be inaccurate if someone sees a black swan. Southgate et al (1999, p. 66) state that ‘ even one counter instance falsifies it in just the way that it took only one sighting of a black swan to falsify the belief that all swans are white’.

Another person who has done work on this was Quine, born on (25th June 1908 – 25th December 2000). He thought that you should be able to modify the experiment or data collected, instead of using the falsification assumption. Southgate et al (1999, p. 69) state that ‘ consequently it is never possible to point to one crucial experiment which serves to falsify a theory in a straightforward fashion for it is always possible to salvage it by making adjustments’. I agree with Quine that you should be able to make changes to experiments, instead of the experiment being written off as being untrue, because something else has come up.

The main features of a paradigm are as follows; that all data are paradigm dependent which means no observation are required during experiments. Paradigms are resistant to falsification this is to do with the information gathered cannot be proved false. Barbour (1999, p. 126) state that ‘ discordant data, as we have seen, can usually be reconciled by modifying auxiliary assumptions’. This statement suggests that if there is a change in data, it could be adapted to make it correct . There are no rules for a paradigm unless there is a change in revolution. Barbour (1998, p. 126) state that ‘ Kuhn initially maintained that criteria for choice are themselves paradigm dependent’. The previous paradigm must have come under great stress through the increase of differences between another paradigm, but another competing paradigm must be available to take its place.

Kuhn thought that scientists always make assumptions. There are no purpose criteria to judge new scientific suggestions. There are no such things as meaningless facts in science, so Kuhn thought Popper’s idea inaccurate. We are not stuck in the same paradigm forever which can come under a lot of pressure and when the paradigm comes under strain this will create a paradigm shift. Ptolemy and Copernicus both thinkers worked in two different paradigms. Kuhn (1996 p. 150) “ The transition between competing paradigms cannot be made a step at a time, forced by logic and neutral experience , it must occur all at once though not necessarily in an instant or not at all”. No theory neutral observation, no single logic of testing, scientist’s values and commitments influence scientific results, science is not cumulative and sometimes theories are abandoned.

In Ptolemy’s system the Earth is at the centre of each planet’s circular orbit, the reasons for this was studied by Southgate (1999, p27) he suggested that ‘ because it was the coldest, most impure place in the cosmos and it would therefore fall as far as it could – to the centre’. Ptolemy attempted to make the observations of the changing positions of the stars ands planets consistent with a geocentric worldview. On the other hand the Copernican theory was that the sun was at the centre of the orbit. The anomaly of retrograde motion (is explained by the fact that planets further away from the sun move more slowly than those close to it. For example the observed retrograde motion of Mars occurs because the Earth passes by at a faster rate. Retrograde Motion

There are two phases of science which are normal science (work within an established paradigm). Problems are solved by adjusting theory to fit central set of assumptions. Current paradigm dominates and is largely accepted by scientists in that field. Barbour (1998, p. 125) state that ‘ a paradigm provides an ongoing research community with a framework for normal science’. An example of this could be when local schools compete against each other, to see who does better and achieve the better grades. Kuhn (1996, p. 163) ‘ Scientific progress is not different in kind from progress in other fields, but the absence at most times of competing schools that question each others aims and standards makes the progress of a normal-scientific community far easier to see’. Scientific Revolutions (Paradigm Shifts) emerge out of a growing worry among a group of scientists that the anomalies facing the paradigm have reached a crisis point. An alternative way of making changes to current information, the scientists will look for a new experiment. Barbour (1998, p. 125) state that ‘ instead of simply acquiring further data or modifying theories within the existing framework, some scientists look for a new framework’.

Some problems with Kuhn’s theory are that applying the idea of ‘ normal science’ is unclear, are different paradigms working all the time, he over stresses the differences between paradigms, how do we know when there’s a revolution or a change within a paradigm. To help answer this question Southgate (1999, p. 73) has discussed this in his book which states ‘ Kuhn referred here to the ‘ incommensurability’ of competing paradigms’. This means that paradigms can not be compared to one model to another, but must just change to that model. The new paradigm and the new data in this paradigm is important, you can use some of the old data and reinterpret this. Another problem was that science does seem to be cumulative.

In this section I will look at Kuhn’s concept and see if these can be applied to theology. Barbour (1998, p. 127) state that ‘ Religious tradition transmits a broad set of metaphysical and methodological assumptions that we can call a paradigm. This suggests that in religion they have ideas which can be seen as a paradigm, such as different faiths have different teaching and style of living. The history of religion and theology progresses in similar way to science – by a series of paradigm shifts e. g. Luther and Aquinas. Van Huyssteen Kuhn shows us a model of rationality for systematic theology, which means theology, can be seen as rational. Systematic theology interprets metaphorical language to construct theories in response to concrete problems. Van Huyssteen (1989, p. 190) stated that ‘ the rationality of a theological statement, theory and conceptual model is no longer seen as dependent on its supposed ability to state the truth unproblematically, in fundamentalist manner’.

In conclusion from doing my work on Thomas Kuhn I have found that his ideas on paradigm shifts were interesting to learn about. This is because his features of paradigms that observations are not required during experiments, information cannot be proved to be false, and so this means that Kuhn didn’t agree with Popper’s theory. A new paradigm shift can only happen if their old paradigm is under constrain. Paradigm shift has occurred between the Ptolemy and Copernicus model. Kuhn’s concept can be applied to theology because they can create a paradigm from religion same to as science. If scientific and theological methods are similar, then theological knowledge is no less valid than scientific knowledge.