UNIT 5 POSITIVISM, SOCIAL DARWANISM AND EVOLUTIONALISM

Structure

5.0 INTRODUCTION

The earlier Unit has provided an overview of the philosophy of science. In this Unit we are going to discuss positivism, an approach that sought to apply the scientific methodological principles of empirical observation, deductive reasoning, and formulation of laws or universal generalizations in the social sciences. It was envisaged that the knowledge thus acquired would help us to reconstruct and even create a better society.

The first section of the Unit traces the origin of positivism followed by the early developments and their consolidation. Though positivism became a powerful sociological method, it had its critics too. The next section focuses on the emergence of Social Darwinism and its critique. The last section deals with evolutionism (or social evolutionism).

5.1 LEARNING OUTCOMES

After studying this Unit you will be able to:

- Explain Positivism as an approach and the contributions of Comte and Emile Durkhiem;
- Understand Social Darwinism and its influence on social sciences;
- Comprehend the process of social evolutionalism and its transformation; and
- Critically analyse feminist intervention in science.

5.2 ORIGIN OF POSITIVISM

It is important to trace the historical process by which positivism became established in the discipline of sociology.

5.2.1 History of Origin

During the 17th century, modern science was evolving with the works of Bacon, Descartes and Newton. The new scientific inventions and discoveries aroused immense optimism and altered the cultural and intellectual landscape of Europe leading to what was called the 'Enlightenment' in the 18th century. This period was celebrated as a new age of reason, objectivity and criticality. It was a turning away from the medieval religious influences, and an assertion that scientific thinking would enable the creation of a better world. Science was viewed as objective and foundational knowledge. To survive in the new milieu, it was necessary to accept science and its ascending power.

BOX No.5.1

The Period of Enlightenment

The Enlightenment witnessed a period of spectacular triumphs in the natural sciences. Beginning with Galileo (1564-1642) and Isaac Newton (1642-1727) , natural science began a conquest of the natural world, which was a staggering success. This success did not go unnoticed in the social sciences. Rather, as many commentators have noted, the social sciences were born in the shadow of these triumphs. Furthermore, the methodological lessons that the natural sciences were teaching seemed to be very clear: if the methods of the natural science are strictly adhered to, then the spectacular success of these sciences could be matched in the social sciences. The social sciences had only to await the arrival of their Newton (Hekman1986: 5).

Source: MSO 02, Block 2, Unit 7 pg. no. 103

The 'new age' was characterized by the Industrial Revolution in the West, with expanding trade and commerce, and the rise of a middle class, the bourgeoisie, with greater financial and social capital. The emergence of the new elite, technologists, scientists and capitalists, altered power relations. They saw immense possibilities in science, and were strong adherents of a positivist scientific culture and mode of enquiry. There were dissenting voices, such as the 'romantics' who critiqued the worship of science and reason, and pleaded for imagination, subjectivity and creativity. But the positivist approach and values of science were sustained by the politico-economic establishment.

In contrast to common sense knowledge, science sought and provided systematic explanations, based on factual evidence for natural phenomena and technical innovations. For instance, for centuries people knew the function of the wheel. But modern science provided an explanatory principle, frictional forces that made sense of the operation of wheels. Whereas

common sense knowledge tends to rely on supernatural explanations, science studies and analyses phenomena, traces causes and effects to find explanations. What distinguishes science is its critical spirit, its insistence on empirical and logical evidence.

Possibly **Saint Simon** (1760-1825), one of the early sociologists pleaded strongly for extending the scientific outlook from the physical sciences to the study of human beings. It was an urge to create some kind of a social physics so that sociology could accomplish its historical mission, completing the unfinished agenda of the Industrial Revolution. Indeed, this close affinity with science gave birth to positivism.

