

# *Chapter I*

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# Chapter I

## Introduction

American literature has a mixture of exuberant writers from the beginning of the seventeenth century. In American literature, many changes have occurred over the last thirty years. The changes in writings depend upon the changes in culture and lifestyle of people. The development in industrial and technological fields alters the lifestyle of the people. As a corollary, diversity emerges in culture. This diversity is responsible for producing many varieties in literature. American literature has been molded by its history. It has produced many genres and subgenres. It keeps flourishing in the day-to-day scenario.

This chapter traces the history and development of anthropology, anthropological writers from Herodotus to Marcel Mauss and the sub-disciplines of anthropology. A detailed study of cyborg anthropology is done. This chapter also traces the history of American literature from the beginning of the seventeenth century to the contemporary science fiction writers of Neal Stephenson. A glimpse of Neal Stephenson's works is given. The structure of the thesis is discussed.

The prehistory of anthropology handles a number of issues which explain the difference between mankind and animals; nature and culture; the inborn and the learned intellects; and the sensual body and the conscious mind. Anthropology became a major discipline only at a later stage. It is developed through gradual process because of the two different genres — travel writing and social philosophy. When these two writings are fused with anthropological aspects, anthropological studies appear. The book *Between Anthropology and Literature* depicts that “travel and writing therefore, are forms of

displacement through other worlds” (Angelis 162). After the arrival of anthropology, cultures of colonized and unexplored territories are examined scientifically by anthropologists. Thus the anthropologists of different periods are responsible for the development of anthropology.

Anthropology is a discipline that has human diversity. The sphere of human life has numerous differences. These diversities are based on caste, color, gender and race. The variations vary from place to place all over the world. It may be due to food, clothing, culture, language, physical appearance, shelter, ornaments, religion and lifestyle. Thus anthropology is the study of uniqueness and variations of human life. Anthropology is unique because it has interconnections and interdependence in all aspects of human life. David Lewis says “Reluctant Participation”, in which anthropologists have to be involved actively during their research (Lewis 2). The overlapping of different fields of anthropology occurs due to the deep connections of interdependency. Anthropology studies the complexities of human life in all places and time. In the book *Cultural Anthropology*, it is mentioned that “Anthropology has been called the most humane of sciences and the most scientific of humanities – a designation that most anthropologists accept with pride” (Haviland 28). Anthropology looks deeper in each aspect of human life for better research. Anthropologists study human life in all aspects including their biology, culture, society, language, family, politics, history, economics, technology, art, medicine and so on. They give their deep involvement with the people of all time and places. Not only anthropologists but researchers from other fields also contribute to their research.

The history of anthropology begins from the west, especially in four western countries: The USA, Britain, France, and Germany. It is believed that the ancient Greeks differed quite completely from the people of other countries. By looking into the world of Greeks, it is assured that Greeks are surrounded by the traditional Iron Age where family and kinship are the main social units. They are connected to the outside world through trading with the urban settlements along the coastal areas of the Mediterranean and Black sea. Through trading, they developed knowledge from the people of different countries. Anthropology has its roots from a very ancient period. Traveling paves way for studying and observing culture, language and geography of different people and countries.

*Anthropology: An Introduction to the Study of Man and Civilization* explains “History, archaeology and geology teach man’s age and course on Earth” (Tylor 34). Many ancient writers write about people of their period and distant past. The history and development of anthropology can be analysed through the writers of different periods from the past. Herodotus, Ibn Khaldun, Ibn Battuta, Michel de Montaigne and Rene Descartes are the writers who write from the anthropological perspective.

Herodotus (c. 484 – 425 BCE) is born in a Greek Colonial town Halicarnassus, which is known as Turkey at present. As a young man, he begins to travel to many places and gains knowledge from many foreign people. This allows him to write travel narratives. He has written his experience by comparing both similarities and differences of various societies. His descriptions on language, dress, political and judicial institutions, economics and crafts are very much readable. His books are the only written source about the people

of the distant past. He utters that the culture of Greek is dominant in the west and the Persian culture is dominant in the East. The research on society, people and their culture begins from the period of Herodotus. Anthropology has begun to develop from this stage.

Throughout the middle age, Europe was rich in science, politics and economics. The rise of Islam in seventh century paves way for Arabs to conquer the territories from Spain to India. At this period, the Mediterranean world has sophisticated life. Ibn Khaldun (1332 - 1406) is a great Arab historian and social philosopher of this period. He has written the history of Arabs and Berbers with a long critical introduction. He is the person to develop the first non-religious social theories, which are the cornerstones of sociology and anthropology. Khaldun stresses the importance of kinship by creating and maintaining a sense of harmony and mutual commitment among the members of the group.

Ibn Battuta (1304 - 1369) is a contemporary of Khaldun. He has traveled widely in the world of pre-industry. *The Rihla (Travels )*, written in Arabic language, is his major work which was completed in 1355. This work holds much knowledge about the land of Arabs and interprets other cultures. Apart from this, there are some other works that are considered to be the forerunners of later-day anthropology. Books like *The Voyage and Travels of Sir John Mandeville*, and *Knight*, which are written by an anonymous author, depict the journey through Asia. Marco Polo has written about his journey towards China in his untitled book. Many sea voyages pave the way to explore new places, people and their culture. Eriksen explains this in his *History of Anthropology* as “These journeys – to Africa, Asia and America – are often described in the West as the ‘Age of Discovery’, though the ‘discovered’ peoples themselves may have had reason to question their greatness” (5). This “Age of Discovery” has an important place in the

development of anthropology (Eriksen 5). In many cases, the writers and the anthropologists failed to explain more about the people they have visited. Instead the writings speak more about their own background. It is mentioned that “these descriptions are often denounced as telling us more about the anthropologist’s own background than about the people under study” (Eriksen 7).

Michel de Montaigne (1533 - 1592), a French Philosopher, has written on numerous large and small issues among the common people. He writes mostly about the remote people that make him appear as a real cultural relativist. His work, *Le Bon Sauvage* translated as ‘The Noble Savage’ is about the stateless people, who appear as the common heritage of anthropology.

Rene Descartes, a Frenchman, is considered to be the founder of modern philosophy. He pays attention between consciousness and spiritual life; and the material world and human body. All his philosophical thoughts have obvious truth. Philosophers and the writers study people, their culture, belief and the way of living in different societies even before the term anthropology becomes a discipline. These writers have ideas that are relevant to anthropology. The writers like Montesquieu, Henry Home, Adam Ferguson, John Millar, Auguste Comte, Henry James Sumner Maine, Sir Edward Burnett Tylor, Sir James Frazer and Emile Durkheim are from different fields but have anthropological approach in their writings.

Montesquieu (1689-1755) is a French Judge and political philosopher. During the eighteenth century, his writings throw light on sociological thought due to lack of proper understanding of politics from people’s side. He says that the relation between different societies can be discovered by comparing the observations. He examines different ways

of social life in different societies in European countries through his travel experience. His method of interpretation is explained as “we should explain the laws by the laws, and history by history, as a social fact can only be explained in terms of other social facts” (Pritchard 7).

