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Thomas Kuhn's Paradigm Shift and Social Science: A Theoretical Analysis[1]

[1]**Justine Thomas & [2]Sanusi Mohammed Suleiman**
Department of Political and International Studies,
Ahmadu Bello University, Zaria, Kaduna State, Nigeria
Department of Arts and Social Sciences,
Waziri Umaru Federal Polytechnic, Birnin Kebbi, Kebbi State, Nigeria

Abstract

This paper examines Thomas Samuel Kuhn's paradigm shift thesis as an alternative explanation of the history of the development of science that replaced the previous perspective of a steady, cumulative progress in scientific knowledge, and theoretically analyzes the extent to which the thesis can be useful in explaining the progress of social science knowledge. Kuhn saw that discontinuities or a set of alternating normal and revolutionary phases of the developmental periods characterise the historical development of science. The central postulation of Kuhn's paradigm thought and the structure of scientific revolution are significantly discussed. Kuhn's philosophy was not spared by critics, yet his ideas reveal an important fact, namely that the generation and development of scientific knowledge depends on a specific set of practices and ideas, called paradigms, which are unique to a specific community and to a particular time. This feat open up the possibility of more particular, contextualized explanations of change instead of the global scientific method, including the social sciences if some theoretical exceptions, based on contemporary empirical evidences are integrated.

Keywords: *Paradigm, Paradigm Shift, Scientific Community, Consensus, Anomaly, Incommensurability*

Corresponding Author: Justine Thomas

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Background to the Study

The paradigm shift discourse provides the theoretical milieu for understanding the changing trends that inform and characterise scientific progress, and also gives insight into the possible alternative routes to scientific innovation, especially in the face of recalcitrant anomalies that require scientific solution. This paper theoretically examines Thomas Kuhn's paradigm shift thesis as an alternative explanation of the history of the development of science that sought to replace a previous perspective of a steady, cumulative progress in scientific knowledge. It is an attempt to theoretically analyse the extent to which the thesis can be useful in explaining the progress of social science knowledge. Thus the paper is divided into sections that: (i) provide the academic background of Thomas Kuhn, (ii) concisely explain his paradigm shift thesis based on his book, *The Structure of Scientific Revolution*, (iii) enumerate the critique of the thesis, and (iv) discuss the applicability of the thesis in social science discourse. These are then followed by the conclusion.

Methodology

The paper employed the methodology of critical analysis of qualitative, secondary information from Thomas Kuhn's *The Structure of Scientific Revolutions* (1970) as the main source of information, in addition to other relevant texts and journal articles. The data is analysed qualitatively to provide a simplified explanation of the paradigm shift thesis and its critique, and to discuss its relevance for social science knowledge. The idea is to evaluate and review Kuhn's paradigm shift perspective so as to arrive at an understanding of its extent of applicability to contemporary social science analysis.

The Academic Background of Thomas Samuel Kuhn (1922-1966)

Thomas Kuhn's major work (1970), *The Structure of Scientific Revolutions*, is the first full published report on a project originally for several years, particularly since he was a postgraduate student in theoretical physics. It was a fortunate involvement with an experimental college course that treated physical science for the non-science students that exposed him to the history of science. To his utter surprise, that exposure to out-of-date scientific theory and practice radically undermined some of his basic conceptions about the nature of science and the reasons for its special success (Kuhn, 1970). This resulted in a drastic shift in Kuhn's career plans from physics to history of science, and then also, gradually from relatively straightforward historical problems to the more philosophical issues that had initially led him to history. This essay, except for a few articles, is the first of his published works in which these early concerns are dominant. He says this about the work: "In some part it is an attempt to explain to myself and to friends how I happened to be drawn from science to its history in the first place" (Kuhn, 1970:v).

Kuhn devoted time to study the history of science proper, especially the writings of A. O. Lovejoy, Alexandre Koyré, Emile Meyerson, Hélène Metzger and Anneliese Maier. This group, more clearly than most other recent scholars, has shown what it was like to think scientifically at that time, although he questioned a few of their particular historical interpretations. However, their works were second only to primary source materials in shaping his conception of what the history of scientific ideas can be. He also explored fields

that in which research then disclosed problems like the ones history brought to his attention, although they have no apparent relation to history of science. Eventually, Kuhn delivered eight public lectures in 1951 on "The Quest for Physical Theory," and the next year he began to teach the history of science (Kuhn, 1970).