Auguste Comte (1798- 1857), the founder of modern sociology, established positivism, as the most cherished doctrine of sociology. Yet, like Saint Simon, Comte too were witnessing the revolutionary transformation. In a way, he saw the contradiction between the two social forces: theological/ military and scientific/ industrial. Like a visionary, he felt that this contradiction could be resolved only by the triumph of the scientific/ industrial society. Scientists were replacing theologians as the moral guardians of the new social order, and industrialists were replacing the warriors. Comte too shared the Enlightenment assertion that it was possible for science to grasp the workings of the world. He believed that positivist or scientific knowledge was the inevitable outcome of the progressive growth of the individual mind as well as the historical development of human knowledge. Comte and Saint Simon collaborated so closely that it was almost impossible to distinguish the contributions of the two. It was at this juncture that they spoke of **social physics**, and the need to discover natural and immutable laws of progress which are as necessary as the law of gravity. But then they separated and Comte published six volumes of 'Course of Positive Philosophy'. And finally, during 1851-1854, he published four volumes of 'System of Positive Politics'.

Not all branches of knowledge, argued Comte, reach the positive stage simultaneously. The "lower" sciences, like astronomy, mechanics, chemistry and biology, develop fast. These are lower sciences because these are less complex, less dependent on the other sciences, and their distance from human affairs is far greater. But sociology, being more complex, and more near to everyday life, reaches the positive stage quite late. Comte professed sociology as a positive science that analyzes social phenomena and discovers the laws governing the relations among them.

5.2.2 Implications of Positivism

After reading about how positivism evolved, it is now not difficult to draw the implications of positivism.

Social phenomena are subject to strict determinism. Let us understand what it means. Even a child learning elementary mathematics would tell you that 2+2=4. If someone wants it to be different, it cannot be altered. In other words, 2+2= 4 is like a proven fact, say, like the law of gravitation. It prevails irrespective of our subjective states of mind. That is precisely the kind of knowledge positivism strives for.

Comte was a great proponent of science who believed in the essential Enlightenment notion of progress and in the new age of scientific objectivity. He sought to use positivist sociology to reconstruct his society. Thus, we see that Auguste Comte provided the intellectual foundation of positivist sociology. And possibly it was this French tradition that gave birth to one of the most distinguished classical sociologists, **Emile Durkheim** (1858-1917). Durkheim consolidated and elaborated positivist sociology. His book ***The Rules of Sociological Method*** (1895) gave a new momentum to the discipline, arguing for the study of what he called 'social facts'. You can understand this better through an example from your everyday life. Imagine one fine morning you choose to walk barefoot. Nobody has compelled you to do so; it is your free choice, your own decision. But then, imagine one evening you decide to visit a temple, and offer your prayers. Before entering the temple, you remove your shoes, wash your hands, and walk barefoot. Do you see a qualitative difference in these two experiences? In the second case you are not really free. Well, you may argue that it is you who have chosen to walk barefoot inside the temple complex. But that is because you have internalized the prevalent practice so well that it looks almost natural and spontaneous. Imagine what would have happened had you tried to enter the temple without removing your shoes. From the temple authorities to the other devotees: all would object to your act. In other words, walking barefoot inside the temple is a fact that exists out there as a thing. It has an independent force that transcends your own will. If you disobey the practice, you would be forced, coerced, isolated or ridiculed. Such facts, according to Durkheim, are called social facts. Everybody eats drinks and sleeps. **Social facts** are distinct from biological/physiological facts

- Social facts exist outside you. Imagine a tree that you are seeing from your window. It has a reality of its own. Even if you close your eyes and refuse to see it, the tree exists as it is.
- Social facts are endowed with coercive power that because of habit, socialization and internalization, we tend to experience as natural and spontaneous.
- Social facts need to be distinguished from their individual manifestations. Durkheim held that social facts 'acquire a body, a tangible form, and constitute a reality in their own right, quite distinct from the individual facts which produce it'.

Further, it is argued that social facts are 'things' whose factuality cannot be altered even if we want to do so. It is in this sense that external objects like a tree, a table and a chair exist as things, so, a tree needs to be seen as a tree, even if you hate trees.

Box No.5. 2

A social fact is every way of acting, fixed or not, capable of exercising on the individual an external constraint; or again, every way of acting which is general throughout a given society, while at the same time existing in its own right independent of its individual manifestations. Durkheim's (1964: 13)

Source: MSO002, Block 2, Unit 7

Durkheim, sociological explanations are objective and independent and cannot be reduced into psychological terms. It was in this sense that Durkheim (1964: 102) made an interesting point that 'a whole is not identical with the sum of its parts'. It acquires an independent character that is qualitatively different from those of its component parts. Society is, therefore, not identical with the sum of individuals. It is, of course, true that without individuals there is no society. But society transcends the individual. In understanding what are social facts, it is important to understand the supremacy of the collective over the individual.