Henry Home, Lord Kames (1696 - 1782), is a lawyer, polemicist, author and farmer, who often introduces new methods in farming. He comes from an agricultural background which makes him pay much interest in property. He has good knowledge in many subjects like physics, physiology, history and criticism. In the eighteenth century, his writings have created an interest among the students of social history. He is also appreciated for paying attention to the position of women in the society. He gives a piece of advice to the anthropologists that one should not tug conclusion from particular facts. He further says that anthropologists “should not try to see the general in the particular” (Pritchard 17). The result of anthropological research differs from time to time and place to place due to variation in the human sphere.

Adam Ferguson (1723 - 1816) is also known as Ferguson of Raith, who is one of the major societal figures in the history of Scottish sociology. He is also called the father of modern sociology. His most famous work *Essay on the History of Civil Society* (1766), has been translated into various European languages. This work is about contemporary travel literature that analyses the modern commercial society. Another major work of Ferguson, *History of the Progress and Termination of the Roman Republic* (1783), comprises five volumes with rhetoric narration and it has a little sociological value. He also talks about mankind, principles of progress, society and its development in his works in an anthropological way.

John Millar (1735 - 1801) is a Scottish philosopher. His book *The Origin of the Distinction of Ranks or an Inquiry into the circumstance which give rise to Influence and Authority in the different Members of Society* (1771) is considered to be important for anthropologists. He compares different societies and explains the causes of different laws and customs over societies. He also talks about progress of women, authority of leader over a group or tribe, dependency of children upon their father, powers of husband, father and civil magistrate in different societies. His writings focus on the anthropological view on society and its culture.

Auguste Comte (1798 - 1857) is a French Philosopher. He is the founder of Sociology as an academic discipline. His concept of sociology and social evolutionism paves way to the social theorists and anthropologists like Harriet Martineau and Herbert Spencer. His intellectuality is seen through his writings. He combines science with sociology in his works. Social anthropologists reflect the ideas that he has on sociology.

Henry James Sumner Maine (1822 - 1888) is a British jurist and historian. His famous work, *Ancient Law* (1861) explains the law and society ripened from status and contract. Evans Pritchard says that “*Ancient Law* (1861) is not only a classic of jurisprudence but may also be regarded as a classic anthropology” (82). This book has an influence on anthropological theory that mostly deals with history and society as natural phenomena with a number of laws and stages of development. This work develops interest among anthropologists about the type and method of social structure.

Sir Edward Burnett Tylor (1832 - 1917) is an English anthropologist and the initiator of cultural anthropology. He is regarded as the founder of British anthropology. He was the first reader in anthropology during 1884 - 1895 and later in 1896 he was



appointed as the first Professor of Anthropology at Oxford University. His first work *Anahuac: Or Mexico and the Mexicans, Ancient and Modern* (1861) is about beliefs and practices of people of Mexico. His highly reached work *Primitive Culture* (1871) has two volumes. The first volume *Origin of Culture* covers ethnography comprising myth, linguistics and social evolution. The second volume *The Religion in Primitive Culture* is on interpretation of animism, which is the term that refers to religious belief, whereas creatures, places and objects all possess spiritual essence. This term is used in the anthropology of religion to refer to the belief of various ethnic groups. He tries to depict the customs and beliefs of many cultures. His literary works paved the way to build anthropology as a discipline.

Sir James George Frazer (1854 - 1941) is a well- known Scottish social anthropologist and folklorist. He postulated that human belief has come through three stages: magic, religion and science. He is very much interested in myth and religion. His most famous work, *The Golden Bough*, is based on ancient myths and their religious beliefs. The book has three editions with several volumes. It discusses the symbols and practices which have been followed in twentieth century culture. His curiosity in anthropology stems from Tylor's *Primitive Culture*. His works remain as forerunner for the upcoming anthropologists.

Emile Durkheim (1858 - 1917), French sociologist, has tried to distinguish sociology from political philosophy and psychology. His work, *The Elementary Forms of the Religious Life* (1912), is considered to be his masterpiece. This work is written from a sociological perspective. In this work, he compares the social and cultural life of ancient and modern societies. He believes that religion has its ancient subjects such as totemic

belief and animism. Totemic belief is that in ancient times each group or society was tied with a certain object or any living thing as their symbol, which is considered to be sacred. Animism is that all the creatures and objects possess a distinct spiritual essence. He has a strong belief that external forces shape the individual behavior. His works influenced many sociologists and anthropologists of the twentieth century like Claude Levi-Strauss, Charles Tylor, Evans Pritchard and so on. Anthropological writings on different areas like society, religion, culture, history and science give way for sub-disciplines in anthropology.

Anthropology has been developed through a series of stages from the writings of various philosophers, sociologists, historians and anthropologists. Anthropology and its development is depicted as “a process that has increasingly assumed an air of performance, perhaps exacerbated by the growing number of anthropologists directly or indirectly involved in development” (Gow 299). Anthropology starts to progress during the early twentieth century when it transfigures the world and people in it. Social changes in technology, culture and the way of living are responsible for the evolution of many new theories in sociology, law and history, which paves way for the growth of anthropology, which “drew students to societies” (Edelman 32). Many writers are responsible for making anthropology a separate discipline. Among all those writers Frans Boas, Bronishlaw Malinowski, Alfred Reginald Redcliffe-Brown and Marcel Mauss are considered to be the founders of anthropology. All these four founders belong to different countries. Boas is a German born American anthropologist. Malinowski was born in Poland and settled in Britain. Mauss belongs to France. Redcliff-Brown is a British

anthropologist. Anthropologists from different countries pave way for different traditions in anthropology. These different traditions in the nineteenth and early twentieth century are responsible for making anthropology as a discipline.

Boas, oldest of all the founders, wants anthropology to be a well-esteemed science. He is the founder of modern anthropology and the father of American anthropology. He worked in the Ethnological museum of Berlin under Adolf Bastian (1826 - 1905). Boas is a loyal follower of him. Adolf Bastian, a polymath, is known for his contributions in the field of ethnography, anthropology and psychology. He explores anthropology and finds that it is difficult to contribute equally to every part as it is vast. It paves way to divide anthropology into four fields such as physical anthropology, archaeological anthropology, linguistic anthropology and cultural anthropology. He encourages all the subfields of anthropology respectively. His four-field concept brings different kinds of anthropologists under one department at Columbia University. His writings cover all the four fields but he is fascinated with cultural anthropology, which develops its various subfields during his lifetime. He relies on a particular approach rather than studying a society with approaches. This paves way for historical particularism. He utters that every society has its own historical development. He further says that every tribe, every nation, and its people have their own character which is irreplaceable. He conducts many fieldworks and tries to learn the detailed history of a particular group. He never jumps into conclusion. He asks other anthropologists also to do the detailed analysis of a particular group's history and culture rather than doing the analysis of an individual's each stage of life. He says that the first task of anthropology is

to give proper data and after providing data, one can consider theory. According to him, the object of anthropology is people's way of understanding and interacting with the world in different ways through culture.

