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A Study of the Changes in the Intellectual Environment from the Middle Ages to the Late Nineteenth Century Culminating in the Professionalization of Anthropology

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A STUDY OF THE CHANGES IN THE
INTELLECTUAL ENVIRONMENT FROM THE MIDDLE AGES
TO THE LATE NINETEENTH CENTURY CULMINATING IN THE
PROFESSIONALIZATION OF ANTHROPOLOGY

by

Linda Marie Place

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Linda Marie Place

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INTRODUCTION

According to A. Irving Hallowell, the key to the professionalization of anthropology is the development of a "comprehensive spatio-temporal frame of reference which embraces all living varieties of Homo sapiens, as well as extinct cultures and peoples of the distant past and more ancient hominid types besides" (1965:308). The purpose of this thesis is to trace the development of this framework through conditions giving rise to an increased awareness of world geography, the concomitant necessity of explaining diversity, and to the acceptance of the theory of evolution by natural selection. Before these investigations can be undertaken, however, it is important to delineate Hallowell's notions of anthropology, the process of professionalization, and the spatio-temporal framework regarded as necessary to this process.

Hallowell primarily focuses upon anthropological questions and their refinement within a professional discipline. He suggests that systematic inquiry which characterizes anthropology developed from a more generalized interest in humanity evident in all cultures. The most authoritative answers to such questions in non-Western cultures and prior to organized inquiry in Western civilization are felt to be "embedded in the cognitive orientation of a people, in their culturally constituted world view, from which they have not been abstracted and articulated" (Hallowell 1965:305). This type of knowledge Hallowell labels as folk anthropology.

In Western culture folk anthropology has been equated with the traditional Christian world view which amounts to "culturally constituted,

untested knowledge about man and his world, reinforced by socially sanctioned religious values which gave it the stamp of ultimate truth" (Hallowell 1965:307). In contrast, professional anthropology is characterized by specialists in the study of man who are concerned with undertaking systematic observations and inquiry and who aspire to values of reliability in knowledge of all aspects of human phenomena. Two terms are outstanding in this definition: systematic and reliability. The former suggests a preconceived methodological approach and the latter implies a dependability leading toward predictability. Both concepts lend legitimation to anthropology of a more empirical nature.

"Professional" is the adjectival form of a noun meaning "a vocation or occupation requiring advanced education and training, and involving intellectual skills" (Webster's New World Dictionary of the American Language 1970:definition 3). It follows that if anthropology is to be considered professional, it must be an established discipline within an institution of advanced education. Anthropology achieved this status in 1884 when Edward Burnett Tylor (1832-1917) was appointed Reader of Anthropology at Oxford University. Since professional anthropology is unique in its origin to Western culture and given Hallowell's definition of folk anthropology, the traditional Christian world view must be acknowledged as the foundation from which anthropology professionalized. The process in question, the transition from folk to professional anthropology, may be viewed in terms of legitimation. Sanction in the former is of a religious nature, specifically, Christian. Professional anthropology is legitimated by empirical science. To understand the process of transition, one must investigate the conditions which mitigated in

favor of a scientific world view.

The spatio-temporal framework conceived by Hallowell obviously involves the development of two discrete conceptualizations which together are required for the professionalization of anthropology. In the spatial realm, one observes a change from a perspective limited to the immediate European, Asian, and African land masses and their associated peoples to an awareness of world geography and a vast diversity of peoples. The ramifications of this dramatic expansion of perspective in Western thought had profound effects on ideology which will be revealed as this paper develops. Anthropology emerged as the discipline destined to analyze and synthesize the rapidly accumulating information in a holistic, comparative manner.

Traditionally in Western civilization, time was viewed in a cyclical sense--a conceptualization typical of most cultures. Yet, anthropology professionalized in a civilization whose time concept was linear. For a linear time concept to emerge, it was necessary to transcend cyclical Christian notions of world chronology. The process was begun by James Hutton (1726-1797) who claimed the geological age of the earth to be much longer than that attributed to it by Biblical account. Linear time was confirmed by Charles Darwin (1809-1882) when he demonstrated evolution by the mechanism of natural selection. The concomitant Darwinian refutation of the immutability of species functioned to significantly undermine the religiously sanctioned world view.

Given these definitions and directions, the following study attempts to present the conditions of change in the intellectual environment of Western civilization which result in the unique transition from folk

to professional anthropology.

MIDDLE AGES/RENAISSANCE: FROM THE AGE OF FAITH
TO THE AGE OF DISCOVERY AND THE SEARCH FOR ORIGINS

As one might expect when considering change in the intellectual environment through history, there is no simple line of demarcation between any two attitudes. Such is the case with the impact of geographic discoveries on the European world view. The process of attitude change from the circumscribed perspective of the Middle Ages to the broad awareness of the nineteenth century was gradual, involving the contributions of many people and the breaking down of a well-established traditional belief structure.

"It is no exaggeration that the progress of geographical discovery and exploration, with the simultaneous broadening of the intellectual horizon, forms one of the most important manifestations of the Renaissance" (Thompson 1959:7). This statement pinpoints the intellectual atmosphere associated with the beginning of the Age of Discovery¹. The Middle Ages-Renaissance periods are not clearly distinguished in time. The Middle Ages is generally regarded as covering the span from the fall of the Roman Empire in 476 A.D. to the mid-fifteenth century. The Renaissance is generally correlated with the fourteenth, fifteenth, and sixteenth centuries. A century and a half overlap is indicative of the lengthy transitional element involved in ideological change viewed at the cultural level. That the Age of Discovery (beginning ca. 1450 A.D.) is an outgrowth of the Renaissance intellectual atmosphere rather than that of the Middle Ages reflects the Renaissance interest in the world around humans as opposed to the medieval preoccupation with heaven and hell--the Age of Faith (Thompson 1959:6). Prior to discussing the Renaissance

intellectual environment, it would be of value to consider the medieval world view which co-existed with the early Renaissance.

The Middle Ages is generally characterized by intellectual stagnation (particularly the early part commonly referred to as the Dark Ages), thought being dominated by the values of the Roman Catholic Church. Medieval awareness of other lands and peoples was limited to the writings of the Encyclopedists. These accounts of other nations were filled with tales of monstrosities. Typical of this literary genre was the work of the Bishop of Seville, Isidore. His Etymologies (622-623) reduced ethnological description to epithets which through time were sanctioned by traditional usage. Etymologies was regarded as the authority on other peoples until the thirteenth century when Bartholomaeus Anglicus (Bartholomew) published a similar work, De proprietatibus rerum (1240-60). The popularity and authority of these monstrosity-oriented books lasted until the sixteenth century (Hodgen 1964:54-66).

It is important to note the role of the Church in maintaining the ethnological fables of such writers as Isidore and Bartholomew. Merchantizing, evangelization, and war brought Europeans into contact with other populations (Hodgen 1964:79). It is assumed that those engaged in these pursuits encountered other human beings besides monstrosities and reported their findings to influential members of the European community, notably officials of the Church. The independent travels into the Mongolian Empire by two Franciscan monks in service of the Church, Carpini and Ruybroeck,² provide successive accounts of the same territory giving credibility to information obtained. Marco Polo brought back tales of China and India with a merchant's bias (Thompson 1959:10-14).

Traders, missionaries, pilgrims, and crusaders were all agents adding to medieval knowledge of distant lands and peoples. Despite the amount of contact, very little was actually written about distant peoples and customs. Since the Church regarded all beyond its jurisdiction as heathen and monstrous, every effort was made to retain distorted images of these populations (Hodgen 1964:88). The Church, then, must be regarded as the prime agent in disseminating non-factual knowledge about humans during the Middle Ages.

Early in the Renaissance Italian scholars began searching for the origins of their own civilization in Roman and Greek sources. It has been suggested that this self-searching process was essential to the development of anthropology, because a recognition of past time was necessitated. "Only when men had learned to see differences by studying the past were they able to observe contemporary differences in the world around them" (Rowe 1965:8). The flowering of intellectualism accompanying this search has been well documented and does not require reiteration here. Suffice it to say that within the florescence of the Renaissance, European society acknowledged its identity with Greek and Roman cultural antiquities. The ideas of Classical scholars became available to fourteenth century scholars through translations, thereby, altering the European intellectual climate significantly.

A humanistic attitude developed as a consequence of this Classical influence. Renaissance humanists were interested in man for his own sake. They sought the 'Whole Man' through a unity of culture with the intellectual personality (Stromberg 1975:18). Through archaeology, the humanists gained historical awareness of the ancient world. They were

so enamored of the Classical world view that it was substituted for the traditional Christian world view of the Middle Ages (Flemming 1970:190). This reliance on the authority of the ancients served to increase the secularization of Renaissance thought, thereby, lessening the restrictive influence of sacred authority. It can be seen, then, that two discrete world views, Christian and Classical, were operative during the preliminary stages to the Age of Discovery.

As noted, the Age of Discovery began ca. 1450 A.D. with the Portuguese explorations of the African coast by Prince Henry the Navigator, followed by Columbus' "discovery of the Americas." To assume, however, that there was no geographic discovery during the Middle Ages would be erroneous. The travels of Carpini, Ruybroeck, and Polo have already been mentioned. In the thirteenth and fourteenth centuries, exploration and discovery by land contributed to knowledge of the European, Asian, and North African landmasses. Prince Henry and Columbus instituted maritime exploration, thereby opening the entire world to discovery. This shift was significant because it was necessary to overcome medieval superstitions founded in ignorance about the world before lengthy voyages could be undertaken regularly. Prince Henry disproved the notion that equatorial regions were uninhabitable. Columbus proved the earth was not flat by sailing to what he took to be the East Indies. Magellan's expedition (he died before completion) further defined the globular nature of the earth by circumnavigating it. Thus, while exploration and discovery had taken place in the Middle Ages, the Age of Discovery was properly ushered in by those ocean voyages which challenged the obsessive hold of superstition and which, by the sheer magnitude of newly

acquired information, eventually forced a re-evaluation of traditional knowledge.

By 1502 over 3000 miles of coastal South America had been explored and numerous displays and parades of native Americans were made throughout Europe. Despite the excitement of these discoveries, the strange and bizarre were still emphasized in literature. The discovery of the New World initially appears to have made little impression on European populations (Hodgen 1964:113).

During this period and throughout the sixteenth and seventeenth centuries an enthusiastic preoccupation with the collection and display of curios (e.g., coins, fossils) reflected the interest in discoveries, if not concern for understanding them. Human artifacts were often among these curiosities but did not find display in their own right until the seventeenth century (Hodgen 1964:122-3). Of significance to ethnography was the recording of manners and customs. Classification of such collections was more complex than that of objects, since manners and customs cannot be held and/or turned over for analysis. Classification is necessarily verbal and arbitrary. Composed of definitions, it falls within the realm of ideas. Conceptual themes, categories, and structures common to all peoples had to be recognized by the compiler and then descriptively conveyed to others (Hodgen 1964:164-5).