Despite his strong plea for scientific sociology, Durkheim was deeply concerned about the moral foundation of society, its stability and order. Possibly modern/ industrial societies, and their implicit differentiation, specialization and division of labour made him confront a new problem. Gone were the days of simple societies characterized by 'mechanical solidarity'. But then, can modern societies survive merely through egotistic individualism and selfish interests? Durkheim continued to retain his belief in the moral supremacy of the collective, and he saw that the increasing differentiation in a modern society, paradoxically, would lead to more and more mutual dependence and create "organic solidarity". In this sense, Positivism, is both an assertion of science as well as a quest for order and stability.

5.2.3 Critique of Positivism

The appeal of Positivism was because it sought to give a 'scientific status' to sociology. The search for precision, objectivity, causality and value neutrality made it acceptable. Thus, positivist social science found its logical culmination in the quest for quantification, in the mathematization of social phenomena, in the urge to reduce qualitative human experiences into numbers and statistics. It has, however, been argued that Positivism undermines the creativity, reflexivity and agency of social actors. This sharp critique of positivism was made rather sharply in the 20th century by the Frankfurt School, who had developed a 'critical theory' based on the philosophy of Marx and Hegel and drawing upon a range of disciplines. The critical theorists asserted is that science had lost its emancipatory power. Instead, science itself has become an integral part of the establishment.

(Above sections have been adapted from MSO02, Block2, Unit 7)

Check Your Progress Exercise I

Note: I. Use this space given below to answer the question.

II. Compare your answer with the Course material of this Unit.

1. Why do you think social facts are coercive? Explain with the help of examples.

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2. What is positivism?

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Let us now discuss the concept of Social Darwinism that influenced social sciences, especially sociology and anthropology.

5.4 SOCIAL DARWINISM AND SOCIAL EVOLUTIONISM

The term Social Darwinism, draws upon Charles Darwin's theory of natural selection in plant and animal life in nature, and applies to human populations. Spencer used the phrase in 1864 - after reading Darwin's *on the Origin of Species* (1859).

The idea of Social Darwinism that evolved in the 19th century drew upon theories which held that biological concepts that explained natural selection and survival of reproductively successful organisms could be applied to human beings and society. It is a political theory and a philosophy based on notions of racial and economic superiority, which sees the wealthy and powerful as naturally and inherently 'strong'.

Generally, Social Darwinism is present as an ideology defending 'free-market economics and opposing the interventionist state". In this sense, Social Darwinism represents 'laissez-faire' and it is opposite of state-socialism or collectivism. In this respect, the term is reserved for that peculiar variety of individualism which was concerned less to assert the dependence of social evolution upon the operation of natural selection, than to claim the cessation or virtual cessation of natural selection due to the growth of party and government bureaucracies committed to the introduction and administration of welfare services. (Halliday, 1971 pg. 390-391)

Box No. 5.3

Social Darwinism is a set of ideologies that emerged in the late 1800s in which Charles Darwin's theory of evolution by natural selection was used to justify certain political, social, or economic views.

Social Darwinists believe in "survival of the fittest" – the idea that certain people become powerful in society because they are innately better.

Social Darwinism has been used to justify imperialism, racism, eugenics and social inequality at various times over the past century and a half.

Ref: https://www.history.com/topics/early-20th-century-us/social-darwinsim

Initially, scholars of anthropology were of the view that culture evolves in a uniform pattern and in a progressive manner. Later, based on the success of Darwin's theory of evolution, the Evolutionists, tracked the advancement of

culture through time and professed that, similarly cultures too progress from simple to complex forms. Initially it was thought that most societies pass through the same stages of progress to arrive, eventually, at a common end. Further, it was thought that change originate primarily from within the culture, thus, the process is internally determined. Thus, the notion of evolutionary stages ranging from primitive to civilized was fundamental to the new ideas of the nineteenth century social evolutionists.

Box No. 5.4

Progress was the key idea in 19th century theories of social evolution, and evolutionism was the common core shared by the most influential social theories of that century. Evolutionism implied that humans progressed along one line of development, that this development was predetermined and inevitable, since it corresponded to definite laws, that some societies were more advanced in this development than were others, and that Western society was the most advanced of these and therefore indicated the future of the rest of the world's population. This line of thought has since been disputed and disproved. In the second half of 19th century, evolutionary thought dominated the new field of social and cultural anthropology .