Thomas Kuhn's Paradigm Shift and Scientific Revolution

Thomas Kuhn's *The Structure of Scientific Revolutions* (1970) is considered as one of the most important books on history of science in the 20th century. After the book was published, scholars began to examine scientific disciplines in which science was regarded not as the most esteemed, untouchable product of the Enlightenment, but as just another subculture. Kuhn viewed the communities (i.e. scientific communities, rather than individuals) as the basic agents of science and that communities must be characterized by the specific cognitive values to which they are committed (Agbo, 2017; Orman, 2016; Kuhn, 1970).

Before Kuhn, the view of science was dominated by philosophical ideas about the scientific method. For example, the positivists assert that a scientific change is necessarily progressive, and the path of scientific change is cumulative, objective and linear, among other things. In other words, scientific progress was seen as the addition of new truths to the stock of old ones, or the increasing approximation of theories to the truth, or at least the correction of past errors. Whereas the then existing version refers to the steady, cumulative progress in scientific knowledge, Kuhn saw discontinuities or a set of alternating normal and revolutionary phases of the developmental periods (Orman, 2016; Kuhn, 1970).

Kuhn in *The Structure of Scientific Revolutions* (1970) contends that science evolves when there is a consensus among scientists about basic ontological commitments, explanatory principles, general methodology, research priorities, and guidelines which should be followed, when scientists share a paradigm. Scientists' sharing a paradigm is in the stage of normal science. Yet, real progress did not result from the puzzle-solving of normal science. Rather, true breakthroughs arise in a totally different way: when the discovery of anomalies leads scientists to question the paradigm, and this, in turn, leads to a scientific revolution that he termed paradigm shift. Summarily, Kuhn claims that a science does not progress as a linear accumulation of new knowledge, but undergoes periodic revolutions called paradigm shifts. This happens whenever the fundamental assumptions of the paradigm become subject to widespread doubt, and there may be general consensus that a replacement must be found (Kalman, 2016; Orman, 2016; Kuhn, 1970).

Therefore, scientific revolution occurs when scientists or a scientific community encounters anomalies that cannot be addressed by the generally accepted paradigm within which scientific progress has hitherto been made. Consequently, one among the competing approaches to resolving the anomaly or anomalies will eventually produce a solution that gains a large and loyal following in the scientific community because of its universality and prospects for future research. This solution becomes regarded by its proponents as a concrete, definitive scientific achievement that defines by example how research in that discipline should subsequently be carried out. By and large, a new paradigm which gains its own new

followers is formed, and an intellectual battle takes place between the followers of the new paradigm and the hold-outs of the old paradigm. Thus progress of scientific change shows this pattern: normal science, crisis, extraordinary science, and a new phase of normal science (Orman, 2016; Kuhn, 1970).

In general, a particular scientific paradigm goes through some distinct phases, the sum of which forms what Kuhn calls a scientific revolution. The structure of scientific revolution is concisely discussed below.

The Essential Tension

At a point in revolution, there is what may be called a crisis generating level. In the development of a particular paradigm, there is bound to be a battle between tradition (stasis) and innovation. Discovery does not have to do with staying permanently with a particular tradition. Discovery commences with the awareness of anomaly. Such awareness induces crises. A science is said to be in crisis when its practitioners are no longer convinced that the current paradigm has the resources to allow for the resolution of the mounting tide of anomalies. During normal science the inability of a scientist to solve a particular problem will reflect primarily on the capacities of the scientist.

A science in crisis is unstable if the central theory and paradigm which it is a part are in serious doubt, and then the paradigm will no longer be a suitable vehicle for guiding further research. A new paradigm is needed, one not beset in the same way by serious and intractable anomalies. During a crisis period the usual conservative structures relax somewhat, and truly innovative ideas and practices may emerge as serious alternatives. The repeated failure of established normal scientists to handle the crisis situation, together with the emergence of a promising new approach may trigger a revolution (Agbo, 2017; Kuhn, 1970).

Pre-paradigm Science or Pre-science

In this phase, a scientific community lacks a central paradigm, but from which as archetypal begins to emerge. In pre-paradigm science, scientists start from zero level and attempt to build a science from scratch. Because of the absence of paradigm to organize the data, all facts appear to be equally relevant. So, science begins from simple data collection with no real organizing principle or method. There is then a proliferation of facts and hence little progress in solving problems under these conditions because of the competition among the various schools. Kuhn claims the overall result of this situation appears to be "something less than science" (Agbo, 2017; Kalman, 2016; Kuhn, 1970).