Perhaps the first work of this nature was Boemus' Omnium gentium mores, leges, & ritus ex multis clarissimis rerum scriptoribus (1520). The popularity of this collection is evidenced by twenty-three reissues in five languages after a revised edition (1536) (Hodgen 1964:131).³ The work's authority is questionable in that Boemus never traveled to

any of the places he described. The traditional cultural descriptive formulae of the Middle Ages dominated the work as well as most such literature of the sixteenth and seventeenth centuries. The cosmographers and geographers, writing contemporaneously with Boemus, continued the development of geographical awareness but contributed little to the factual knowledge available on humans. The great number of accounts written by explorers and others in this time period served to bring the diversity of customs and peoples to the attention of scholars but made no attempt at systematic study of this diversity.

Gradually, the initial geographic interest shifted to an increasing emphasis on ethnography (Slotkin 1965:45). The result was a more "cosmopolitan outlook and the use of the comparative method in the development of generalizations about social phenomena" (Slotkin 1965:38). Montaigne (1533-1592) exemplified this new cosmopolitanism. His works, greatly influenced by his readings and travels, were focused on the subject of humans (Slotkin 1965:55). Montaigne was the exception rather than the rule and, consequently, he did more than others to clarify the problems of cultural description. He used comparisons and sought cultural similarities in the data. The fact that he made comparisons, indicates Montaigne's acknowledgement of the cultural diversity made available through geographic discovery. Requiring a standard for comparison, he chose Europe, since it was the culture base most familiar to his reading audience. This provided the comparative method of the time with a distinct Europocentric slant (Hodgen 1964:191-3). Although Montaigne denied any ethnocentrism, others employing comparisons assumed European superiority. Montaigne could not accept the customs of his own society

as necessarily more rational than those of other societies and even made unfavorable comparisons by way of demonstration (Slotkin 1965:56). Differences in personality types he attributed to geographical variation. He regarded human beings as essentially the same (Slotkin 1965:61). Natural laws were sought to replace notions of supernatural causation of phenomena, foreshadowing the naturalism of the seventeenth and eighteenth centuries. The ideas of Montaigne represent an important break with the traditions of the Church and a definite advance toward professional anthropology in terms of objectivity and cross-cultural comparisons.

It has been stated that Montaigne was exceptional in his thinking, given the period. For most, recognition of the magnitude of human diversity (biological and cultural) raised issues incompatible with religious thought. The problem confronted by sixteenth and seventeenth century scholars was that of placing the Indians of the New World into the established scheme of Biblical tradition. If Indians were viewed as descendents of Noah, how did they arrive in the New World? If they were not descendents of Noah, then could they be regarded as human (Willey and Sabloff 1974:25)? The foundation of the ideology of Western civilization was being dramatically shaken. African Negroes had been regarded as descendents of Ham. The Biblical account of the Tower of Babel had provided the rationalization for diverse languages. Physical variation had been credited to differential environmental influence. Native Americans simply did not fit into previous conceptions. The peopling of America became a question stimulating considerable speculation, with the notion of overland migration suggested as early as 1648--well before

the navigations of Cooke in the late 1700s which mapped the Bering Straits archipelago (Willey and Sabloff 1974:26). The New World peoples were often viewed as being descendents of the Lost Tribes of Israel. More usually they were assigned non-human status along with black populations. This latter designation salved the consciences of those adopting slavery since native Americans and blacks were viewed as animals without souls (Shapiro 1964:343).

As the discussion has suggested, there were two fundamental points of departure for evaluating the populations of the New World, the Christian tradition and the Classical tradition. The former categorized peoples on the basis of religious affiliation, either Christian or heathen. Humanity was defined by receptivity to divine grace. Classical heritage classified peoples as either Greek (civilized) or barbarian. Montaigne expounded upon this application of terms in the sixteenth century when he stated, "'everyone calls barbarian what is not his own usage'" (quoted in Elliott 1970:46). In classical terms, humans were defined by rationality (as determined by the definer). In 1537, Pope Paul III maintained in the bull Sublimis Deus that Indians were "true men," after which Indians were accredited with some degree of humanness. Nevertheless, by either tradition, Indians fell somewhere along a continuum from bestiality to primaeval innocence (Elliott 1970:41-3).

The mind-set established by the Christian tradition was exemplified by the substantial number of missionaries sent by the Church to convert the heathens of the world. The importance to anthropology of this desire to save the world may be questioned, but it may have increased the ethnographic data base as a consequence of missionaries having extended

periods of exposure to particular culture groups. Unfortunately, missionaries were less concerned with studying humans than with converting them to Christianity--being of the attitude that Indians were creatures of God under the control of the Devil. It was part of God's design that all should be shown the way to salvation (a philosophy supported by scripture--Matthew 28:19-20--and still characteristic of today's Christian religions). Consequently, missionaries' accounts reflected the trials and tribulations of conversion, only incidentally providing insight into manners and customs of the people. Much of the work of missionaries focused on gaining familiarity with a native culture's language, since this would facilitate conversions. Dictionaries and grammars of languages resulted which assisted in more detailed explorations of culture, most notably religion. Many accounts of native culture based on mission work were simply never published (Elliott 1970:34-5). It was not until the eighteenth century with Father Lafitau (1670-1740), a French Jesuit missionary to the Iroquois, that we have the first extensive study of ethnology using a comparative method (Glacken 1967:361).

Of less direct importance to anthropology, but of considerable relevance to ideological change, was the association between the discovery of the New World and the rise of capitalism in the Old World. In addition to the Christian concern for the conversion of all the heathen of the New World, tales of gold and similar treasures stimulated the adventurous to endure the trials of a long ocean voyage and the potential dangers of native savages. The fact that the Americas were perceived as the location of boundless wealth spurred greed in Europeans. The native Indian populations generally paid the prices of treachery, en-

slavement, starvation, and death as a consequence of European greed (Jones 1964:42).

That European economic life was transformed by the discovery of the New World is evidenced by business expansion both within the newly developing nation-states of Europe and in the Americas. The latter provided resources and new produce to Europe while supplying a market for European goods (Elliott 1970:6). The Americas became the land of opportunity for Europeans. A four hundred year economic boom period has been associated with these so-called "frontier" conditions (Elliott 1970:55).

Politically, the New World served to alter the European balance of power. Merchantilism shifted, with the change in trade from land to maritime, from a Mediterranean locus to the Atlantic seaboard. Colonization of the Americas established wealth and power, with Great Britain, France, and Spain accumulating the most territory (Elliott 1970:32-3). In general, Europeans were less concerned with the study of man, than they were with gathering data about natives which would facilitate European exploitation of resources, taxation, and ruling of peoples. There is certainly no dearth of literature discussing the ramifications of colonization; but, as greater depth would be tangential to this thesis, no synthesis of this literature will be attempted. Of note is the fact that writings of this nature served to facilitate commercial pursuits but contributed little or nothing to the explanation or understanding of human diversity.

What, then, were the explanations given for the overwhelming human diversity evidenced in the New World data? It has been demonstrated that, with the possible exception of Montaigne, no systematic effort

had been made to understand human diversity. Although the dichotomy of Christian and Classical perspectives for native classification has been discussed, such classification does not address the issue of explaining diversity. Instead, it groups diverse human characteristics arbitrarily to facilitate incorporation of newly discovered but not necessarily understood peoples into a familiar and/or comfortable framework. Attempts at explanation revived a controversial theoretical issue of origins, specifically monogenesis versus polygenesis, which had been laid to rest in favor of the former by Saint Augustine in the Middle Ages (Penniman 1965:35).

Defined briefly, monogenesis pertains to the origin and development of a species from the creation of a single mating pair. In the case of humans, monogeneticists assumed--based on scriptural authority--that pair to have been Adam and Eve. Biblical account later attributes destruction of the world population except for Noah, his three sons, and their wives, to the occurrence of a universal flood. These four couples (descendents of Adam) were credited with repopulating the world, explaining human diversity. The major problem besetting monogenesis was demonstrating the presence of multiformity out of the assumption of uniformity. This, of course, is the crux of the issue in explaining human diversity.

Monogeneticists, founding their theory on blind faith, used primaeval perfection and degeneration from that perfection as their explanation for human variety. Degeneration was regarded as the continuation of the falling away from grace, from the perfection of the Garden of Eden. It was not restricted to humans and their institutions but the earth, too, was decaying. Time was the agent of degeneration, and change

inevitably yielded decay. All beings in the shape of man were the consequence of the original creation and, similarly, were subject to the same original sin. Recall the Christian classificatory basis for humans as receptivity to divine grace. New World savages were simply humans living in innocence,⁴ unaware of their ungodliness--the ultimate in degeneration. With proper guidance (i.e., from European missionaries), they would 'see the light,' leaving their heathen ways to become Christians, Christianity being regarded as the only way to compensate for human frailty, i.e., sin.

Diffusion, the transmission of cultural traits from one group to another, was seen as a mechanism of degeneration. Culture change was necessarily cultural decline. An attitude of monogenetic origin of a divine nature necessitated moving away from a perfect center. Human movement through time and space accounted for diffusion. The greater the distance between groups and the amount of time from separation, the more likely degeneration was to occur. The resultant diversity and its evil underpinnings could readily be viewed in the known world. Christianity had been introduced to the world to save it from total decay. It was, therefore, the responsibility of the Church to save humanity from what would otherwise be inevitable destruction. (See Hodgen 1964:254-69 for a more thorough discussion of these issues.)

It is important to recognize that human diversity at that time was realized in terms of manners and customs, without any racial connotation. Physical variation was explained in environmental terms. For instance, the theory of differential exposure of white skin to the sun's rays answered the question of pigmentation variation. As Hodgen (1964:214)

explains, "People were differentiated from one another as 'nations,' while the term 'race' carried a zoological connotation properly applicable only to animals." The modern notion of race did not evolve until the nineteenth century.

Opposed to monogenesis was the theory of polygenesis. Polygenesis attempted to explain human diversity by postulating multiple creations rather than a single creation. Issac de la Peyrère (1594-1676) was a major spokesman for this viewpoint. He first cast doubt on the historical validity of the Book of Genesis and, then, proceeded to propose, in essence, that if creation could happen once with Adam and Eve, it could happen more than once in other parts of the world. La Peyrère's works, Praeadamitae and Systema theologicum ex prae-Adamitarum hypothesisi presented his polygenetic thesis (Hodgen 1964:272-6).

Others felt that the theory of degeneration was too negativistic. Men like Machiavelli (1469-1527), Le Roy (ca. 1510-1517), and Bodin (1530-1596) were empiricists and secularists who supported an attitude of cyclical history. Advancement as well as degeneration were phases in the cyclical process. They pointed to the histories of several nations as demonstrating this order-decay-order pattern (Hodgen 1964:270-2).

Perhaps foremost in disrupting the grip of the degenerationists was the sixteenth century environmentalist, Jean Bodin. Convinced of the validity of geographical determinism, Bodin filled his books Colloquium, République, and Methodus with illustrative material taken from historical and geographical sources. Human and cultural diversity was seen as the result of the peculiarities of the environment--land, climate, topographical features. Bodin stressed the comparison of history and

historical materials for social inquiry. His greatest influence was on English cosmographers and geographers (Hodgen 1964:276-90).