Ref: https://www.britannica.com/topic/evolutionism

5.5 FEMINIST INTERVENTIONS IN SCIENCE

You have already read about historical perspectives in science in the previous unit. Let us now examine the interventions made by feminists in this area. Feminist scientists seek to go beyond the flaws of objectivism and reductionism, in the search for alternative ways to describe and understand the natural world. Several feminist scientists have actively worked towards creation of alternative models – with alternative explanatory frameworks and ways of gathering and interpreting evidence. For instance, Barbara **McClintock** has made remarkable contributions to the study of plant genetics.

McClintock's theorization has not been accorded due respect. In fact, her theories are rooted in a very different view of nature. Her view of nature is very distinct from the conventional scientific view. For her, nature has a complexity that far exceeds the capacities of human imagination. Organisms have a life and an order that scientists can hardly begin to understand. She emphasizes, therefore, the need to "listen to the material" (McClintock, 1983). She criticizes contemporary research as being based on insufficient humility. She finds scientists too ready to impose their own ideas on the material. They hardly recognize anything that indicates something different. They try to fit new observations into old rules. In so doing, they miss much of what is actually going on. **McClintock** draws attention to the multiplicity that exists in nature. This multiplicity cannot be reduced to simple formulae. Scientists often try to force nature to fit into tightly defined rules of organization. In so doing, they miss out on the individual differences. She thinks that we should be content, in fact, to rest with the fact of difference

and multiplicity. We should not try to impose unified, all-encompassing laws upon nature. **McClintock n**otes that respect for differences can be a starting-point for relatedness. Finding a different fact, which does not fit our earlier theories, is a challenge to create a larger, multi-dimensional framework into which the new observation fits. McClintock's scientific passion motivated her to engage in years of patient observation, to understand each plant she worked with. This resulted in an ability to write, almost, the 'autobiography' of each plant.

The paradigm formulated by McClintock is of a world where mind and nature, self and other, co-exist, with integrity. Good scientific research does not require any fundamental division between researcher and object of research. In fact, good research requires a form of attention that enables us to progress to thinking and knowing about reality, in its own terms.

The goal of science is not the power to manipulate objects, but rather a deeper empowerment, that comes from understanding the world around us. In the positivist view of science (which was a dominant framework in the west), nature is a resource, to be manipulated and used for human ends. Nature is seen as inert and passive. Scientists display an arrogant confidence that they will be able to comprehend nature, reducing its functioning to certain universal principles and laws. Any new observation should fit into these scientific laws. A scientist like McClintock challenges these assumptions. Francis Bacon, father of modern science, laid the groundwork for positivism in the sixteenth century. In his articulation, mind dominates over nature, researcher dominates over the objects researched, and man dominates over woman. Nature was personified as feminine, and scientific knowledge was explicitly equated with the domination of nature. The goal of scientific knowledge was laid down, as mastery over nature. Power over nature was seen as the purpose of human knowledge. This kind of science sees the world of nature as fundamentally chaotic. The human mind is invested with the capacity to impose order on this chaos. Moreover, the methods of science require violence and aggression. As Bacon said, the methods of science "do not merely exert a gentle guidance over nature's course, they have the power to conquer and subdue her". In his book New Atlantis, written in (1664), Bacon described the ideal society as patently patriarchal, with the father exercising authority over all his kin, and the women virtually invisible (Bacon, 1664). Similarly, his The Masculine Birth of Time (Bacon, 1602) criticizes "the older science" as "female… passive, weak", and the new science as masculine and virile.

The establishment of the Royal Society in England in 1662 marked the institutionalization of the new science. Soon after the Royal Society was established, its Secretary, Henry Oldenburg, announced that its intention was "to raise a masculine Philosophy… whereby the Mind of Man may be ennobled with the knowledge of Solid Truths" (Mehrotra, 1994). In establishing the supremacy of the new science, scientists aggressively rejected earlier, 'feminine' forms of knowledge. For instance, thousands of women healers were labeled 'witches', and burnt at the stake. Bacon was one of the chief proponents of witch-hunting. It was considered that if ordinary,

illiterate women possessed knowledge of healing, they could only have acquired such knowledge from the Devil. Physicians (doctors) had a special interest in branding these women as evil, and seeing to it that they were destroyed. Scientific knowledge has rejected all other sources of knowledge, apart from 'objective' 'rational' thought. The scientist is projected as being 'objective', superior and detached. Empathy, emotion, experience, intuition and insight are all declared to be invalid as sources of knowledge.