Bronislaw Kasper Malinowski (1884 - 1942), a well-known anthropologist of the twentieth century, is recognized as the founder of social anthropology. Similar to Bastion and Durkheim, he also studies under Wundt, who is regarded as one of the founders of modern psychology. He teaches Malinowski that society is divided into many integrated parts and it should be viewed holistically. Human body has different parts and each part is interrelated with one another and has its own functions. Similarly, it can be considered that society has different parts which are interrelated and each individual part offers a specific function. James Frazer's *The Golden Bough* makes him to investigate primitive people. In the history of anthropology, his book *Argonauts of the Western Pacific* is considered to be the most revolutionary work. Malinowski uses the local language of the area as a working language in order to gain direct contact with the culture of those people. He does not believe the translators because they may cut out some informal aspects of communication, which are also necessary to examine a culture. His Participant observation places a new standard for field research especially in ethnographic research. This method has originated in the research field of anthropologists, especially the anthropologists like Bronislaw Malinowski in Britain, the students of Franz Boas in the United States, and in the Chicago School of sociology. The research work in the field should be practical and the ethnographer should take an active role in the field so that they can know the routine of everyday events in their life. Eriksen says that "Malinowski was too good a fieldworker to restrict himself to unstructured methods. He collected

accurate data on yam yields, land rights, gift exchange, trade patterns and political conflicts, and many other things, and carried out structured interviews whenever necessary” (53). Malinowski is a good field worker and his field works are very accurate. He writes about trade, economics, marriage, social structure, politics, magic, and world views. The preface of his first book *Argonauts of the Pacific* is written by Sir James Frazer. This is the first part of his three volumes, which has an influence in the field of ethnography. This book explains the kula trade of Trobians. Kula is an exchange system at Trobiand Islands of Southeast Melanesia. This kula trade system is like the barter system in India. Malinowski passed away during his study on social change among Native American people in Mexico.

Alfred Reginald Radcliffe-Brown (1881-1955), a social anthropologist, is recognized as a structural functionalist. He has boarded on medical studies but later he has been encouraged by his teachers Rivers and Haddon to study anthropology at Cambridge University. Radcliffe has undergone fieldwork at Andaman Islands from 1906 to 1908 and the result is published in the style of diffusionism. According to Rivers’ view, culture originated at one point and spread through-out the world over time. He has seen anthropology from a holistic view and wants it to become a true science.

Marcel Mauss (1872 - 1950), a well-recognized French sociologist and anthropologist, started his career as a Professor of Primitive Religion at Paris in 1902. He is interested in doing projects on non-European societies. Unlike Boas and other anthropologists, he does not like to do research on individual societies but he does it on others as a comparative study. He tries to find the structural similarities between the societies for the understanding of social life. He is interested in studying religion and

language mainly in India. His researches are done in the topics like gift exchange, sacrifice, magic and social structure around different cultures of the world. His most famous work *The Gift* argues that the gifts are never free and should be given back. Exchanging gifts builds a strong social relationship. He explains Trobrian Islanders' kula trade in this book which serves as a platform for Malinowski's *Argonauts of the Western Pacific*. Mauss talks over the exchange of things in the kula trade and its meaning in his works. These four founders are the initiators for the different fields in anthropology.

Anthropology studies the real stuff of human beings like success and failure; and weakness and strength. One cannot fully understand a society, culture, language, history or political condition of a particular people without fieldwork or participant observation. It requires systematic collection of data which is substantiation for the scientific side of anthropology. Anthropology appears when the data and the theory are brought together. Physicians, sociologists, psychologists, economists, linguists all study humankind in their field. Anthropology combines all the fields. It acts as a bridge for all other fields by studying human science. The word anthropology is the combination of two Greek words 'anthropos' and 'logos', which means 'human' and 'science' or 'study' respectively. Thus anthropology is understood as the science or study of humans. Anthropology can be studied in-depth through the four fields mentioned by Franz Boas.

Anthropology has four sub-disciplines, whereas each sub-discipline has a distinct approach to study human beings. Each subfield has many divisions in which their boundaries overlap with one another. The four subdisciplines of anthropology are biological or physical anthropology, social or cultural anthropology, archaeological anthropology and linguistic anthropology. Cyborg anthropology, media anthropology,

data anthropology, software anthropology, computational anthropology and digital anthropology are the developing subdisciplines of anthropology. All these subdisciplines constitute a broad way to study the humanity of the world. Initially these subdisciplines of anthropology are developed for a better understanding of western and non-western societies and cultures by analysing its categories, cultures, societies, physical and language differences, economic and technological development and various other features of people. The analysis of the different branches and its sub disciplines give way for the clear idea.

Physical anthropology is also called biological anthropology. In this field, human beings are considered to be biological organisms. It studies the physical characteristics and evolution of human beings through different stages. Human growth and development as well as the impact of the environment on this process are studied. Physical anthropology is divided into molecular anthropology, paleoanthropology, primatology and forensic anthropology.

Molecular anthropology is also known as the anthropological study of genes and genetic relationships. This molecular anthropology gives information about the genes of human beings from the initial period. The people of different geographical areas through time can be compared and their similarities and differences can be studied. It helps to study human heredity and changes in heredity over time. In Neal Stephenson's *Seveneves*, Molecular anthropology can be applied. In this novel, Stephenson brings out the detailed study of genes and genetic engineering. He uses the method of parthenogenesis to recreate the human race after the destruction of earth.

Paleoanthropology is also known as human evolutionary studies. It explores the origin and predecessors of the human race by pondering on the biological changes through time. It helps to understand the initial stage of human kind. It is also mentioned that “Paleoanthropology, unlike other evolutionary studies, takes a biocultural approach, focusing on the interaction of biology and culture” (Haviland 22). The study of fossils through different stages helps us to determine the link between the ancestors and modern human beings.

Human evolution can be understood better by examining the fossils of primates. The deep study of primates is called primatology. By studying the fossils of human beings and other primates, people can understand the uniqueness of the human race. The primates are the members of the most developed and intelligent mammals like apes, monkeys, lemurs, and tarsiers. Lemurs are mammals which are considered to have evolved before apes and monkeys. Tarsiers are a very small animal with large eyes which are found in South East Asia. Haviland in his book *Cultural Anthropology* says, “Primate studies offer scientifically grounded perspectives on the behavior of our ancestors, as well as greater appreciation and respect for the abilities of our closest living relatives” (23).

Forensic anthropology deals with many of the practical applications of physical anthropology. Forensic anthropologists investigate the violation of human rights and abuses such as genocide, terrorism and war crimes. It is also used to identify the human skeletal remains for legal purposes.

Apart from these sub-branches, there are other sub-branches like ethnology, which studies human diversities, nutritional anthropology that deals with nutrition and the subsequent growth and development of human beings. Physiological anthropology



examines the internal organs of the human body to know the biochemical contributions. Dental anthropology deals with teeth and its pattern. Anthropometry is the study of measurement of human body parts. Demography is the science of population. Ethnology studies the science of animal behavior. Osteometry is the study of measurements of human skeletal elements. These are all the sub branches of physical or biological anthropology that help in the detailed study of the human race.