THE SEVENTEENTH CENTURY: THE AGE OF REASON AND SCIENCE

De Waal Malefijt suggests that

the main ingredients for an objective approach to the study of society and culture were present by the end of the sixteenth century: a separation from theology, a waning reliance on older authorities, and a consideration of literate as well as nonliterate cultures for comparative purposes. Still lacking were systematic, objective observations, and a conscious application of scientific principles (1974:58).

The science of the seventeenth century contributed the missing scientific principle, i.e., to understand complex phenomena it is necessary to reduce them to their simplest, most basic elements (de Waal Malefijt 1974: 64). The generalizations sought were the laws of nature and the universe. The development of seventeenth century scientific principles were fundamental to the continued attitude change necessary for the professionalization of anthropology; but, within the century attitudes toward the study of man in fact changed very little.

With respect to the intellectual climate, the seventeenth century has been labeled a transitional period (Hampson 1968:32). It is a remarkable period in terms of intellectual geniuses and their influence in the dramatic alteration of world view. The revolution, which began with the work of Copernicus, Kepler, and Galileo, changed the Western world concept from terracentric to heliocentric. In the process of destroying medieval cosmology, science had expanded the traditional "closed world" view into that of an "infinite universe" (Stromberg 1975:46). The magnitude of this change in perspective and the difficulty the common

person had in incorporating it into his personal world view seems roughly analogous to the impact of the discovery of the Americas and the difficulty of digesting the tremendous human diversity revealed by discovery. By the end of the seventeenth century, the heliocentric theory had achieved relatively greater acceptance than had human diversity, but then, the latter's study needed the principles of the former, so such a circumstance should not be surprising.

Two of the most influential men in this transitional period were Bacon (1561-1626) and Descartes (1596-1650). Each contributed fundamental elements to modern science but neither recognized the value of the other's contribution. Disciples of each continued the struggle, and it was not until Newton synthesized the two approaches that modern science was genuinely born. "With the great synthesis and summation made of the laws of motion and of gravity by Issac Newton in 1687, all obscurities seemed cleared up; the pieces fell into place, nature revealed its secrets, and Europe prepared to enter into its optimistic Enlightenment" (Stromberg 1975:61). This, of course, is simplistic but sufficient for the purposes of this thesis.

Bacon initiated the century as a strong proponent of developing the new sciences. He inveighed against the ancients despite his acknowledgment of Greek and Roman scholars as the last to advance science and his own use of Aristotelian ideas. Ancient science was burdened by its teleological approach. Bacon emphasized inductive reasoning, the need for directed experimentation, and the importance of recording experiments. Although he did little in the line of theory building, Bacon stimulated scientific hypothesis construction and testing as well as the search

for general laws in science (Butterfield 1956:72-82). He has often been referred to as the "father of inductive science" (Stromberg 1975:47).

Stromberg (1975:54) has labeled Descartes as "the strongest single force working on seventeenth century thought." As Bacon, Descartes rejected previous knowledge as inadequate and commenced to reconstruct all knowledge, recognizing only the self as a point of departure. The self, being a consequence of thought, could not be denied; hence, cogito ergo sum. Based on the assumptions that "the essential capacity to see reason was distributed throughout the human race without any difference of degree" and that "[a]ll things which we clearly and distinctly conceive are true" (Butterfield 1956:84), Descartes developed a mechanistic vision of a perfectly ordered, unified, and interlocked universal science. Deductive reasoning and mathematics were the keystones of Cartesian thought. In contrast to Bacon, he had little concern for carefully designed experimentation. His most significant work, affecting the conceptualization of a "clockwork universe," was his A Discourse on Method (1637). The work is regarded by Butterfield as particularly important in intellectual history, suggesting its impact was strengthened by having been written in the vernacular. Descartes apparently designed the book to speak to the "natural reason of men whose minds had not been perverted by the traditions of the schools" (Butterfield 1956:82).

Butterfield (1956:138-9) expresses agreement with Bacon and Descartes rejection of thought since antiquity by crediting the Renaissance with mere recovery and assimilation and contributing little, if any, innovative thought. In contrast, he credits the seventeenth century with brilliant, creative activity. Major advances were being made in

all natural sciences except chemistry. Traditional attitudes and assumptions were subjected to critical scrutiny, frequently being rejected. Seventeenth century scientists and philosophers, following Descartes, detached man's physical nature from his mind. The natural world came to be seen as inert physical matter based on mechanical relationships, rather than in organic analogy. Scientists chose to concentrate on an object's observable properties, rather than seeking its intangible 'essence' (Stromberg 1975:46).

Man, in his new awareness of his separation from nature by way of soul (mind), and of the predictability of the mechanical laws of nature, soon came to realize his power over nature.

As science seemed to establish itself on an impregnable basis of experimentally verified fact, doubt and confusion eventually gave way to self-confidence, and belief that the unknown was merely the undiscovered, and the general assumption--unprecedented in the Christian era--that man was to a great extent the master of his own destiny (Hampson 1968:35).

Philosophical speculation shifted from the supernatural realm to the natural. Similarly, legitimation in thought shifted from authority based on faith to that of scientific experimentation (Flemming 1970:268). This secularization which coincided with the scientific revolution was not a circumstance solely of the revolution, however. Hampson (1968:29) cites dissention within theology as the greatest cause of the Church's decline in intellectual authority. Notable for its criticism was the work of Father Richard Simon, Critical History of the Old Testament (1678) which questioned the authorship of the Pentateuch (Stromberg 1975:123). Further evidence of theological dissention was the proliferation of Protestant sects breaking from the universal Church and the political decline in

power reflected by the rise of nation-states out of the Holy Roman Empire. While these last events occurred prior to the seventeenth century, their ramifications for increasing seventeenth century secularization should not be underestimated.

Some attempts were made to apply the scientific principle of reductionism to the social sciences in the seventeenth century. When applied to social institutions, a comparative method developed from which emerged the concept of culture as learned behavior (de Waal Malefijt 1974:65). The comparative method used in the study of religions led to a more relativistic attitude, especially toward the religious diversity uncovered by the geographic discoveries of previous decades which was just beginning to be recognized (Butterfield 1956:143). In the effort to discover the laws of human nature and social life, social philosophers searched for common culture items and behavior patterns which were thought to be closest to original human nature (de Waal Malefijt 1974:71). Be that as it may, there were few anthropological contributions in the seventeenth century, leaving the proliferation of social thought to eighteenth and nineteenth century thinkers.

The seventeenth century has characteristically been referred to as the Age of Reason. Its major thinkers--Galileo, Bacon, Newton, Descartes, Spinoza, Hobbes, Leibniz, and Locke--strove "to perfect a method of scientific analysis that was careful, rigorous, logical, and naturalistic in that it did not refer directly to supernatural causes" (Stromberg 1975: 122). God was viewed as the final guarantee of an orderly universe but the phenomena themselves were essentially explainable by the laws of nature. Newton, the great scientific synthesizer, supported theism by fusing re-

ligion and science, but it was his scientific advances which most influenced Enlightenment thinkers. Locke (1632-1704), the great synthesizer of political thought, developed the philosophy which was to dominate eighteenth century thought (Stromberg 1975:111). Locke has been regarded as the pivotal point in the secular transition. His philosophy supported Deism which sought the principles of natural religion. These underlying principles were considered to be universal irreducible truth. Because of his tremendous influence on Enlightenment thought, discussion of Locke will be left to the eighteenth century.

THE EIGHTEENTH CENTURY: THE ENLIGHTENMENT
AND THE NOTION OF PROGRESS

Looking at the generalized intellectual climate of the eighteenth century, one must acknowledge two primary national influences. France had become the European model of taste in literature, art, architecture, and refinement in social behavior. Across the Channel, Britain exemplified an ideal of civil liberty being guaranteed to all with education and influence rather than only to those born into certain families, civil liberty then being an inherited right. Europe was predominantly agricultural. The few towns which flourished were associated with industry which maintained traditional methodologies under the regulations of guilds established during the Renaissance.

The area exhibiting a substantial rate of change capable of effecting alteration in social forces was oceanic commerce. The switch from Mediterranean-centered to Atlantic seaboard-centered trade networks significantly increased capital development in England, France, and the Netherlands. This development is reflected demographically by tremendous population growth, particularly in France and Britain. A new class consciousness developed among the merchants as they "developed a new self-confidence that matched their standard of living and awareness of their increased importance to the national economy" (Hampson 1968:47).

Gentlemen formed more of a social club during the eighteenth century than in preceding and following periods. They shared a common language (French) and culture (Western European). A cosmopolitan society existed

in which communication between men and of ideas prevailed. Travel had become so common that travelers and their books abounded. As the century progressed, the international exchange of ideas increased in momentum. London-Paris-Amsterdam developed into the main communication triangle for intellectual thought (Hampson 1968:71-2). The particular contributions of this environment to the development of anthropology will be examined in this section.

The notion of degeneration has been discussed as being prevalent in seventeenth century thought. It continued to be common in the next century, but as natural science successfully instilled greater confidence in the capabilities of humanity, people not only became aware of their power over nature, they construed this power to be limitless. (The Enlightenment misconception of limitless power over nature unfortunately persists in the twentieth century.) Eighteenth century scholars were aware that the science of the preceding century had greatly increased technological knowledge. Reason, a consequence of seventeenth century Cartesian-dominated thought, 'enlightened' eighteenth century thinkers, precipitating an idea of progress as the advancement of knowledge (Garbarino 1977:13). It appeared that humans, given reason, could continually improve, eventually achieving perfection. The following assumptions underlay the Enlightenment notion of progress: "(1) that advancement in knowledge is natural and necessary, certain and endless; (2) that advancement in knowledge can only proceed slowly, and by insensible degrees; and (3) that knowledge is continually advancing toward perfection" (Teggart 1962: 89).

During the Enlightenment the 'study of man' became a significant pursuit.

The principles of nature were fundamental to this study. A mechanistic aspect of nature was envisioned in which purposeful principles of organization and process ruled nature. Through science, the laws of nature could be discovered (Voget 1975:50-1). Cartesian mechanical philosophy underlay the eighteenth century search.

[T]he laws of Nature came to be thought of as the orderly provisions which Nature makes for the realization of certain specific purposes, these purposes, discernible by the exercise of reason, being nothing other than the promotion of progress and happiness of mankind (Teggart 1962:90).

For the purposes of clarity, it should be reiterated that Descartes theorized that the human mind, characterized by innate ideas, was distinct from the human body which was physical and governed by mechanistic, natural laws. Late in the seventeenth century Locke challenged and subsequently rejected the cogito ergo sum aspect of Cartesian philosophy, postulating instead that the human mind was empty at birth and all knowledge was learned. The Lockean tabula rasa concept emphasized the socialization process through the improvement of the social environment (Stromberg 1975:116). "The inescapable consequence of this doctrine is that different experiences, or in modern terms, differential environmental exposure, will produce both individual and national differences in behavior" (Harris 1968:12). Environmental determinism was not original with Locke; Bodin introduced it in the sixteenth century. But Locke encouraged experimentation, the scientific approach, and used evidence from non-European societies to support his contentions. (Bodin also made use of 'ethnographic' evidence, although fewer data were readily available to him due to the recentness of discoveries and the censorship of the Church.)