Extraordinary Science

Extraordinary science is created by the problems left over by normal science. The movement from normal science to extraordinary science involves two key events: first, the paradigm's boundaries become blurred when faced with recalcitrant anomalies; and second, its rules are relaxed, leading to a proliferation of theories and ultimately to the emergence of a new paradigm. Often the relaxing of rules allows the practitioners to see exactly where the problem is and how to go about solving it. In other words, the scientist in crisis will always try to

speculate theories that, if successful, may disclose the road to a new paradigm, and if unsuccessful, can be surrendered with relative ease (Agbo, 2017; Kuhn, 1970).

Paradigm Science

This is also referred to as normal science, a phase where the scientific community attempts to enlarge the central paradigm design by a sort of puzzle-solving. When observations or the results of research fail to conform to the paradigm, they are seen as the error of the researcher, rather than refuting the paradigm. Thus the paradigm drives the research, building upon itself, becoming more consolidated and accomplished. However, as mentioned earlier, as more and more anomalous and incongruent results pile up, the paradigm of the scientific community reaches a crisis. Kuhn (1970) argues that before scientific investigation can ever begin in some field, the concerned scientific community has to agree upon answers to fundamental questions: What is observed? What is research? And how is it interpreted? Every concept and procedure has to align with principles framed by the paradigm.

Kuhn (1970:175) admittedly used the term paradigm in two different meanings. In the first one, paradigm designates a disciplinary matrix or what the members of a certain scientific community have in common, that is to say, the whole of techniques, patents, and values shared by the members of the community. Paradigm as a disciplinary matrix is a set of answers to some questions that are learned by scientists in the course of the training that prepares them for research and provides the framework within which the science operates. A disciplinary matrix is the entire theoretical, methodological, and evaluative framework within which scientists carry out their research. This framework constitutes the basic assumptions of the discipline about how research in that discipline should be conducted as well as what constitutes a good scientific explanation (Agbo, 2017; Orman, 2016; Kuhn, 1970).

Secondly, paradigm as exemplars on the other hand, refers to those successful aspects of science that all beginner scientists learn; they provide them with a model for the future development of their subject. The idea is that by repeating the process, eventually, if they have the attitude for it, students will learn how to apply these techniques to new kinds of problems that nobody has yet managed to solve (Agbo, 2017; Kuhn, 1970). In this second sense, the paradigm is a single element of a whole that acts as a common model or an example – paradigm simply means an example. The paradigm in this sense is just an example, a single phenomenon, a singularity, which can be repeated and thus acquires the capability of tacitly modelling the behaviour and the practice of scientists. Kuhn (1970) refers to an achievement of this sort as an exemplar, which refers to the initial concrete problem-solutions that students encounter from the start of their scientific education, whether in laboratories, on examinations, or at the ends of chapters in science texts. However, Orman (2016) insists that some of the technical problem-solutions found in the periodical literature that scientists encounter during their post-educational research careers and that also show them by example how their job is to be done, should be added to these shared examples.

Normal Science

Most science is what Kuhn calls 'normal science', because it is conducted within an accomplished paradigm. It involves elaborating and extending the success of the paradigm, for example, by gathering lots of new observations and accommodating them within the accepted theory, and trying to solve little problems using the paradigm. Hence, normal science is often said to be a 'puzzle-solving' activity, where the rules for solving puzzles are quite strict and determined by the paradigm. Therefore, most of everyday scientific practice is a fairly conservative activity in so far as, during eras of normal science, scientists do not question the fundamental principles of their discipline (Agbo, 2017; Kuhn, 1970).

Some examples of paradigm shifts include the cosmos of Ptolemy replaced by Copernicus and Newton, and the world of positivism and modernity replaced by post-modernism. And at a more micro-level, in the discipline of anthropology for instance, such shifts include the emergence and crisis in cultural revolution, followed by historical-particularism, followed by functionalism, followed by structuralism, and followed by constructionism (Agbo, 2017; Orman, 2016).