Cultural anthropology is the second division of anthropology. It is also called social or sociocultural anthropology. It is the study of human behavior, belief, thought, and feelings. It also “focuses on humans as culture-producing and culture-reproducing creatures” (Haviland 23). It analyses the similarities and differences of various societies and their culture. The term is cultural anthropology in America and social anthropology in Britain. America holds the influence of German, who gives importance to culture and so it is said to be cultural anthropology in America. Eriksen in his *A History of Anthropology* says:

In the German-American (and Tylorian) sense, culture is a far wider concept than society. If society is made up of social norms, institutions and relationships, then culture consists of everything that humans have created, including society: material phenomena (a field, a plough, a painting), social conditions (marriage, households, the state), body techniques (dance, manual skills, sense perception), and symbolic meaning (language, ritual, belief). Anthropology was the humanist science, the science of humanity, and was, quite literally, concerned with everything human. (58)

American anthropologists believe that culture covers everything including society. It has research priorities like social structure, social relations, cultural interaction, kinship, politics and economy. The society in which the people live has several facets and the detailed study results in the origin and growth of several sub-branches in cultural anthropology like Familial anthropology, Economic anthropology, Political anthropology, Psychological anthropology, Anthropology of Religion, Medical anthropology, Anthropology of Development, Ecological anthropology, Urban anthropology, Legal anthropology, Applied anthropology and Anthropology of Art. Each sub-branch has in-depth study of people and culture; and it overlaps with the other branches of anthropology due to interconnectivity and interdependency. For example medical anthropology takes a bio-cultural approach due to the interaction of biology and culture.

Familial anthropology analyses families of different cultures and societies. It discusses the origin of family, its forms and functions of various societies. In Neal Stephenson's *The Diamond Age*, the family structures and its functions are depicted. Stephenson explains the families of different cultures in this novel.

Economic anthropology looks into the role of economy in society. Economic activities have a major role in social organization. The change in the economic sector leads to change in society.

Political anthropology explores the types and forms of government, state, laws, rewards, nature of punishment and so on. In society, administration occupies an important role in determining the life of the people. In *Snow Crash*, Stephenson brings in the politics of the government and mafia. Politics plays a little role in the storyline of the novel.

Anthropology of religion concentrates on the beliefs and practices related to supernatural powers and forces that play a major role in shaping the culture of a group. It analyses the rituals and the performance of a group along with their culture.

Medical anthropology focuses on the bio-cultural understanding of human-beings and their works regarding health and disease. Beliefs of indigenous people on their health, disease, treatment and preventive measures are a few aspects that can be analysed in medical anthropology.

Development anthropology, as a sub-field, concerns the progress, welfare and development of human beings to ensure security and a good livelihood. Poverty, development of human beings and society, human welfare, inequality and social justice can be analysed under this sub-field.

Psychological anthropology brings out the interaction of cultural and mental processes. The development of human beings in a certain group depends upon his or her emotion, cognition, perception, motivation and mental health. Human behavior can be focused in this sub-field. In *The Diamond Age*, Psychological anthropology can be applied to study the mental progress of the three little girls. The psyche of the girls differs from each other as they have grown up in different cultures and family backgrounds.

Ethno-archaeology is the study of human beings for archaeological reasons. It explains the way in which an object is made along with its purpose and use. It helps to know about the people's way of living and their worship, buildings, tombs, arts, and travels.

Ecological anthropology focuses on the relationship between human beings and their environment. Through this sub-discipline, the connection of human beings with nature can be analysed. Neal Stephenson depicts the relationship between human beings and nature in his *Zodiac*. The eco-crime by human beings and its effect is picturized in this novel. These sub-disciplines provide a clear insight of cultural anthropology in literature.

Archaeological anthropology is the third sub-discipline of anthropology. It traces the origin, growth and development of culture in the past. It is the period before history, when men have not acquired the capability to record the story of life. The archaeological anthropologists differ from social or cultural anthropologists in two features.

The archaeological anthropologists examine the culture in the past, whereas the later one explores the present culture. It is explained that “Archaeology also includes the search for relations between groups and the reconstruction of social life even in quite recent time” (Barnard 3). The archaeological anthropologists lack the personal contact among the people but the social or cultural anthropologist interacts with the people. The former one tries to understand the geological process and climatic phase. The cultural development in man can be classified into Paleolithic, Mesolithic and Neolithic age. The Paleolithic age is also called the Old Stone Age, where human development has begun by using stone tools. They depend on their climate and environment for survival by using stone tools. The Mesolithic age is also called the Middle Stone Age period. People use more pointed tools for hunting. Domestication of animals started during this period.

The Neolithic age is also known as the new Stone Age. People started farming and pottery during this period. These sub-disciplines of archaeological anthropology help to explore the people of different ages.

Linguistic anthropology is the fourth sub-discipline that examines the language of people all over the world in the past and present. Language plays an important role in transmitting the culture from generation to generation. It studies the construction and the structure of language. The transmission of language is expressed as “language allows people to preserve and transmit countless details of their culture from generation to generation” (Haviland 28). Language plays a vital role in preserving the culture of a particular society and it makes culture pass through one generation to the next generation. This linguistic anthropology has three categories: they are descriptive or structural linguistics, historical linguistics and socio-cultural or ethno linguistics. Descriptive or structural linguistics deals with the description of languages. It studies the formation of a sentence and proper structure of the language and sentence. Historical linguist studies the history of language, that is, origin and development of languages and changes in a language over a passage of time. Socio-cultural or ethno linguistics explores the uses of language in actual speech in routine life. The difference in languages of various societies can also be studied. These are the various other developing subdisciplines of linguistic anthropology that help to study human beings in-depth.

Apart from biological or physical anthropology, cultural anthropology, archaeological anthropology and linguistic anthropology, there are several subdivisions in the developing stage. They are media anthropology, Visual anthropology, multimodal anthropology, digital anthropology and cyborg anthropology. Media anthropology or anthropology of media is the study of audiences, understanding procedures, cultural and social aspects of media. The approaches of media anthropology are adopted from visual anthropology. Visual anthropology is the study of photography, film, visual arts and other

kinds of performances. Visual anthropology also gives way for the development of multimodal anthropology. It is an emerging subfield that contains anthropological research across many traditions and media platforms like photography, video, film, theater, mobile apps, interactive games, web based social networking, virtual reality and augmented reality. It works across multiple media. The novels of Neal Stephenson can also be analysed through multimodal anthropology as he uses emerging technologies to reshape society. Digital anthropology is the study of relationships among human beings and digital-era. It analyses the interaction of human beings with internet technology. But the wider range of technological study in the anthropological perspective comes under cyborg anthropology.