Four philosophical implications of Locke came to dominate eighteenth century thought. (1) Belief being regarded as a product of the environment, ideological toleration was encouraged. (2) Despite environmental differences, all men were viewed as potentially equal. (3) Through regulation of material conditions, a society could facilitate the moral improvement of its members. (4) A new psychology and an educational attitude developed "based on the belief that human irrationality was the product of erroneous association of ideas, that had become fixed in childhood" (Hampson 1968:39).

In England, deists, applying Lockean notions, concluded that reason without revelation was sufficient to understand religion and morality properly. Hence, Christianity was unnecessary. Only a prime mover, a creator, was required to start the processes of nature. While the deist following was never in the majority, the members were sufficiently outspoken to cause orthodox Christianity to be more generally questioned.

The English Enlightenment, begun by deists and philosopher-scientists like Locke and Newton, eventually jumped the Channel, influencing the thinkers of the Continent, particularly those in France. Religious controversy was more acrimonious in France than it had been in England. One reason for this was that freedom of thought as expressed in publications was greater in Britain than in France. This freedom gave the controversy greater air, allowing it to blossom. English deists attacked every dogma. "If God himself could be put on trial (as someone said of the deistic debate in England), what was sacred" (Stromberg 1975:128)? Another reason for the bitterness of the religious controversy in France was the strength of the Jesuit faction in influencing the belief structure

between 1700 and 1760.

In 1721, Montesquieu (1689-1755) initiated the new spirit into France. Due to publication restrictions, Persian Letters was published in the Netherlands and smuggled into France. The work breathed new life into a society only recently released from an epoch of "solemn authority" under the rule of Louis XIV who died in 1715. Persian Letters served to bring awareness of the Middle East to the public as ". . . two Persians visit Europe and pass comment on its curious customs, comparing them to their own, in letters to each other" (Stromberg 1975:131-2). Through analogy monks become dervishes, the pope becomes a wizard, and religious rites are regarded as superstition. The good life is stressed as of prime importance, with religion serving as the guide to it. The anthropological relevance of Persian Letters is obvious. Cross-cultural awareness and relativism had been promoted.

The essence of deism was expressed by Voltaire (1694-1778) in his "Profession of Faith of the Theist" (1764).⁵ Stromberg summarizes Voltaire's thought as follows:

God exists. He is a remote deity who probably does not concern himself directly in the affairs of men. But it is good for the people, at least, to believe that he rewards virtue and punishes sin. There is a universal original, primitive religion, simple and rational. All religions derive from the same source (1975:129).

As this passage indicates, natural religion is perceived through reason. But only the enlightened few are capable of such perception. The masses need guidance because they are influenced by irrational hopes and fears. Consequently, religion is needed to provide the populace with the direction of the priests.

Voltaire was a prominent spokesman for the French Enlightenment, perhaps too prominent for the best interest of evolutionary thought. Maupertuis (1698-1759) and Voltaire were both disciples of Newton and Locke. In 1736 the latter man traveled to Peru and, under the leadership of Maupertuis, participated in an expedition to Lapland. The joint expedition proved the Newtonian theory that the world was not flattened at the poles as claimed by the Cartesians. The data accumulated from these expeditions were used by Voltaire subjectively to support his own theories. Maupertuis carefully considered the diversity he encountered and, after experimentation, developed theories of evolution, natural selection, and genetics. Unfortunately, the two men were rivals in both science and love. The greater misfortune, in terms of scientific advancement, was that Voltaire was the more influential of the two and succeeded in discrediting Maupertuis' theories of evolution--not a difficult task considering the eighteenth century static, creationist world view.

Greater freedom in French publications after 1740 allowed more tolerance of the outspoken ideas of the philosophes (Voltaire and Montesquieu, among others). Knowledge as a whole rather than as a collection of separate parts was important to eighteenth century thinkers. Expressive of this attitude was the substantial work of Diderot (1713-1784). Encyclopaedia was a compendium of current knowledge and 'enlightened' opinions which attempted to include everything of value to the period (Hampson 1968:86). Despite its prohibitive expense, Encyclopaedia was regarded as a symbol of status, and all who were able displayed its volumes along with the plays of Voltaire and Buffon's Natural History.

Traditional religion did not remain stagnant during the period of

scientific advance. Seventeenth century scientists had allowed for supernatural causation by suggesting that God revealed truths through science. Science, therefore, was viewed as a tool of God who could be known through His works as a consequence of reason (Voget 1975:45-6). In the eighteenth century the concept of divine bienfaisance or 'Providence' was coined. Acting as an agent of divine benevolence towards humanity, Providence was interpreted anthropocentrically by Christians. All the natural laws disclosed by science were regarded as being for man's benefit and under the guidance of God. Hence, order, the reflection of Providence, and progress, a natural law, were not in conflict with Christianity (Hampson 1968:79-82). Deism, also, made use of bienfaisance but only as an initiator.

Vico (1668-1744) in his work, The New Science (1725), provided a good example of the combination of traditional Christian views and the concept of orderly process revealed by science (Voget 1975:46). His primary contribution to anthropology was his insight that society was man-made. Changes, he claimed, were best explained within one's own social context; therefore, an historical perspective was necessary to understanding culture. Further, non-literate peoples were to be regarded as full members in socio-cultural traditions (de Waal Malefijt 1974:78). Vico has been regarded as a theoretical pioneer of modern history (Stromberg 1975:175).

As deism was useful to anthropological development by weakening the hold of traditional religion, so skepticism served to further the decline of blind faith. Scottish philosopher, David Hume (1711-1776) sowed the seeds of skepticism in 1748 with An Enquiry concerning Human Understanding.

He discredited the deists by demonstrating that no factual support existed for natural morality or religion as being perceived by all men in terms of reason alone (Stromberg 1975:126-7). Hume developed five arguments which became a counter-philosophy to Enlightenment thought and influenced the Romanticism of the nineteenth century. First, Hume did not acknowledge a concept of 'mind' but only a series of psychic happenings. Second, he could establish no proof of the validity of causal inferences. Custom, not reason, was thought to support scientific laws. Third, reason was regarded as either abstract as in mathematics and logic or empirical, i.e., experimental. Reason, consequently, played a negligible part in life since it was not innate or experiential. Hume's fourth argument was that God could not be demonstrated by reason. Given the spirit of the times and Hume's embracing of the scientific method, such a statement not only denied God by reason but also by revelation. That skepticism encouraged atheism is not surprising. Finally, social utility, a concept popularized in the eighteenth century, was expounded upon by Hume in his statements on government. The good or bad qualities of government were discernible by its usefulness to the community (Stromberg 1975:160-3).

The atheistic tendencies of Hume's philosophy were developed by the French materialists. Men like d'Holbach (1723-1789) felt that reason was subject to natural law, providing a guide to human destiny. Science, as the gift of reason, had liberated humanity from the grip of superstition which had confined people to the regulations of the Church. Espousing atheism, d'Holbach and others emphasized human nature and served to further the disruption of the Christian influence on society (Voget 1975:47).

By 1760, philosophical thought was divided between skepticism and

determinism, at least among the few to whom the works of the great thinkers were available. The general public was still not strongly influenced since the Church, essentially opposed to the Enlightenment, regulated the spread of new ideas through clerical censorship (Hampson 1968:128-31). For the masses the Bible presented the literal truth, the Christian order. Followers of the new scientific and intellectual movement proposed that Moses was an unreliable historian, questioning God's role in the universe. Hume claimed there existed no objective knowledge of any kind, and d'Holbach removed any need for divine causation by regarding the universe as matter in motion. Everything occurred of necessity and could not be otherwise (Hampson 1968:95).

Discussion thus far has been concerned with the currents operating to weaken traditional world views in the early eighteenth century, a necessary condition for the thesis of this paper. It is clear, however, that the coherence and confidence of the Enlightenment rested primarily on the foundation of either natural or revealed religion. One way or the other, religion provided stability. The eighteenth century world view remained static, with a single act of creation establishing land, plants, and animals as those known at the time, i.e., fixed species (Hampson 1968:81).

It will be recalled that sixteenth and seventeenth century attempts at classification of peoples were based on conversion potential or degree of rationality--the Christian or Classical traditions, respectively. During the Age of Reason, humans were thought to be above nature (supra-organic) by virtue of being part of a special environment--society. Reality was organized at three levels: inorganic, organic, and social or

psychosocial. Man, not being governed by instinct as other animals, was distinguished from them by his rational (moral) nature. Society was seen as a natural state of humanity (Voget 1975:55).

Attempts were made in the eighteenth century to develop a scheme of classification and ordering according to natural laws of the new organic forms (flora and fauna) recognized from geographic discoveries. Linnaeus (1707-1778) proposed a graded series of created types in his System Naturae (1735) in which he included man as a primate. While classified with primates, man was grouped as a single species, Homo sapiens, being unified as such by virtue of reason and being separated from other primates by his social capabilities (e.g., language, morality) and reason (Voget 1975:60). This classificatory system forms the basis of current taxonomic and evolutionary thinking, but it is generally felt that

the potentially subversive nature of the transfer [man from a Biblical to a zoological system] was recognized neither by Linné nor by the Church, and it is not an unwarranted assumption that it had much to do with eventually opening the mind to evolutionary doctrines that inevitably included man who had become an integral part of the zoological world (Shapiro 1964:344).

Still, Linnaeus was very cautious about postulating any evolutionary notion which would constitute heresy and seemed, generally, to argue for the fixity of species (Slotkin 1965:180).

Buffon (1707-1788) also recognized a similarity between humans and apes but refused to accept their affinity based on the purely human attribute of a soul. Monogenetic degeneration (all humans derived from the same primal type) characterized Buffon's theory. Variation was explainable by environmental differences.

Both Linnaeus and Buffon, among the majority of others concerned

with devising a systematic scheme of organic classification, were proponents of what Lovejoy designated as the Great Chain of Being concept (Eiseley 1958:6). Blumenbach (1752-1840) denied the concept. He classified man separately, not only from primates but also from mammals (Slotkin 1965:187). Reason set humans so far apart from animals as to make it impossible to place the two in the same scale.

These three attempts at delineating the System of Nature are mentioned briefly as indicative of the classificatory efforts of the period. A more detailed discussion will be reserved for the section on evolution to be presented later. Our concern at this point is with cultural rather than biological diversity.

Enlightenment scholars considered humans to be social animals separated from other animals by the ability to reason. Studying social phenomena would reveal similarities in culture contributing to general human nature. Stimulated by the scientific search for general laws begun in the seventeenth century and the Newtonian idea that nature was reducible to a single great law or, at least, relatively few laws, and since advancements in the natural sciences were so convincing, scholars interested in understanding society attempted to apply scientific methodology to social phenomena. Laws of nature were thought to govern social phenomena and, therefore, were capable of discovery via inductive and deductive reasoning. The problem with this notion was not in the applicability of scientific reasoning to the study of society but in the inability of the eighteenth century scholars to make use of induction.