Critique of Kuhn's Paradigm Perspective

Kuhn was never deeply engaged by the wider effects of his claims, the philosophical and historical critiques led him to specify more carefully just what he meant by paradigm and normal science. Even today the term paradigm is very controversial and Kuhn himself revised its meaning and tried to answer his critiques' questions. Kuhn's use of paradigm was imprecise (Agbo, 2017; Orman, 2016; Kuhn, 1970). Furthermore, When Kuhn elaborated his analysis of the particular form of human knowledge, i.e., science, he had in mind the developments in specific disciplines such as chemistry, physics, and astronomy, which were the sources of the vast majority of examples presented as evidence of its allegations in *The Structure of Scientific Revolutions.* Of these sciences he chose to treat also the moments of their historical development in which they had offered the paradigms that are predominantly presented as such to non-specialist audiences (Guerra *et al.*, 2012).

Because this new epistemological thought was based on a deep knowledge of the history of science and, ultimately, of the hard sciences, Kuhn would not recognize such a paradigm shift in the social sciences where people can still use earlier ideas to discuss the history of science; after all, it was possible to apply it to the history of economics or other social sciences, as many papers had showed in the past years (Orman, 2016; Guerra *et al.*, 2012). Another problem Kuhn was accused of is that of being unsystematic in his works especially in *The Structure of Scientific Revolutions*: according to critics, Kuhn was never thoroughly trained as a philosopher (Agbo, 2017).

Another weakness of Kuhn's philosophy of science is that he has been accused of introducing the duo of irrationalism and subjectivity in science: the analogy between scientific revolutions and political revolutions has tempted commentators to think of a scientific revolution as a thorough and radical break with the past whose outcome is determined by highly contingent factors that are equivalents of the revolutionary mob, propaganda, coercion and so on

obtainable in political revolutions. Correspondingly, they think that while in normal science, what matters as a rational preference among competing theories is determined by reference to the paradigm, and in the revolution the absence of a paradigm means there will be no agreed standard of rationality. This is to say that scientific revolutions are irrational (Agbo, 2017).

Discussion: Paradigm Shift and Social Science

Social science is the science of man and his behaviour in his socio-economic and political environment. It is a relevant discipline because it answers to the need for a scientific understanding of individual behaviours in relation to other individuals and groups (Sociology), governance and power (Political Science), material needs (Economics), information need (Mass Communication, Development Communication), cultural attachment (Anthropology) and mindset (Psychology), among others. In other words, the social sciences address the practical issues of human existence in any society "(Adler, 2010; Salvilla, 2009).

As human society experiences progress from one stage to another, or goes through positive and negative watershed events, new phenomena and problems emerge, which in turn call for new theories, methodologies and concepts in social science in order to understand and consolidate or resolve them. Social science must of necessity take strides of progress in the form of developing new concepts, theories, methodologies and research/analytical techniques that can meet up with the responsibility of providing scientific understanding and resolution of issues that come with changing social circumstances '(Gosselin & Toka, 2007; Bawnet al., 2006; '——Banchoff, 2004).

The paradigm shift thesis of Thomas Kuhn (1970) mainly focused on the history of the development of physical sciences, rather than social sciences. The thesis, as shown above, tried to explain the systematic progress of scientific knowledge in the quest to understand the physical and relatively less changing world as more and more discoveries and information emerge through scientific observation undertaken through generally acceptable paradigm, including difficult problems. The objects of the study of physical sciences are much more fixed, stable and predictable than those of social sciences.

The social sciences study man and his ever-changing behaviour informed by different circumstances, interactions, interests and processes in society. Changes that characterise human behaviour and society, which constitute the objects of social science study, are more dramatic and less predictable than those in the hard sciences. Therefore, the paradigm shift thesis may be relatively useful for explaining social scientific progress only if some exceptions to Kuhn's thesis are entertained, when applying the concept in explaining the progress of social science knowledge about human behaviour in society. Some of the exceptions are noted below vis-a-vis conceptualisations of Thomas Kuhn:

Scientific Paradigm vs. Plurality of Paradigms

A paradigm refers to the generally accepted perspective of a particular discipline at a given time. Whereas Thomas Kuhn (1970) conceived paradigm or normal science as a one-

dimensional phenomenon wherein scientists are bonded together by one paradigm through consensus, the social sciences are characterised by multiple paradigms and their adherents co-existing side by side. For example, development can be understood from either the modernisation paradigm of Western scholarship or the underdevelopment and dependency perspectives of the Third World school of thought; society can be conceived within the Liberal or Marxist ideological frameworks; and international relations can be theorised using either the idealist or realist traditions, and all of these exist side by side and are equally viable dominant paradigms, sometimes complementary (Akpabio, 2005; Biersteker, 1989).