Cyborg anthropology was launched as a sub-discipline of anthropology at American Anthropological Association (AAA) in 1992 at San Francisco. The term cyborg anthropology is officially recognized during the paper presentation entitled 'Cyborg Anthropology' presented by Lee Downey, Joseph Dumit, and Sarah Williams in this meeting. The term Cyborg was coined by Manfred Clynes and Nathan Kline in an article called 'Cyborgs and Space', a journal entitled *Astronautics* in 1960 issue. Donna Haraway's *A Cyborg Manifesto* is the first academic text to explore the sociological and philosophical consequences of cyborgs. Initially the word has been used to represent human beings who physically adapt some technologies to survive in space instead of changing the environment. In the book *Our Cyborg Future: Law and Policy Implications*, it is explained as follows:

As conceived by Clynes and Kline, the cyborg — a portmanteau of “cybernetics” and “organism” — was not merely an amalgam of synthetic and organic parts. It represented, rather, a particular approach to the technical challenges of spacetravel — physically adapting man to survive a hostile environment, rather than modifying the environment alone” (Wittes 6).

The figure of cyborg is explained as “In the figure of the cyborg, the human is physically intertwined with the nonhuman, the organic with the mechanical” (Thweatt-Bates 15). Human body is connected with any technology like machines, chips, or other technologies to perform some functions that are considered to be cyborgs.

The American Anthropological Association describes cyborg anthropology as the study of the relationship between machines, science and technology. These are considered to be shaped by culture and culture can shape the technologies and science over time. Cyborg anthropology also looks into the disciplines like genetics, robotics and nanotechnology. Amber Case, a cyborg anthropologist, added in her TED talks that “Cyborg is an organism to which exogenous components have been added for the purpose of adapting to new environments” (Case). Amber Case explains cyborgs as human beings who have adapted technology to perform some functions. Cyborgs mainly consist of artificial machinery parts as a majority but under the control of natural parts. But human beings with certain replacements or implants like pacemakers or artificial limbs are said to be Bionic Humans. Amber Case states that the work of cyborg anthropologists is “stepping back to look at how people in contemporary society are influenced by technology” (Case 2012). Cyborg anthropology tries to identify the

boundaries of human identity in the technological world. This provides a clear insight to explore technological human life in the select novels of Neal Stephenson in an anthropological perspective.

In the history of American literature, at the end of the ice age, people moved from Asia to Alaska. The Asian descendants of Alaska explored the western coast of North America and they occupied nearly the entire continent. Later, America was colonized by the British. Colonization is the reason for the influence of the English language on the eastern coast of the United States. This opens the door for English literature as a literary tradition in America. Many writers added colour to the language over centuries and made English a standard language. During the early seventeenth century, British settlers in America like John Smith, Nathaniel Ward, John Winthrop and Anne Bradstreet started to write practical non-fiction and poetry. Seventeenth century provided a platform for the growth of literary works in English.

After the independence of the United States in 1776, a new era began in American literature. Poetry and Fiction flourished well during the eighteenth century. The remarkable writers of the Eighteenth century are Benjamin Franklin, Phillis Wheatley, Philip Freneau, William Hill Brown and Olaudah Equiano. Philip Freneau published *The Power of Sympathy* anonymously in 1789, which is considered as the first American novel.

A proper American literature emerged in the beginning of the nineteenth century. The remarkable writers of this age are Washington Irving and James Fenimore Cooper. Their novels and short stories depict and explore American society and its landscape. Washington Irving (1783 - 1859), is known as the first American man of letters. *The Legend of Sleepy Hollow* (1820) and *Rip Van Winkle* (1819) are considered to be the



first American short stories, which depict German folktales. James Fenimore Cooper (1789 - 1851) is the first American major novelist. His first novel is *Leatherstocking Tales*. It has a series of five novels. It explains the reality of the American wilderness. The middle of the nineteenth century paves way for the growth of romanticism.

Romanticism in America lasted for nearly forty years from 1830 to 1870. Romanticism has certain characteristic features like imagination, individuality, nature, wisdom, considering a common man as a hero and emotional experience. Many novels, poems, plays, short stories, essays, biographies and autobiographies have flourished in this period. Romanticism is the rejection of idealization and rationality. It appreciates the beauty in nature, pushing out the emotion, self and human personality. During this period, many writers emerged with different ideas. The writers like Edgar Allan Poe, James Russell Lowell, Henry Wadsworth Longfellow and Oliver Wendell Holmes explore society with their own experience and perspective. Nathaniel Hawthorne, Herman Melville and Walt Whitman are the three writers who have published novels, poetry and short stories which are still considered as the long lasting works in America.

In America, the Civil War took place from 1860 to 1865. This results in the emerging of many works on African Americans about their slavery and freedom. The notable African American writers of this period are Harriet E. Wilson, Harriet Beecher Stowe and William Wells Brown. Harriet E. Wilson (1828 - 1863) is the first African American woman to publish a novel in English. *Our Nig* (1859) is her first novel published anonymously in Boston. William Wells Brown (1814 - 1884) is the first African American to publish a novel, a play and a travel book.

Civil war results in a new transformation in literature. Romanticism is opposed by certain writers, which gives way for realism and naturalism in the literary field. Realism and naturalism are the literary movements which are linked closely. Realism is the representation of real life or contemporary life and naturalism is scientific or extreme realism. Realism has started in order to oppose romanticism and to portray reality to the people. In naturalism, everything is explained by means of nature. The belief of naturalism is that nothing exists beyond the natural world. Naturalism has been inspired by French authors during the nineteenth century. The following are the notable American writers of naturalism and realism.

Mark Twain (1835 - 1910), an American novelist, is known for his travelogs. *The Innocents Abroad* (1869) is his first travel narrative which depicts his steamship voyage to Europe and Egypt. Theodore Dreiser (1871 - 1945), an American novelist, is a prominent figure in naturalism. He presents real life incidents as his subject. He bravely explores the problem during industrialization in America. His first novel *Sister Carrie* (1900) is considered as the first masterpiece of American naturalism. Henry James (1843 - 1916), an American novelist, is a reputable person in transatlantic culture, which is the transformation of ideas and culture across the Atlantic from the early modern era. He has been nominated three times for the Nobel Prize in Literature during 1911, 1912, and 1916. David John Lodge (1935), a literary critic, has written a long essay on Henry James in his essay collection, *The Year of Henry James: The Story of a Novel*. The beginning of the twentieth century paved the way for modernism.

Modernism is an art and philosophical movement which began in Europe and reached America during the World War I and World War II. The works of this period include cultural changes along with transformations from 1910 to 1945. Industrialization, growth of cities and dreadful reactions of the World War I and II are the major factors that shape modernist writings. The writings include war experience, psychological and physiological inharmony among the people. During modernism, the advancement in science and technology is deeply rooted in America. The development of science and technology is reflected in the pieces of literature. This period is considered to be the richest in American literature. The popular literary figures of this era are Francis Scott Fitzgerald, Richard Wright, Ernest Hemingway, Willa Sibert Cather, John Steinbeck, T. S. Eliot and Robert Frost.