Adherence to the assumptions of progress, discussed above, resulted not in a concern for the conditions of progress, but rather with the

obstacles to progress. Commitment to a metaphysical notion of progress in natural law inhibited inductive reasoning (Voget 1975:62), thereby, restricting the eighteenth century progressivist contribution to anthropology.

With the tremendous quantity of diverse biological and cultural data available as a result of geographic discovery in the sixteenth and seventeenth centuries, the System of Nature sought by Enlightenment thinkers was not immediately apparent. In an effort to reduce this extreme diversity to workable proportions, scholars sought analogues between their familiar European culture and the unfamiliar cultures of which they were increasingly becoming aware. Because they wished to determine that which was 'natural,' the abnormalities, peculiarities, and accidental characteristics noted within societies were ignored as not pertinent to understanding human nature (Teggart 1962:90-1). It can be seen that such a notion is quite in contrast to the medieval and Renaissance emphasis on the bizarre.

In the seventeenth and early eighteenth centuries, comparisons were generally made between the existing, observable social conditions of so-called 'savage' societies and those conditions of ancient civilized peoples known through early historical records. Teggart enumerates several examples of the application of this form of comparative method (1962: 93-5). By the mid-eighteenth century, the notion of progress from ancient to modern and the attitude that the present 'savage' state was representative of the early civilized state had been established as fundamental assumptions. Based on similarities observed among world cultures, scholars sought a synthesis which would reveal the uniform series of de-

developmental stages of mankind (Teggart 1962:96).

It should be mentioned that these scholars did not base their synthesis on personally made observations taken from fieldwork situations. Instead, the reports of missionaries, traders, navigators, military officers, administrators, and captives were sifted through for ethnographic data. Reliability was assumed if some degree of concensus was discernible (Voget 1967:136-7). Particularly helpful to this process of synthesis was the contribution of J. N. Démeunier, an eighteenth century French 'ethnographer,' who translated numerous ethnographic and travel reports (Harris 1968:17). It is assumed that Démeunier translated these works into French which had replaced Latin as the common European language (Hampson 1968:53).

Analogical introspection was the technique used by progressivists to allow documentation of savage and civilized thought processes. Reasoning with the aid of analogy was suggested by Locke as constituting a uniform intellectual process. His empirical associational psychology, i.e., sensory-ideas form the first step in the organization of knowledge, became the theoretical basis for progressivists (Voget 1967:140-1). In essence, the Lockean position was that "despite differences in experience, reason, correctly applied, would eventually lead man, everywhere, to the same social institutions, moral beliefs, and scientific technical truths" (Harris 1968:13). The notion of psychic unity established the common ground among members of humanity. Given this basic assumption in conjunction with the principle of simplicity-complexity, eighteenth century scholars sought the origins and progressive stages of civilization.

Traditionally, history had been viewed from an individualistic perspective. In the eighteenth century the emphasis on nature resulted in a concern for natural history which was people oriented. The stress now being placed on the group or social element of society led to interest in institutions, customs, and ideas--cultural facts (Voget 1975:52). Establishment of ethnographic fact as a descriptive and measurable unit of study distinguished progressivists from historians.

Commonly, cultural differences had been explained by sole reference to the physical environment, particularly, climate. The early environmental deterministic work of Bodin has already been discussed. By the time of Montesquieu in the eighteenth century, environmental determinism was the principal explanation for cultural diversity. De l'esprit des lois (1748) made good use of the expanding literature of the Age of Discovery to 'substantiate' determinism. However, Montesquieu was not content with single factor explanations for anything as complex as cultural diversity.⁶ Instead, the work demonstrated the interrelationship of social, geographical, political, economic, and religious forces--a functionalist approach to the study of the legal institution which may be regarded as the starting point of sociology (Hampson 1968:114-5) or at least of the social sciences. As Montesquieu states: "'Mankind are influenced by various causes: by the climate, by the religion, by the laws, by the maxims of government, by precedents, morals, and customs; whence is formed a general spirit of nations'" (quoted in de Waal Malefijt 1974:80). Significantly, Montesquieu promoted cultural relativity by abandoning an ethnocentric viewpoint. His writing suggested a three-stage developmental progression for human history: hunting or savagery,

herding or barbarism, and civilization (Garbarino 1977:14-5).

Turgot (1727-1781), in Plan for Two Discourses on Universal History (1750), synthesized cultural diversity into three stages of human development similar to those presented by Montesquieu. In keeping with the times, biological factors were not regarded as primary to accounting for cultural diversity. Instead, Turgot emphasized cultural factors such as education, environment, and relative isolation from other peoples (Garbarino 1977:15). Credited with formulating many modern anthropological principles, Turgot recognized

that culture is learned, that it constitutes a whole, that it is transmitted from generation to generation by means of symbolic language, and that it is cumulative in as far as past achievements are added to the common store of knowledge. . . . that each cultural advance accelerates the rate of change, that diffusion plays a larger role than independent invention; he gave cogent explanations for the existence of cultural and personal differences, and he stressed the relationships between cultures instead of considering them as separate entities (de Waal Malefijt 1974:85).

The rise of civilization tended to be associated with the rise of technology, advancing from hunting-gathering through pastoralism, plant domestication, and finally commerce (Voget 1975:65). Condorcet (1743-1794), in Esquisse d'un tableau historique des progres de l'esprit humain (1793), carried the assigning of stages in human development to the extreme by suggesting ten periods. The then current period was regarded as the next to the last stage. This notion of present European civilization as being superior or near perfection reflects a Europocentric attitude characteristic of most scholars. Condorcet, in fact, ignored the data available from geographic discoveries, relying instead, on the

classical tradition and European history for his development model. Regardless, Condorcet's work was illustrative of a dominant influence for anthropology and sociology in the study of man, that being the "procedure of delineating the cultural development of mankind in the form of an 'ideal' or generalized series" (Teggart 1962:97).

The eighteenth century progressivist school of thought was well represented by the Scotch historians--Hume, Smith, Ferguson, Kames, Robertson, Millar, and Monboddo (Voget 1967:132). Based on the notion of the psychic unity of mankind, the Scotch school developed a unilineal theory of cultural evolution similar to that of the nineteenth century evolutionists. The social nature of man was stressed, a naturalistic perspective prevailed, and institutions provided the focus for most of their works (Slotkin 1965:412-60). Progressivist ideas, which have been discussed above, pertain to the Scotch school.

Limitations in data distinguish eighteenth from nineteenth century progressivists. By the end of the eighteenth century, the entire geographical world had been mapped. The three voyages of Cooke in the last part of the century contributed greatly to this project. Ethnographic data were collected by natural scientists and historians providing a sound base for the early nineteenth century ethnographers. Before discussing early nineteenth century ethnography and its role in the professionalization of anthropology, however, it will be of value to look generally at the transitional nature of the period's intellectual environment and the development of evolutionary theories.

THE NINETEENTH CENTURY

"Because of the complexities and variety of responses to it, the nineteenth century is a difficult century to 'place' in human history, or to access as a whole" (Briggs 1970a:25). Given this assessment of the nineteenth century, it will be advantageous to provide a brief introduction of the principal forces that influenced intellectual thought.

Two major revolutions interacted to produce the early nineteenth century environment. The French Revolution of 1789 became a symbol of the century. Eighteenth century France had been the leading European power. It had the greatest population, an economic growth rate comparable to that of Great Britain, and produced some of the greatest thinkers of the period. French revolutionary philosophy emphasizing liberty, human dignity, and the rights of man affected the rest of Europe. The fall of the Bastille, along with (perhaps more importantly) the burning of manor-houses and castles by peasants, represents the overthrow of a former order (Roberts 1970:57). Based on the French example, "'nationalism' in the name of the sovereignty of the people was a strong enough force to guide, even to dictate, the course of particular revolutionary movements" in other countries (Briggs 1970a:26).

In Great Britain, the Industrial Revolution shaped the early nineteenth century. Steam power had been developed and instituted for industrial use. A sizeable textile factory industry had been established which had begun exporting. A labor force composed primarily of women

and children evolved its own consciousness and institutions, forming a 'working class.' Introduction of a steam engine-powered railway marked the technical climax of what Mumford called "carboniferous capitalism" --an iron and coal based economy (Briggs 1970a:27-8).

Between 1789 and 1851 the 'industrializing, individualizing, secularizing, and politicizing of European society' represented what has been called "'the end of the Middle Ages.'" Industrialization resulted in a new economic order evidenced by a shift from a status to a market society with a concomitant decline in agricultural elements. New institutions appeared such as banks, stock exchanges, and a commercial press. Commercial codes of law were formulated, capital accumulation was rapid, mercantilism was increasingly criticized, and free trade was advocated. The individual achieved new dignity and significance; ambition became respectable (Roberts 1970:66).

Skepticism, a strong influence initiated by Hume in the eighteenth century, continued to encourage secularization in the nineteenth century. Greater separation of Church and State occurred with the Church conceding to its new position by entering politics to achieve its goals. Fear of revolution, stimulated by the French Revolution, strengthened the intensity of religious faith. Evangelical and pietistic movements were characteristic of the early part of the century (Roberts 1970:67).

As the assumption that society was a changing entity, not a static one, gained wider acceptance, the State became stronger than ever before. New institutions arose: conscription, police force, centralized administration, and a growing expertise of bureaucracies. Technical changes in warfare, transport, and communication further strengthened the State.

A new class of politicians developed to act as representatives of society in the bargaining and discussions necessary to the determination of public affairs. "The outcome of politics was to be the unquestioned acceptance of the authority of collective action expressed as the law-making of the sovereign state" (Roberts 1970:67-8).

Cities grew rapidly in the nineteenth century, particularly capital cities, creating enormous consumer markets. Service opportunities became abundant as the needs of the city for domestic, retailing, and entertainment activities were met. Industry flourished in urban environments providing employment for great numbers and creating unprecedented wealth for the few entrepreneurs. An immense chasm between classes of people came to characterize the social geography of cities. Segregation of classes was facilitated by housing, living standards, income, and culture differences. "Unhealthiness, overcrowding, ugliness, anarchy given free rein for the benefit of private interests, and dehumanization through the lack of social communication" were symptoms of urban problems which stimulated insurrections, riots, and confrontations (Bédarida, 1970:128). Anonymity was fostered by large cities. Individual rights preceded the welfare of the group. Cities were, nevertheless, centers of progress as evidenced in the institution of public services: road systems with sidewalks, networks of sewers, water distribution services, organization of household waste collection, creation of parks and public gardens, municipal baths and laundries, and improvement of public transport systems (Bédarida 1970:126-30).

Education had been limited to the elite prior to the Industrial Revolution. Developing class consciousness and the need for greater

knowledge to operate the machines of industry resulted in the institution of public education. Consequently, primary schools became common in the nineteenth century (Joll 1970:93). This development must be acknowledged as being of extreme importance to the expansion of the intellectual environment. No longer was knowledge restricted to a few. Intellectual communication was facilitated as increasingly more people became involved. Public concern for intellectual issues may be seen in the embracing of evolutionary ideas by the public before honest recognition was given to evolution by scientists as evidenced by the public demand for Chambers' Vestiges (see following discussion, page 58).