Incommensurability of Concept vs. Synthesis of Concepts

Kuhn's (1970) formulation posits that concepts of rival paradigms are incommensurate, and so new paradigms completely abandon concepts of old ones. However, in the social sciences, old concepts are not discarded because they still remain relevant for the new paradigm in explaining the new issues that the old paradigm could not explain. There is the possibility of combining different ideas into a complex whole, thus giving birth to what more or less may be referred to as synthesis – the new paradigm that not only projects new theoretical concepts and formulations but also integrates the relevant ones from the old paradigm "(Adler, 2010; Goldstein and Keohane, 1993). In Political Science, for example, the behavioural revolution did not abandon, but rather synthesised, the concepts that were applicable to the traditional paradigms that hitherto were in vogue.

Consensus of Scientific Community vs. Theoretical/Practical Merit of New Approaches

Thomas Kuhn (1970) emphasised the importance of the scientific community, bonded together by a consensus about how the scientific affair should be undertaken. In social science with its unique object of stud (i.e. human behaviour), the usefulness of a paradigm for understanding, explaining and predicting the changing behaviours of people is what makes it acceptable, whether or not all members of the scientific community accept and are agreed about its disciplinary matrix. Also, what may be appropriate for and applicable in one empirical context may not be in another, and what is acceptable by members of the community in one place (e.g. the Western hemisphere) may not be in another place (e.g. the Southern hemisphere).

Paradigm Shift vs. Paradigm Progress

Kuhn (1970) saw discontinuities or a set of alternating and revolutionary phases of the developmental stages in science history. However, what seems to be obtainable in the social sciences may be called a paradigm progress rather than a shift, because concepts of old paradigms at best could only be redefined to reflect changed or changing realities, but never completely discarded. So the steady, cumulative progress in knowledge seems to best describe the development of social science rather than paradigm shifts.

Conclusion

Thomas Kuhn's paradigm shift thesis as advanced in his *The Structure of Scientific Revolutions* (1970) has minimal theoretical accuracy for understanding what actually takes place in the process of the development of social scientific knowledge, although it provides an alternative

way of theorising about the history of scientific development in the physical sciences. In the social sciences, there is a plurality of paradigms which social science students use singly or in combination; there is a synthesis of concepts; the acceptance of paradigm depends not on consensus, but on its theoretical relevance for understanding real social phenomena; and instead of a paradigm shift, there is what we call paradigm progress where concepts of previous/other paradigms are redefined and expanded to reflect current realities. In political Science, for example, the emergence of a state-centric international system and the accompanying problems and wars birthed the idealist and realist traditions, then the neoliberal and neorealist approaches. In the 1950s the scientific revolution replaced the traditional and institutional approaches in Political Science, but the same, albeit redefined concepts remained useful for theoretical explanations of practical social phenomena. In a nutshell, the nature of the social science which is predicate on the nature of the objects of study, defy any and every theoretical absolutism, thereby giving room for intellectual innovations that accommodate both the plurality and syntheses of paradigms for better systematic analyses of social phenomena.

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Appendix: Definition of Key Concepts of Kuhn's Philosophy

There are some critical concepts that underline the core of Kuhn's paradigmatic philosophy, namely *revolution*, *anomaly*, *paradigm*, *paradigm shift*, *incommensurability*, *consensus* and *scientific community*, among others. This section gives concise explanations of each of the above mentioned concept for better understanding of Kuhn's paradigm theory of science history. Some of them have already be explained in the main work.

Revolution: The term revolutionis apt in two respects. First, it reflects the cyclical nature of change in mature science. The adoption of a new paradigm as a result of a paradigmatic shift or scientific revolution inaugurates a new phase of normal science. The cycle from normal science, to crises, revolution, new paradigm, and normal science is complete. Secondly, there is an intended analogy between scientific revolutions and political revolutions. In a normal political conflict, all concerned parties agree with what mechanisms and procedures of resolution are and what counts as a satisfactory outcome. Thus, a government may appeal to the support of the people in election, and if it is defeated, it will accept the result, passing the rein of power to some other party, as required by the constitution. But if these mechanisms and procedures fail to answer the problem in question, they will themselves be regarded as part of the problem. Therefore, a revolution does not operate within a constitution; it is necessarily unconstitutional. When a new political order and a new constitution are being sought, the old pattern of doing things and the old constitution will neither provide any way of determining which new order should be put in place nor give it legitimacy. Hence supporters of a new system will have to resort to other means, for instance force or propaganda, to ensure its victory of rival proposals (Agbo, 2017; Kuhn, 1970).