Francis Scott Fitzgerald (1896 - 1940) is an American novelist and short story writer. His novels narrate the development in communication technologies, jazz music, economic prosperity and criminal activities. Richard Wright (1908 - 1960), a novelist, poet and short story writer, is the first African-American to protest against the treatment of black people by white people. He initiated the culture of protest after the World War II. Ernest Hemingway (1899 - 1961), an American novelist, journalist and short story writer, is a winner of the Nobel Prize for Literature in 1954. He is known for the theme of masculinity and adventurous writing. He has traveled a lot for fishing, bullfighting and hunting which are depicted as his writings' background. Willa Sibert Cather (1873 - 1947) is a novelist, magazine editor and teacher. Her novels include *O Pioneers* (1913), *The Song of the Lark* (1915) and *My Antonia* (1918) are known for the people living near the boundary lines in Great Plains. William Faulkner (1897 - 1962) was a Nobel Prize winner in 1949

and was also awarded the Pulitzer Prize for his novels: *A Fable* (1954) and *The Rivers* (1962) in 1955 and 1963 respectively. John Steinbeck (1902 - 1968), an American novelist, received the Nobel Prize in Literature for his imaginative and realistic writings in 1962. T. S. Eliot (1888 - 1965) is a poet, playwright, essayist, and literary and social critic. *The Waste Land* (1922) and *Four Quartets* (1943) are his most famous poems. In 1948 he was awarded the Nobel Prize in Literature for his outstanding contribution to poetry. Robert Frost (1874 - 1963) is an American poet, who has depicted the reality of rural life in his poems. He is the only poet to receive the Pulitzer Prize four times for poetry. He was named as poet laureate of Vermont in 1961. He is nominated for the Nobel Prize in Literature thirty one times. The changes in literary works emerged during the mid-twentieth century due to certain social changes.

The cold war created geopolitical tension between The United States and the Soviet Union at the end of the Second World War. Proxy wars, the threat of nuclear destruction due to the cold war, resulted in shaping American literature in the second half of the twentieth century. Women's movement and the civil rights movement brought cultural change in the United States. The literature in America became more complex during the late twentieth and the beginning of the twenty first century. Wide choices of writings are produced in different genres. Many theories have evolved during this time. Literature begins to develop with an open ground to all the writers. The American novels reached its peak after the World War II with a lot of forms, theories and techniques like naturalism, realism, metafiction, autobiography, fragmentary, stream of consciousness,

ecology and feminism. Many novelists with different writing styles emerged during this period. The notable writers are Vladimir Nabokov, Norman Mailer, Thomas Pynchon, Philip Roth, Toni Morrison and Jonathan Franzen.

Vladimir Nabokov (1899 - 1977), a Russian born American novelist and critic, has written novels in both Russian and English. His novels are highly stylized and his *Lolita* (1955) creates a cultural and literary sensation among the readers. Jack Kerouac (1922 - 1969), a novelist and poet, is known for his novel *On the Road* (1957). This is considered to be the first novel in connection with the Beat movement. It is also called as the Beat Generation. It is a literary movement initiated by a group of writers whose work explores and depicts the culture and politics of America after the World Wars. This originated during the 1950's. It centers the artist communities of Bohemian in San Francisco. Norman Mailer (1923 - 2007) is a novelist and journalist, well known for using New Journalism, which is a genre that combines journalism and techniques of fiction writing in reporting the real life events.

Thomas Pynchon (1937) is an American novelist and short story writer. His works are the combination of black humour and fantasy to bring out human alienation in modern society. Black humour is also known as black comedy or dark comedy which throws light on a serious or a painful subject in a comic style. Philip Roth (1933 - 2018) is a novelist and a short story writer, who has won Pulitzer Prize, Man Booker International Prize and National Book Award. Toni Morrison (1931) is a novelist, essayist, book editor and professor at Princeton University. She is the first African American woman to receive the Nobel Prize in Literature in 1993. Jonathan

Franzen (1959), an American novelist and essayist, has written multilayered novels on contemporary America. Slowly in the latter half of the twentieth century, literature began to deal with the role of science in society. It paves way for the emergence of science fiction.

Science fiction emerged as a modern genre in the West during the twentieth century. In this period, standard science fiction themes like space travel, aliens, time travel, robots, growth of computers and technologies, parallel universes, interplanetary warfare, artificial intelligence and extraterrestrial life have been developed in the literature. This genre connects two worlds together, the world of literature and the world of science. It also deals with the consequences of scientific and technological advancements. The history of science fiction started before coining the term ‘Science Fiction’. The term is coined by the publisher Hugo Gernback. In science fiction, the plot focuses on the past or future or the real technological world with scientific facts. A descriptive definition for science fiction is as follows “Science fiction is the branch of literature that deals with the effects of change on people in the real world as it can be projected into the past, the future, or to distant places” (Gunn 5). The notable science fiction writers exploring science and technology through literature are Philip Kindred Dick, Isaac Asimov, Ursula Kroeber Le Guin, Roger Joseph Zelazny, Octavia Estelle Butler, Stephen Edward King, William Ford Gibson, Greg Bear, Michael Bruce Sterling, Richard Yancey and Neal Stephenson.

Philip Kindred Dick (1928 - 1982), known for science fiction, explores themes such as philosophical, social, political with stories based on alternative universes, authoritarian governments and consciousness. His interest in metaphysics is reflected in his writings. *The Man in the High Castle* (1962) is narrated in an alternative history and

has won Hugo Award. He has used science fiction concepts like reality and unreality in *The Three Stigmata of Palmer Eldritch* (1965). His *A Scanner Darkly* (1977) is a mixture of science fiction and detective novel. He has also written many short stories and essays based on technology. Many of his stories are adapted by television programmes. Philip K. Dick Award is a science fiction award given to the best science fiction writers of novels.

Isaac Asimov (1920 - 1992) has written popular fiction and science fiction novels. Isaac Asimov, Arthur C. Clarke, and Robert Heinlein are called The Big Three science fiction writers. Asimov's *Foundation series* has won Hugo Award for Best All-Time Series in 1966. His *Fountain and Earth* (1986) describes a robotic story linked with the distant future. He has written on scientific and non-scientific topics like chemistry, astronomy, mathematics, history, and literary criticism.

Ursula K. Le Guin (1929 - 2018), an American novelist known for her science fiction and fantasy works, is the daughter of renowned American cultural anthropologist A. L. Kroeber. She is influenced by the methods of anthropology, which allows her to describe ancient societies. Her first three novels *Rocannon's World* (1966), *Planet of Exile* (1966) and *City of Illusions* (1967) explain human beings from planet Hain and begin human life on habitable planets as like Neal Stephenson's *Seveneves* and *Anathem*. *The Left Hand of Darkness* (1969) is set on a planet called Gethen which is full of androgynous people, who can change their sexuality every month so that an individual can be a father or a mother. Her novel *The Dispossessed* (1974) explores two different neighbor worlds. *Always Coming Home* (1985) portrays life and society of a cultural group called Kesh, who live in the distant future. This novel has received a runner up for the National Book Award.