Between 1789 and 1900 the total population of Europe increased two to two and a half times, reaching approximately 400 million. In addition, during the same period, around 50 million people emigrated to colonies, especially to the Americas and Australasia. To meet the demands for food, industrial farming developed, stimulating a market economy in which international trade in basic agricultural products and tropical products grew increasingly important (Thompson 1970:149).

It is arguable that until about 1850 the early stages of industrialization and urbanization had been made possible by an increasing surplus of materials, men and finance extracted from a fundamentally traditional and technically static agriculture, by means of a tightening squeeze on peasants and labourers and at the expense of a deterioration in their living standards, rather than by an agricultural surplus made available by technical improvements and increasing productivity (Thompson 1970:155).

England was an exception to this generalization, in that agricultural output and prosperity of farmers kept pace with industrialization. After 1850 the general rural situation improved in response to rapid industrial-

ization and an acceleration of technical changes which raised output and productivity. Introduction of railroads extended the market economy into the countryside.

Demographically, the population shifted from rural to urban concentrations. The foremost push-pull factors in this shift are apparent. Industrialization of agricultural techniques reduced the need for manpower on farms. Urban industry was creating employment opportunities as was the growing demand for 'service'-type positions. Rural population loss promoted the disruption of traditional peasant communities and practices. Conscious efforts were made to preserve these traditions, resulting in 'old world' cults of folk art and costume. Rationale for such preservation efforts was the promotion of tourism. The countryside had become a popular place of escape from urban stresses for the aristocracy and middle-classes, particularly after the railway made it more accessible. The Romantic emphasis on a return to nature further stimulated rural tourism (Thompson 1970:156-8).

The modern state emerged during the nineteenth century in three different ways. The 'Atlantic Revolution' saw the countries from Spain to Scandinavia unified and consolidated through the reformation and centralization of monarchs and internal revolutions. In Central Europe, cultural and linguistic nations already existed. Here, nation-states were established through unification and centralization of many small states into larger wholes under the ideology of 'nationalism.' Nation-states were formed in Eastern Europe by secession from the larger empire (Röhl 1970:175). Looking at the countries under primary consideration in this paper (England, France, and Germany), one sees two of the three

modern state development patterns. France represents the first, Germany, the second. England manifested a gradual, peaceful development of a representative, parliamentary government.

National consciousness, previously associated with allegiance to a ruling monarch, became more abstract in the nineteenth century--represented symbolically by a flag and an anthem. Nationalism took different forms depending on the world view of the particular country, its past history, and the actual problems of the nation. In Germany, nationalism facilitated union by creating the notion of Volk--defined as national self-consciousness, folk spirit, shared national memories, and poetry (Mosse 1961:42). Volk provided an identity factor in a politically weak and industrially backward country (Mosse 1961:46).

A conservative element characterized English political thought. The Middle Ages notion of the ruler and the ruled predominated but, perhaps as a consequence of being the focus of the Industrial Revolution and the concomitant rise of new social classes, a concern for the social welfare of the people brought social reforms.

In France, the Revolutionary tradition (see above discussion) resulted in a nationalism concerned less with the distant past, emphasizing a more intellectual perspective.

A notion of nation superiority was recognizable in both English and German nationalism. "For the Germans it was the instinctive soul which counted; the English were suspicious of intellectual brilliance, but the Great French Tradition of rationalism asserted itself. This, in the last resort, gave a different flavor not only to French nationalism but to French intellectual endeavor as a whole" as evidenced by giving birth

to the ideas of both Descartes and Comte (Mosse 1961:62).

Nationalism contributed to imperialism, particularly in France and England. Imperialism must be regarded as the end product of several centuries of an Age of Discovery. By 1800, approximately 55% of the world land mass consisted of Europe and its colonies. Colonization continued in the nineteenth century such that by 1878, 67% of the world land mass fell into this category and by 1914 the figure reached nearly 85% (Briggs 1970a:36). Imperialist powers have been described as

states whose material wealth and technical expertise inevitably gave them control over the rest of the world; whose political principles were largely irrelevant outside their own culture (the most liberal democrat could only be a paternalist abroad); and whose mutual competition forced them to regard colonies as sources of power, either economic or strategic (Thornton 1970:216).

The prevalent state of mind characteristic of nineteenth century imperialism was a governor/governed dichotomy. The white establishment had both the power and conviction that would control and shape the future world into a Europocentric mold. 'Natives' were stereotyped into the 'to be ruled' role, being considered not as people but rather as problems, hence the sense of burden or mission which accompanied imperialism after 1869 (Thornton 1970:230). To those Europeans who ruled "it seemed possible, practicable, and proper to put the world in order" (Thornton 1970:232)--a philosophy typical only of the nineteenth century. The eighteenth and twentieth centuries recognized and accepted disorder in the world.

Ideologically, the most pervasive influence in nineteenth century thought, particularly in the first half of the century, was romanticism. Romanticism developed in opposition to eighteenth century Enlightenment

rationalism, seeking to "redirect man toward eternal and stable forces within himself and outside his rational control" (Mosse 1961:9). Emotions and imagination were emphasized as being more valid than reason; more capable of revealing the 'true' nature of the world. The main elements of romanticism have been summarized as

a deep and compelling concern for man's inner life;
a high valuation of emotion and simplicity as against
reason, order, and civilization; a love of nature
amounting often to a sense of mystical communion;
a fascination with the remote and the strange, in
both time and place; and a yearning for the intimate
and the unattainable (Briggs 1970b:292).

In the eighteenth century, Rousseau (1712-1778) foreshadowed romanticism by proposing an ideal of 'natural man' who, without civilization was good and virtuous. Whether the restoration of the arts and sciences has contributed to the refinement of morals (1749) was the essay by Rousseau which has been credited as the starting point of attitude change (Hampson 1968:187). Separation of collective interest and individual interest (society versus its members) was called for with natural feeling being regarded as an infallible guide to moral action. 'Natural' society was seen as primitive communism where land was not privately owned and in which happiness, freedom, and dignity were more likely to occur (Hampson 1968:210). Rousseau, therefore, did not advocate the progressivist position where society was viewed as developing from simple to complex with the later stages deemed more perfect than the earlier ones. Rather, Rousseau believed society became more unnatural, hence degenerated, as the social scale was climbed. In The Discourse on the Origin of Inequality (1755), Rousseau attributed the Fall from primal innocence as due to greed and selfishness. The few achieved wealth and power at the expense of the

populous as evidenced by private property and the development of the state to protect this property (Stromberg 1975:148). Based on this assumption, natural man came to be associated with the rural. This association formed an important preconception of the nineteenth century such that the peasant was seen to represent the greatest virtues in a continually industrializing society (Mosse 1961:15).

Another significant eighteenth century contributor to romanticism was Kant (1724-1804). Of Enlightenment orientation himself, Kant's The Critique of Pure Reason (1781) stimulated an intellectual movement of romanticists and idealists in Germany. His aim was to dislodge the hold of Humean skepticism and, in consequence, release science from Lockean empiricism (Stromberg 1975:216). Kant espoused a view of the mind or intellect as containing the fundamental conditions of thought which imposed order on experience. These ordering principles were present in all minds, providing a fundamental unity.

While reality was not considered to be a creation of the mind, its perception was. Kant recognized two worlds: the phenomenal, dealing with knowledge of appearances, the product of a categorizing intellect; and the noumenal world, the actual external world of reality. The realm of science was contrasted with the realm of value. The former contained useful knowledge based on the phenomenal world. The latter was intuitive, comprised of moral and esthetic experiences founded upon the noumenal world about which, Kant believed, humanity was likely never to know. In sum, Kantian philosophy asserted that the human mind was creative, an active agent, which imposed order on nature, and, by virtue of these

assertions, that pure empiricism was inadequate scientific method requiring creative intuition (Stromberg 1975:217-9).

Both Kant and Rousseau contributed to the new mental climate of the nineteenth century: the "individual existed primarily as a morally autonomous unit whose obligations were self-imposed and owed nothing to the external authority of a religious creed or the determinist pressure of a material environment" (Hampson 1968:198). Industrialization and urbanization created a general loss of identity by disturbing the more stabilizing, strong social structure of pre-industrial society. Romanticism, with its emphasis on natural man, was not escapism from the problems of industrialized society. Instead, it attempted to solve these problems by establishing human identity. Man had to be understood in relation to the world as a whole with regard to his past. Biology became the basic science. The Cartesian mechanistic world view was objected to and an organismic model was used in its stead. In such a model, the parts were understood only in relation to the whole--the individual in relation to the world of nature. The Romantic Age stressed "process, individual personality, and full realization of that personality through striving after, and perhaps achieving particular values, goals, and ideals" (Wilshire 1968:23).

The Rise of Evolutionary Theories

While the foundation for the general social sciences was laid in the eighteenth century, and while certain disciplines diverged late in that century (notably economics and politics), sociology developed after the work of Comte (Positive Philosophy--1893) and anthropology secured

its place among the social sciences with Morgan and Tylor. Voget assigns the theory of developmentalism to the period between ca. 1725 and 1890 and then proceeds to divide the period into two phases. The first phase covers from 1725 to 1840 and amounts to the progressivist philosophy discussed previously. The second phase is delineated between 1840 and 1890, corresponding with the change in the natural sciences from a static to a dynamic equilibrium model. When natural science and social science models of reality assumed the same processes, social scientists could use interpretations of social development and change (Voget 1975:41-2).

This attitude is in keeping with the thesis of Hallowell, since thermodynamic theories were necessary to the advancement of geology which extended the conceptualization of time, a prerequisite to the acceptance of the evolutionary theory of Darwin. Granted, Darwinian evolution was not influential in the ethnological theories of Tylor and Morgan, but the intellectual atmosphere created by the evolutionary controversy certainly facilitated the acceptance of an anthropological orientation. In fact, the Darwinian revolution has been credited with eliminating man's anthropocentrism (Mayr 1971:1).

Much has been written about the development of the conceptualization of evolution. Because better syntheses are available (particularly those of Glass, Temkin, and Strauss, 1959; Eiseley, 1958; Osborn, 1913) no attempt will be made here to reproduce a complete recapitulation. Only the most significant influences on intellectual thought favoring and opposing the changing in time conceptualization will be summarized.

The first foreshadowing of evolutionary theory can be found in the eighteenth century. This is not to suggest that there were no evolutionary

tendencies prior to this period, since the Greeks expressed such notions. Generally, however, the strictly traditional Judeo-Christian world view severely circumscribed the intellectual environment as long as the Biblical interpretation of the cosmos was accepted as literal fact. Since Biblical chronology dated world creation at 4000 years B.C., and since to disagree with the religious view constituted heresy (at least within Christianity), intellectuals who discussed origins did so within this time framework.

Geologists were the first to question Biblical chronology scientifically. The problem in need of explanation was the presence of marine fossils in inland mountains. The questioning of such deposits led to a recognition of the changing nature of the earth which required millions of years rather than the traditional 6000 year period.

The growth of knowledge about fossil forms of life, out of which a genealogy of species could be drawn, and the emergence of an appreciation of the immense time required by natural processes to fulfill the history of life indicated by the fossil record, were among the fundamental developments in the background of Charles Darwin's Origin of Species (Haber 1959a:3).