Anomaly: Scientific progress is a series of puzzle games, marked by transformative revolutions (Kuhn, 1970). For Kuhn, discoveries not only occur in terms of novel facts, but there are also inventions in terms of new theories. Both discovery of new facts and inventions begin with anomalies, with the acknowledgment that nature has somehow violated the paradigm-induced expectation that govern normal science. Anomalies are violations of paradigm expectations during the practice of normal science, and they can lead to unexpected discoveries. It must be noted that the detection of anomalies can only occur due to the background provided by a paradigm (Agbo, 2017; Kuhn, 1970). Anomalies are what generate crisis for a paradigm. The crisis is the point when a new paradigm which subsumes the old results along with the anomalous results into one new framework could emerge and become accepted by the community; this is termed revolutionary science.

Paradigm: A paradigm is a specific theoretical orientation that is based upon a particular epistemology and research methodology, reflective of a particular scientific community at a particular time in history. A paradigm constrains and directs the nature of type of research inquiries generated from that theoretical orientation, as well as provides the fundamental basis for evaluating the results of the generated research. A paradigm provides the questions for what should be asked, what phenomena should be observed, and how the observations should be interpreted. A paradigm reflects a consensus view of a specific scientific community, imbibed by the members of that community, either consciously articulated or, possibly, simply assumed and not intentionally acknowledged (Agbo, 2017; Orman, 2016; Guerra *et al.*, 2012; Kuhn, 1970).

Paradigm Shift: Whereas the vision of idea that preceded Kuhn's philosophy saw science as an accumulation of all that had been learned over history with each new law adding its weight to the mass of knowledge, Kuhn saw something else: a science profoundly altered by a significant new law that might affect all of that science. He envisioned a science as having, at any one time, a world view or paradigm of its environment, which describes everything that the science holds, all of its laws, beliefs, procedures and methods, everything upon which it bases its life. Kuhn felt that most scientists participate in normal science or any activity consistent with the existing paradigm, with relatively small gains as the rule. Eventually, anomalies arise which the paradigm cannot resolve; then some individual(s) may step out of the paradigm, and propose some new principle or law. If the scientific community accepts the proposed change, the science experiences a revolution or paradigm shift, and the new science proceeds with/as a new paradigm (Kalman, 2016).

Incommensurability: Kuhn argues that rival paradigms are incommensurable, in the sense that it is not possible to understand one paradigm through the conceptual framework and terminology of another rival paradigm, because the reality of members of a scientific community is determined by the paradigm through which they view the world. Only when they reach a crisis will a paradigm change occur. In other words, they are incommensurable because they involve different scientific languages; they do not acknowledge, address, or perceive the same observational data; they do not have the same questions to answer or the same problems to resolve; and they do not agree on what counts as an adequate, legitimate

explanation. Thus, the following dimensions of incommensurability can be respectively distinguished in Kuhn's thought: semantic, observational and methodological; Kuhn asserts that a scientific revolution causes important shifts in the meanings of key terms (Orman, 2016; Kalman, 2016; Kuhn, 1970).

Consensus: The ultimate source for the establishment of a new paradigm during a crisis period is community consensus, that is, when enough community members are persuaded by the techniques of the argument and not simply by empirical evidence or logical analysis. Moreover, to accept the new paradigm, a community of practitioners must be convinced that there is no chance for the old paradigm ever to solve the anomalies (Agbo, 2017; Kuhn, 1970). Thus, "What explains the possibility of normal science is the existence of a certain consensus" among the community of scientists. It is the consensus that breaks down during a crisis and which is reconstituted in the wake of a revolution (Fleck in Agbo, 2017:60).

Scientific Community: To further clarify the notion of paradigm, Kuhn discussed the nature of scientific communities, because the nature of paradigm is intimately connected with the nature of scientific communities. Kuhn noted that members of a scientific community are joined by common elements in their education and apprenticeship, and they see themselves and are seen by others as men responsible for the pursuit of a set of shared goals along the line of their discipline. From the analysis of scientific community, Kuhn asked: "What do its members share that accounts for the relative unanimity of their professional judgments?" The answer is paradigm or a set of paradigms. Paradigms govern the shared community life and not the subject matter. Entrance into the scientific community requires acquisition of its lexicon (Agbo, 2017; Kuhn, 1970).