Roger Joseph Zelazny (1937 - 1995) is an American fantasy and science fiction writer. He is well known for his fantasy novel series *The Chronicles of Amber*. Roger uses mythological names for his characters which are set in the modern or future world. Octavia Estelle Butler (1947 - 2006) is an African American science fiction writer who is a multiple recipient of Hugo and Nebula Awards. Her *Patternmaster* (1976) tells the coming-of-age story of Teray as Neal Stephenson's *The Diamond Age*. *Mind of My Mind* (1977), her second novel, is based on the parapsychology of a Vampire. Her works often deal with the theme of Afrofuturism, which is the intersection of culture of the African diaspora with technology.

Stephen Edwin King (1947) is the author of genres like crime fiction, fantasy and science fiction. He has written sixty one novels and also received numerous awards. His first novel *Carrie* (1974) is about a teenage girl gifted with telekinetic powers, a psychic ability of a person to influence an object without physical interaction. His novels carry a blending of themes like horror, macabre, fantasy, science and technology.

William Ford Gibson (1948), an American born Canadian fiction writer, has initiated cyberpunk as a subgenre of science fiction. The term 'cyberspace' is coined by Gibson in his short story *Burning Chrome* (1982). This term is popularized in his debut novel *Neuromancer* (1984), the first novel of the *Sprawl Trilogy*. This novel, like Neal Stephenson's *Snow Crash*, is set in the future and it focuses on hacking and artificial intelligence. He has written *The Difference Engine* (1990) along with Bruce Sterling, which becomes a subgenre of science fiction called steampunk. Steampunk fiction



combines technology and aesthetic designs set in the historical period. Neal Stephenson's *The Diamond Age* is a steampunk fiction. The other writers of Steampunk are Gail Carriger, Tim Powers, Mark Hodder and Stephen Hunt.

Greg Bear (1951) is an American writer who has covered themes like galactic conflict, artificial universes, consciousness, evolution and cultural practices. He has written many short novel series. Bruce Sterling (1954) is one among the founders of the cyberpunk movement. His novel *Lone Star Universe* (1977) portrays a dystopian planet. His novel *Schismatrix* (1985) and a short story collection *Crystal Express* (1989) reveal that people are changing themselves genetically by using prosthetic devices. His writings pave the way for the development of science fiction.

Richard Yancey (1962) is an American science fiction, detective and fantasy writer. *A Burning in Homeland* (2003) is his debut novel. *The 5<sup>th</sup> Wave* (2003) is a trilogy followed by *The Infinite Sea* (2014) and *The Last Star* (2016). It is about the story of aliens invading the Earth. He has also written detective series like *The Alfred Kropp series* and *The Monstrumologist series*. Pierce Brown (1988) is an upcoming American science fiction author who has written the *Red Rising* series. He has also written comic books and short stories. He is the recipient of the Goodreads Best New Novelists Award 2014 and Best Science Fiction Novel Award 2015.

Neal Stephenson (1959) is an American speculative and historical fiction writer. Speculative fiction is a genre of fiction which has certain elements that do not match with the real world. The settings contain supernatural, futuristic and other imaginative elements. Stephenson is born in a well-educated family. His father is a Professor of Electrical Engineering and grandfather is a Professor of Physics. His mother works at a

biochemistry lab and her father is a Professor of Biochemistry. He is educated at Boston University. Initially he had chosen physics but later his interest switched over to Geography. His novels are categorized as science fiction, historical fiction, cyberpunk, post cyberpunk and baroque. Science fiction is a sub-genre of speculative fiction. The concepts of science fiction include science and technology, fictional worlds, time travel, space exploration, parallel universes and extraterrestrial life. It also explores the consequences of technological innovations. The stories of these novels can be written in ancient times which contain fantasy, horror and superhero. In historical fiction, the plot is located in the past. Historical fiction pays attention towards details of the period depicted and its social conditions. Cyberpunk is a subgenre of science fiction, set in the future. Cyberpunk novels are the combination of criminality and high technological life. Baroque is an ornate and extravagant style of music, dance, painting, architecture and other arts developed during the seventeenth and eighteenth century. Neal Stephenson has written sixteen novels, short fiction, non-fiction, essays and short stories. His writings mostly fall under the sub-genres of speculative and historical fiction.

Stephenson's novels look into subjects like Mathematics, Linguistics, Cryptography and History. *The Big U* is his first novel, published in 1984. This novel describes the satirical life in American Megaversity, a big fictitious research university. It is a single building with eight towers. The author uses technologies like rail guns, radioactive rats, and hordes of bats. Rail gun is an electromagnetic motor device with high velocity projectiles. Radioactive rats are the artificial rats with high speed. The hordes of bats are artificial bats which can be controlled by human beings. The students of this Megaversity are divided into groups and they are role players, nerds

and computer scientists. The role playing is a game where the students assume the roles of characters in the fictional setting. Nerds are the students who are over intellectual and introverted with lack of social skills. Computer scientists are people who have in-depth knowledge in the field of computer science.

Stephenson's second novel *Zodiac* (1988) is an eco-thriller novel. The title of the novel *Zodiac* refers to the high powered motor boats, in which the protagonist likes to roam on the Boston harbor. This novel narrates the story of an environmentalist who later struggles to stop the illegal dumping of toxic wastes in the Boston harbor. Stephenson depicts the ecological pollution due to unlawful activities and their effect on society.

*Snow Crash* (1992), his third novel, covers subjects such as history, anthropology, linguistics, cryptography, computer science, politics and religion. This book represents Sumerian language as a firmware programming language for brainstem. This novel recognizes him as a major science fiction writer of the period. This novel was nominated for both British Science fiction Association Award in 1993 and Arthur Clarke Award in 1994.

*Interface* (1994) is written along with the historian J. Frederick George, a pseudonym of George Jewsbury. He is the uncle of Stephenson. This novel is published under the combined pseudonym of Stephen Bury. This novel is a thriller, set in the future with the use of a computer biochip brain implant.

*The Diamond Age: A Young Lady's Illustrated Primer* (1995) is a Bildungsroman or coming of age story of Nell. This novel is set in the near future where nanotechnology occupies a major role in the life of human beings. This novel focuses on themes such as education, social class, artificial intelligence and ethnicity. It has won both Hugo and

Locus Awards. It is shortlisted for the Nebula Award. Stephenson has used various technologies like Chevaline, a mechanical horse and smart paper, which forecast the use of technologies.

*The Cobweb* (1996) is another novel published along with J. Frederick George but it is published under the collective name of Stephen Bury. This novel brings out the trade of terrorists and biological warfare in the fictional city named Lova in the United States. This resembles the place of Stephenson's high school.

*Cryptonomicon* (1999) is set in two different periods, whereas one group of characters belong to the World War II era and whereas the second period is set in the late 1990s. The characters of both the periods employ cryptography and computer technology.