Werner (1750-1817) established geology as a recognized science in the eighteenth century. The school of thought he founded has been labeled Neptunism because of the emphasis placed on the role of water in the formation of strata. The Neptunists contributed to the expanding time depth of the earth's chronology by extensive fossil identification. Many geologists were not content to accept only water as the agent of strata change. These geologists considered heat to be at least an equally important geological agent, hence the labels of Vulcanists and Plutonists were attached to those adhering to this view (Haber 1959b:242-3).

Out of this latter school of geological thought, Hutton (1726-1797) developed ideas which, though radical for his time and, consequently, ignored by his contemporaries, were particularly influential to the evolutionary notions of the nineteenth century (Judd 1911:25-32). His Theory of the Earth (1788) expressed a timeless world-machine view based on three principles: (1) the process of decay--the earth's strata are the result of the destruction of a succession of former worlds; (2) the renovation process--heat repairs the decayed worlds--giving rise to new ones; and (3) a world is always in existence despite continually undergoing the processes of decay and repair (Haber 1959b:244-5). Uniformitarianism, the theory that "geological phenomena were a product of natural forces acting over enormous time periods with considerable...uniformity" (Eiseley 1958:353), was the Huttonian contribution to evolutionary theory which was later solidified by Lyell. Hutton, then, applied evolutionary ideas to the inorganic world (Judd 1911:17-8).

A prominent influence in creating public awareness of the possibility of an evolution of earth and organic life through slow processes and natural forces, was de Maillet's work Telliamed (1748). Assuming a uniformitarian attitude, Telliamed explained fossils as revealing a succession of life forms in the earth's strata. Despite its fantasy, transformations, and cosmology, de Maillet's contribution must be acknowledged as encouraging eventual acceptance of non-orthodox, evolutionary views by the general public by preparing the proper intellectual environment (Haber 1959b:230-2; Eiseley 1958:30-5).

The theory of transformism developed as a consequence of Leibniz's 'Great Chain of Being' notion prominent in the eighteenth century. Diderot

(1713-1784) argued in favor of transformism in Pensées sur l'interprétation de la nature (1753). He presented a view of universe formation without a separation of organic and inorganic which was an essential preliminary to the concept of organic evolution (Crocker 1959:119). Diderot apparently was on the verge of a theory of organic evolution in that he dealt with time and becoming, the continuity of process, and the selection of the fit. "'In general there is no force whatever that is not a principle of change'" (Crocker 1959:122).

Buffon's (1707-1788) work both helped and hindered evolutionary thought. To begin with, he recognized the problems of natural history: that it was necessary to reduce the number of separate species to a minimum; that highly divergent forms derived through a common origin through natural descent; and that the discovery of the causes and methods of modification was essential. Such notions required an expanded time depth. Buffon used comparative anatomy as evidence of organic evolution and presented his theories to his contemporaries in a clear and definite form. All of these factors strengthened the climate for acceptance of later evolutionary thought. But Buffon also promoted a definition of species in association with an assumption of hybrid sterility which was a serious deterrent to a theory of descent (Lovejoy 1911:111-3).

The eighteenth century scholar most capable of contributing to evolutionary thought was Maupertuis (1698-1759). He has been credited with having discovered genetic and evolutionary theories comparable to those of the nineteenth century.

In short, virtually every idea of the Mendelian mechanism of heredity and the classical Darwinian reasoning from natural selection and geographic isolation is

here combined, together with DeVries' theory of mutations as the origin of species, in a synthesis of such genius that it is not surprising that no contemporary of its author had a true appreciation of it (Glass 1959:60).

As has been mentioned previously, Voltaire so criticized Maupertuis and his work that his theories were generally ignored even into the nineteenth and twentieth centuries. That Darwin makes no mention of Maupertuis supports the lack of appreciation of this eighteenth century intellectual.

The contributions of Erasmus Darwin (1731-1802) (grandfather of Charles) and Lamarck (1744-1829) might well be regarded as one, since both promoted transmutation in the same late eighteenth-early nineteenth century period (Eiseley 1958:46-52). The similarities of the two men's theories have caused some to accuse Lamarck of plagiarism, since his theory of transmutation succeeded the elder Darwin's presentation. Independent invention, however, is more generally assumed (see Osborn 1913:152-5; also, Eiseley 1958:49-51). It is Lamarck, however, who is accorded the position as foremost of the pre-Darwinian evolutionists (Gillespie 1959:265). By way of analogy, it has been stated that Lamarck's philosophy of nature was to Darwin what Hegel's historical dialecticism was to Marx (Gillespie 1959:268).

Lamarck's contributions were primarily the establishment of mutability of species in descent and the explanation of variations by natural selection. In this philosophy, living nature became a plastic force capable of producing all animals through progressive differentiation and perfection of organization. Gaps between life forms were explained by the influence of the physical environment which channeled of necessity

the innate tendency toward complication.

Changes in the environment lead to changes in needs; changes in needs produce changes in behavior; changes in behavior become new habits which may lead to particular alterations in particular organs and ultimately in general organization (Gillespie 1959:270).

Following this line of thought led Lamarck to believe that the development or decay of organs was the result of use or disuse and that organisms acquire characteristics through reacting to the environment which are then inherited. This notion of the inheritance of acquired characteristics may be the weakest point in Lamarck's argument. Darwin saw the necessity of distinguishing between the origin of variations (which occur randomly) and their preservation (according to their effectiveness in objective circumstances). Consequently, whereas Lamarckian evolution proposes endless circles in nature, Darwinian evolution has direction (Gillespie 1959:287).

One of the leading opponents of evolutionary thought and to Lamarck in particular was Cuvier (1769-1832). Both he and Lamarck used comparative anatomy to provide evidence for their theories, but the divergence of their conclusions was complete. While Lamarck concluded mutability of species, Cuvier insisted upon fixity. Regarded as the father of comparative anatomy and paleontology, Cuvier provided data in support of evolutionism, particularly his demonstration of divergent anatomical organization. This contribution was significant in the breaking down of the traditional 'Great Chain of Being' notion (Eiseley 1958:88). Yet, Cuvier advocated catastrophism rather than uniformity as an explanation for species change (Osborn 1913:196).

Cuvier subjected Lamarck and his theories to severe criticism. His

influence on the intellectual environment was enhanced by his favored political position with Napoleon (Osborn 1913:196) and his attempt at marring the growing discrepancies between Biblical and geological chronologies. Catastrophism explained discontinuities as being the result of convulsive transformations of the earth's crust. The latest catastrophe was considered to have been the Great Deluge, after which the earth was repopulated. This notion shifted the emphasis of creation from earth to man whose antiquity Cuvier never acknowledged (Toulmin and Goodfield 1965:164-7).

The catastrophist argument was undercut by Lyell (1797-1875) in 1830 with the publication of Principles of Geology. Advocating uniformitarianism, Lyell synthesized thirty years of geological discovery, recognizing only natural processes as agents of change given sufficient time. As distinguished from Hutton, Lyell down played the providential character of geological change and, thanks to the increased knowledge of a later period in time, Lyell provided a more elaborate and detailed account of geological development (Toulmin and Goodfield 1965:167-9). Lyell effectively broke the time-barrier of Biblical chronology, thereby paving the way for evolutionary genealogy.

"Once uniformitarianism was accepted, evolutionism became the most natural and most probable hypothesis concerning the origin of the species" (Lovejoy 1909:367). Despite the evolutionary implications of his work, Lyell did not recognize evolution of organic life. He opposed Lamarckian evolution, supporting instead, special creationists. It was only after the publication of Origin of Species and the subsequent urging of Huxley that Lyell supported organic as well as inorganic evolution. This initial

stance was significant because of the strength of Lyell's influence in scientific circles. Lyell's eventual shift to evolutionary doctrines turned the tide in the intellectual environment.

It has been pointed out that the doctrine of uniformitarianism was insufficient in itself to introduce progressive biological change. Uniformitarian philosophy implied the Newtonian notion of a self-sustaining machine operating continually on the same principles. Its major contribution lay in the concept of continuity of action. Lyell added natural explanations for extinction, faunal shifts, and so forth to the essentially Huttonian stance.

Catastrophism depended upon the supernatural for explanation of change and was progressive in orientation. Lyell denied progression and the intervention of the supernatural, relying on natural causation for change and retaining a cyclical attitude by leaning toward special creations (Eiseley 1958:114-5). As this discussion suggests, Lyell found himself in an ambiguous position, with data supporting progressive evolution and a bias toward cyclical creations--a position referred to as non-progression. It took the work of Darwin to clarify these issues by fusing progressionism and uniformitarianism.

Thanks primarily to the anonymous work of Chambers (The Vestiges of the Natural History of Creation--1844), much of the controversial nature of evolutionary hypotheses had already been aired and brought to public awareness by the time of Darwin. A late nineteenth century writer said of its role, "'happily the whole subject [evolution] was brought to such prominence that it could be withdrawn into obscurity no more '" (Draper, 1877, "Evolution: its Origin, Progress, and Conse-

quences" as quoted in Eiseley 1958:133-4). Vestiges appears to have been founded on a revised progressionism composed of both Lamarckian and Huttonian elements (Eiseley 1958:137). The work's major weakness was its inability to present the precise nature of the process of evolution. Its fundamental strength was its success with the public.

By 1859, when the Origin of Species was published, an aroused and eager audience was considerably prepared for the revelations of Charles Darwin. The great amateur [Chambers] and the great professional scholar [Darwin] should always be remembered as having together won the public mind to evolution. It was one of those events, beautifully timed by accident, which rarely occurs in the history of thought (Eiseley 1958:139).

As Darwin himself said about Vestiges:

'The work from its powerful and brilliant style, though displaying in the earlier editions little accurate knowledge and a great want of scientific caution, immediately had a very wide circulation [ten editions in nine years (Osborn 1913:216)]. In my opinion it has done excellent service in this country in calling attention to the subject, in removing prejudice, and in thus preparing the ground for the reception of analogous views' (quoted in Judd 1911:94).

The final influence affecting a suitable intellectual environment for the acceptance of linear time conceptualization was that of an eighteenth century scholar concerned with population dynamics. Malthus' Essay on Population (1798) formulated the principle of unchecked population growth as being geometrical while subsistence increase was arithmetical. This principle suggested that mortality was necessary for the survival of the population as a whole (de Beer 1964; in Appleton 1970: 8). The Malthusian theory convinced Spencer to suggest that 'struggle for existence' and 'survival of the fittest' were sufficient causes of progress. The essay further stimulated both Darwin and Wallace to pro-

pose natural selection as the primary process of evolution (de Waal Malefijt 1974:130).