For scientists like McClintock, this view of science is extremely limited, distorted and dangerous. It necessarily limits the scope of our research and understanding. In fact, the highly superior attitude of the scientist makes it impossible to properly 'know' anything. Humility and openness are necessary conditions for knowledge. Another feminist scientist whose work is immensely insightful is **Donna Haraway**. Haraway specializes in the study of primate biology. For her, it is problematic and false to think of organisms in terms of a path of (genetic) progress. But this narrative is deeply embedded in Western culture and academics. She has devised an alternative vision of the cyborg, which embodies some of her fundamental views about the nature of organisms. She uses the metaphor of the cyborg to critique traditional scientific frameworks with their reliance on identities and fixed binaries. Her vision of the cyborg implies fluidity, rather than fixity of living organisms. The organism is described as permeable and uncontrolled. This kind of description has serious implications for subjectivity and selfhood. She emphasizes flow across boundaries, rather than physical boundedness. Organisms, as she describes them, retain hardly any sense of being entities. Certainly, they are not the fixed entities that children are taught about, in school science classes! Rather, organisms are fluid and constantly changing. They seem to vanish into webs of complexity. Nor do they have permanence. Rather, they are simply "strategic assemblages" that last only momentarily (Haraway, 1991).

Thus feminist scientists have contributed enormously to entirely different ways of conceptualizing organisms, individual entities, and the world of nature per se. However, most scientists carry on as if such interventions have never been made. Either they are ignorant of the interventions, or unable to open themselves to explore these new ideas. Many scientists continue to be extremely prejudiced, in ways that spill over into their research. Scientists may have patriarchal biases, which influence their observations and conclusions. Conditioned by their patriarchal thinking, they may assume that differences between the female in male (in human and other species) are very basic and fundamental. However, feminist scientists may begin with a more open mind regarding sex differences. This may lead to quite different observations, and different conclusions. For instance, when biologist Lesley Rogers discovered asymmetry of brain function in chickens, many scientists assumed it was genetically programmed (Rogers, 1988, p.50-51). However, through further research she showed that the asymmetry depended on complex interactions between environmental, genetic and hormonal factors. Testosterone can reverse the direction of asymmetry. Thus, she showed that there is no unitary or reductionist explanation for the asymmetry. Further, sex differences are the result of a complex interplay of factors. It is not as if

testosterone is the biological cause for sex differences in human brain asymmetry. There is ample evidence by now, from several studies, for the inseparable interaction of genes and environment, yet most animal researchers continue to assign unitary genetic deterministic theories for asymmetry in animals. Theories of biological determinism in animals are often extended to similar theories about animals. This can be very harmful socially and politically. This section is adapted from the Unit 4: Feminist Reading from the course MWG 001: Theories of Women's and Gender Studies.

Check Your Progress Exercise II

Note: I. Use this space given below to answer the question.

II. Compare your answer with the Course material of this Unit.

1. Define social evolutionism in your own words.

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2. In what way, McClintock's theorisation of plant genetics different? Give any two points in support of your answer.

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5.6 LET US SUM UP

In this unit we have discussed the antecedents of positivism in the context of tremendous strides made in the sciences and of the general milieu of Enlightenment. Auguste Comte is considered the founder of sociology for he tried to conceive of similar methodology for the social sciences and the study of society. Positivism, as we can see, had a tremendous impact on sociology and in some ways helped establish it as a discipline. The propositions and theories of Comte have, however, been refined especially by Durkhiem. The unit also deals with feminist interventions in science as an alternative method to understand the natural world.

5.7 UNIT END QUESTIONS

1. Discuss the origin, implications and the critique of positivism.
2. Trace the evolution of Social Darwinism.
3. What is meant by social evolutionism? Explain.

5.8 REFERENCES

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5.9 SUGGESTED READING

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