*The Baroque Cycle* is a historical trilogy which has won the Arthur C. Clarke Award and was nominated for the Locus Award in 2004. It is published in three volumes, containing eight books. The events of the novel take place during the late seventeenth and early eighteenth century in Asia, Africa, Central America and Europe. Though it falls under the genre of Historical fiction, Stephenson characterizes this work as science fiction, due to the presence of themes related to science and technology, especially cryptology.

His *Anathem* (2008) is the novel of interpretation of many worlds of quantum mechanics and debate between Platonic realism and nominalism. This novel sets on a fictional planet named 'Arbre'. The events of the novel take place before a thousand years. The major parts of this novel contain the detailed analysis of physics, mathematics and philosophy. It won the Locus SF Award in 2009 and was nominated for Hugo and Clarke Award.

*The Mongoliad* (2010), Stephenson's historical novel, is written along with Greg Bear and his friends. The story takes place during the thirteenth century. It describes the invasion of Mongol on Europe headed by Genghis Khan, a Mongol emperor and Ogedei Khan, third son of Genghis Khan. Stephenson also describes the court, geography, Asian martial arts, fauna and flora of that period. In 2011, Stephenson published *Reamde*, a techno-thriller novel. This novel focuses on online multiplayer role playing games.

*Seveneves* (2015) is a hard science fiction novel, nominated for Hugo Award. This novel depicts the efforts of Homo sapiens to escape from the unexplained disintegration of the moon and rebuilding the human race in space. After five thousand years, the space based civilization returns to Earth to rejuvenate it.

*The Rise and Fall of D.O.D.O.* (2017) is written by Neal Stephenson and Nicole Galland. This novel describes the attempt made by members of a U.S. secret agency to change history through magic.

*Fall; or, Dodge in Hell* (2019) explores the process of brain uploading or mind copying to the cloud. Brain uploading or whole brain emulation is a hypothetical futuristic process that scans a particular part of the brain substrate and copies it to the computer. It responds and works as the original brain.

*Termination Shock* (2021) focuses on climate change which alters human society. The plot is set in the near future where people attempt solar geoengineering, in which sunlight is reflected back to space to control overheating. Stephenson has explained the concept of stratospheric aerosol injection by firing sulfur in air. During this process sunlight is reflected into space and the planet gets cooled.

Neal Stephenson's *Zodiac*, *Snow Crash*, *The Diamond Age*, *Cryptonomicon*, and *Seveneves* are the select novels chosen for the analysis of the thesis. Stephenson's writing mostly focuses on technological enhancements and its role in society. He also explains the imaginary technological growth in detail through his novels. He explores the relationship between human beings and technology, which makes it possible to analyze the select novels from an anthropological perspective by relating human beings and technology. The technological development and its impact on culture and society in the select novels are explored through the objectives of cyborg anthropology, a study of interaction between human beings and technology. To study the relationship of human beings with technology in an anthropological perspective, history, development and types of anthropology are traced out.

“Teaching the Conflicts in Neal Stephenson's *Cryptonomicon* and *The Baroque Cycle* by Lee Barbook” (2012) is the dissertation which focuses on postmodern discourse and the demise of post structuralism in America. “The Dangers Behind Technological Progress: Posthuman Control in Neal Stephenson's *Snow Crash* by Monica Sedore” (2012), Florida Atlantic University explores America's corporate society in *Snow Crash*. The dissertation entitled “*Snow Crash* Concept and Prop Design for Entertainment Industry by Igor Sobolevsky” (2013), Rochester Institute of Technology, focuses on the protocols for the entertainment industry. The dissertation entitled ‘A Caring Rebellion: Literacy, Power, and the Problem of Marginalized, Self- Actualization in Neal Stephenson's *The Diamond Age*’ (2021) by Krista Cote, University of Alberta, depicts the marginalized society and self-actualization of characters in *The Diamond Age*. These four dissertations are based on social conflicts, postmodernism, corporate society and marginalization

whereas this dissertation approaches through anthropological perspective. It focuses on the cultural change occurring in society due to technological enhancements in the select novels of Neal Stephenson through the three aspects of cyborg anthropology.

This research has made an attempt to describe the select novels in a new light. The aim of the thesis is to analyze the transformation of human beings mentally and physically due to digital technological enhancement in the select novels of Neal Stephenson. The statement of the thesis is to examine the interaction of human beings with technology through the three aspects of cyborg anthropology in the select novels of Neal Stephenson. Science and technology occupies a major role in shifting people's culture, society, education and lifestyle. This brings out a huge change in present human society in both culture and human nature.

In the process of exploring technology to understand the changes that had happen over human culture and society. The objective of the thesis is: to illustrate the role of science and technology as a cultural phenomenon; to explore and to analyse the role of cyborgs in the technological society; to analyse science and technology as a shaping tool of the society. The aim of this thesis is to bring out the solution and to create an awareness on avoiding the destructive side of technology in order to shape and re-establish a healthy relationship of human beings with the environment.

The thesis is structured into five chapters. The first chapter "Introduction" traces the origin and development of anthropology, its sub disciplines and a detailed study on cyborg anthropology. It also includes the history of American literature and science fiction till the age of Neal Stephenson. Biography of Neal Stephenson, his works and the structure of the thesis are also discussed.

The second chapter entitled “Cultural Shift: A Culture of Science and Technology” brings out the change in culture due to technological enhancement. The interaction of human beings with technology is studied through the first aspect of cyborg anthropology. This chapter analyses the role of science and technology as a cultural phenomenon. Cultural materialism is applied to explore the growth and interaction of technology with the culture. The development in technology paves way for the adoption of new cultures for the betterment of life. The select novels of Neal Stephenson explain the changes in human culture due to the interruption of technological development in human life.

The third chapter entitled “Human Beings and Technology: A Growing Hybridization” explains the second aspect of cyborg anthropology i.e., the transformation of human beings as cyborgs in the technological society through the select novels of Neal Stephenson. This chapter expounds the physical and mental transformation of human beings due to the development of digitalized technology. The technological enhancement, its necessity in the current scenario and the consequences of the darker side in the usage of technology are explored through the select novels.

The fourth chapter entitled, “Societal Change Through Technological Adaption” brings out the third aspect of cyborg anthropology. This chapter analyses the role of science and technology as a shaping tool of society. In the novels of Neal Stephenson, technological developments are a boon to society. This chapter brings out the changes in the society due to the transformation of human beings as cyborgs. Actor Network Theory is applied to analyse constructive way of living in the technological society.



The fifth chapter is “Summation” that sums up the previous chapters. This chapter blends together the aspects of science and technology, cyborg anthropology, cultural materialism and actor network theory. It proves that Science and Technology is intertwined with the life of human beings that leads to cultural and societal changes. This research sharpens on the crucial need of avoiding the negative aspects of technology and understanding the necessity of technological enhancement in the present life. A clear understanding of technology and its role in the life of human beings helps to avoid the destructive path. This chapter also brings out the solution that the destructive side of utilizing technology can be avoided by the better understanding and proper usage of science and technology in day-to-day life. The next chapter deals with the role of science and technology as a cultural phenomenon, which is the first aspect of cyborg anthropology.