Publication of Darwin's The Origin of Species by Means of Natural Selection or the Preservation of Favored Races in the Struggle for Life (more commonly referred to simply as Origin of Species) in 1859 marks the turning point in the conceptualization of time. Granted arguments for and against evolutionary theory existed well before Darwin's publication and persisted well after 1859. Nevertheless, with Origin of Species, evolution became a common element in the intellectual environment. Six major elements in the Darwinian revolution of conceptualization might be summarized here to more succinctly conclude this discussion: (1) the age of the earth was shown to be millions of years old rather than the 6000 years of Biblical chronology; (2) catastrophism or progressionism and the concept of a steady-state world were refuted; (3) the notion of automatic upward evolution or the Great Chain of Being was refuted; (4) creationism was rejected in favor of natural causation; (5) essentialism and nominalism were replaced by population thinking; and finally, (6) anthropocentrism was abolished (Mayr 1971:13-4).

It is clear that with Darwin's Origin of Species, the conceptualization of time necessary to Hallowell's thesis was essentially established. Having assumed this change in thought, it remains necessary to discuss the nineteenth century contributions deriving from the Age of Discovery as they pertain to the emergence of anthropology as a distinct discipline. It will be shown that this new time conceptualization as presented by Darwin had an indirect rather than direct influence on the development of professional anthropology. Of importance was the

intellectual atmosphere which gave rise to anthropology and allowed the acknowledgement of evolutionary theory.

The Professionalization of Anthropology

Having demonstrated the change from a static to a dynamic equilibrium model in the natural sciences, it is necessary to consider the same transition in the social sciences. Comte (1798-1857) presented the ultimate synthesis of progressionism, the first phase discussed previously, in Cours de philosophie positive (1830-42) thus marking the transition into phase two of developmental thought (Voget 1975:42). Positivism concerned itself with theoretical systematic inquiry to the exclusion of the practical. It dealt with the abstract, general, law-discovering nature of theory rather than the concrete, descriptive, and particular. Since Comte supported the fixity of species, positivism must be associated with developmentalism or progressionism rather than evolutionism (Teggart 1962:99-100).

Human progress as proposed by Comte developed through a succession of knowledge systems.

From a rude fetishistic base, early men synthesized their explanations of things in theology, then moved to a rationalization of first principles in a metaphysical system, and finally grasped the intellectual achievement of science, at least in the West (Voget 1975:109).

Essentially, three stages of knowledge were depicted. First, a theological or fictive stage occurred in which the activities of personal gods motivated by human passions explained the universe. Second, a metaphysical or abstract stage developed where personal gods are replaced by

personified or verbal entities. In this state, the current activity of a people corresponded with the abstract concept governing their state of mind, as for instance individual rights or private property as gods of industrial society. Finally, a scientific or positive stage was presented as the most desirable state of knowledge. At this stage, attention was shifted to a determination of "the succession and inter-relations of facts which give the conditions of human actions" (Penniman 1965:58-9). Working at this ideal stage, Comte sought to discover the natural laws governing human advance which, he assumed, would enable humanity to control the future without recourse to violence and warfare (Voget 1975:109).

Society was regarded as the appropriate organizational unit within which to determine these natural laws. Consequently, Comte founded a new science for the study of social phenomena--sociology. A holistic approach was envisioned which necessitated a reorganization of the sciences regarded as the foundation of sociology--mathematics, astronomy, physics, chemistry, and biology. The synthetic nature of sociology prompted Comte to regard it as the master science.

In his theory of social physics, Comte recognized two aspects of society. The social anatomy or statics of society was revealed through a study of organization. Extant conditions of the individual, family, and society were analyzed with actions and reactions seen as parts of the overall system (Teggart 1962:116-7).

Uniform development despite climatic or racial diversities accounted for the similarities evidenced among societies throughout the world. The concept of psychic unity supported this basic assumption. Embracing the

comparative method, Comte concluded that all possible stages of human development were readily observable in contemporary societies. He assumed, therefore, that successive modifications were slow, gradual, and continuous, invariably following a fixed, determined order and that variation among societies was attributable to the inequality of speed in passing through successive stages (Teggart 1962:103-4). Comte's method of approach disclosing the dynamic totality of society has been proposed as his greatest contribution to the social sciences (Penniman 1965:59). Western societies were the focus of Comte's sociology, an emphasis which eventually distinguished sociology from anthropology (Voget 1975:111).

Strictly in terms of the history of anthropology, the early nineteenth century has been labeled the 'dark ages' (Stocking 1973:xii). The Age of Discovery, essentially complete at the turn of the century, had provided a tremendous diversity of physical and cultural data that required some degree of synthesis and interpretation before anthropology could emerge as a discipline. Independently, archaeology, ethnology, linguistics, and physical anthropology contributed to this synthesis of data, gradually merging into an integrated discipline. While some reference will be made to all the subdisciplines, the main concern of this paper will be with ethnology.

Archaeology not only established itself as a science⁷ in the early nineteenth century, but in doing so, it contributed support for the notion of progress which influenced Tylor and his contemporaries. "It may be said without exaggeration that archaeological evidence is at least as important as ethnographic evidence for Tylor's conclusions concerning the overall uniformity of evolutionary change" (Harris 1968:148).

In 1806 Denmark commissioned the investigation of the geological and natural history of the country. A collection from ancient sites was made and arranged by substance into a stone, copper, iron sequence by Videl-Simonsen in 1813 (Voget 1975:103). Christian Thomsen, curator of the Danish National Museum, used seriation principles to organize the artifacts into an internally consistent developmental sequence confirming the stone, bronze, and iron sequence already suggested. Archaeology was thereby established as an independent science, free from a dependence on written documents for dating (Trigger 1978:61). Imperialism facilitated the collection of antiquities as evidenced by the discovery of the Rosette Stone made during the Napoleonic conquest of Egypt (Voget 1975:104).

Archaeological discoveries, notably of Boucher de Perthes in 1838 and 1846, were generally disregarded in the early nineteenth century due primarily to the authority of Buckland, a believer in the theory of a universal deluge. Despite finds of artifacts and human bones in association with extinct animals, the learned world laughed at any theory which suggested bones and objects were 'older than the world itself' (Penniman 1965:53-4). Even the Neanderthal discoveries (1857) were viewed as representative of a primitive race. Not until 1858, when a team of British scientists composed of Falconer, Prestwich, Evans, and Lyell examined and concurred with de Perthes' Abbeville evidence, was recognition of the antiquity of man established (Lowie 1937:8).

Three ideological trends can be discerned in early nineteenth century thought: (1) an increasing dissatisfaction with the Biblical creationist view; (2) a return to eighteenth century progressionism; and (3) an in-

tensification of racial arrogance. Of these trends, only the third represents a phenomenon peculiar to the nineteenth century. During the Enlightenment, European superiority was generally unquestioned. Race was associated with culture and environmental determinism was called upon to explain human diversity. After the French Revolution, humanity became involved in a struggle to eliminate inferior and to elevate superior nations and races (Harris 1968:94-8). "[T]he professionalization of anthropology as a discipline coincided with and was intimately associated with, the rise of raciology" (Harris, 1968:100).

Nineteenth century racism was regarded as an explanation for human diversity being supported by an idea of progress where civilization was viewed Europocentrically. Racism was also used as a justification for imperialism, as an explanation for the problems of the industrial age, and gave support to national self-consciousness (Mosse 1961:74). Linguistic, cultural, and anatomical data were used to establish racial conclusions (Voget 1975:106).

Classification of humans in the late eighteenth, early nineteenth centuries reflected this overriding concern for racial placement of new peoples (Shapiro 1964:345). Anthropometric work of men such as Gall (1758-1828), The Anatomy and Psychology of the Nervous System in General and the Skull in Particular with Observations How Moral and Intellectual Predispositions of Men and Animals Can Be Recognized through the Configurations of Their Heads (1810-19), was characteristic of the period.

Racism was...an emotional presupposition which, through seeking scientific foundations, adhered to what it considered to be anthropological truth, regardless of scientific advance (Mosse 1961:75).

Prichard (1786-1848) was the foremost ethnologist exemplifying the general Romantic concern with nationalism and racial origins. He proposed that "as variation was stimulated in plants by cultivation and in animals by domestication, in man it was stimulated by civilization [i.e., culture]" thereby, rejecting the traditional notion of climate as the mechanism for differentiation of race. The primitive stock of humans was seen to be Negroes with skin color progressing from black to white. Prichard suggested that the processes of going from black skin to white skin and from savagery to civilization were causally interrelated (Stocking 1973:liii-lv).

It is apparent that Prichard's contribution to modern anthropology was not theoretical. Rather, it was his definition of a particular tradition of British anthropological inquiry which influenced Tylor and others of the nineteenth century. Researches into the Physical History of Man (1836-47) and The Natural History of Man (1843) provided a collection of all that was then known about the various races of man--"a synthesis of anatomical, philological, psychological, and ethnological data, [which] form the foundation of ethnology in England" (Penniman 1965:64). A summary of the five categories of references in Researches, therefore, represents the position of anthropological thought at the time. The largest group of references consisted of classical writers, particularly historian-geographers like Herodotus and Strabo, who contributed data on culture and physical types from within the boundaries of the classical world. Next came travel writers from late eighteenth century scientific expeditions who, despite a characteristic botanical orientation, provided a sizable collection of ethnographic data and material on human

variety. The third category was biological sciences writings coming from three sources: a local observational tradition, widely travelled natural historians who wrote systematic zoological treatises, and the newer comparative anatomy tradition typified by Blumenbach which laid the foundation for physical anthropology. A fourth source came from the tradition of oriental studies associated with Jones which had previously been recognized only in linguistics. Finally, historical references were included as chronological sources of racial genealogy of the Christian tradition prevalent at the time (Stocking 1973:xxxiv-xl).

Ethnology, as presented by the Edinburgh Review in 1848, was regarded as the science of races. Ethnological societies were formed in Paris, London, and New York in 1839, 1841, and 1842 respectively (Voget 1975:108). These organizations were preoccupied with racial issues and should not be confused with the anthropological societies of the last half of the century (see below). The intellectual climate of the early nineteenth century was not favorable to understanding the alien and primitive. The arrogance of imperial conquest, the missionary ardour of Evangelical Christianity, the slavery controversy, and the narrowness of utilitarianism and political economy theories produced an atmosphere of dogmatism. Primitive behavior was not regarded as being of legitimate human and scientific interest (Burrow 1970:77).

Serious study of the manners, customs, institutions, and beliefs of primitive and oriental peoples was revived in the 1860s. Evidence of this renaissance out of the 'dark ages' of the early nineteenth century may be found in the works on Maine, Ancient Law (1861); Lubbock, Prehistoric Times (1865); McLennan, Primitive Marriage (1865); and Tylor,

Researches into the Early History of Mankind and the Development of Civilization (1865) and Primitive Culture (1871) (Burrow 1970:80-1). Direct observation and a changing intellectual climate contributed to the study of primitive societies as working systems.

Evolutionary social theory arose, not only from a desire to emulate in the study of society the achievements of biology, geology, and philology, but as a reaction against the collapse of systematic utilitarianism and the weakening of traditional religious belief (Burrow 1970:97)

characteristic of the early nineteenth century.

Universality of natural causation was a fundamental principle in evolutionary social theories. The apparent differences among peoples could be accommodated because they represented different stages in the same process. The process was then described as progress, allowing the formulation of moral and political theories. Archaeological evidence accepted in the 1850s and 1860s supported the assignment of different stages of the same basic process to explain cultural differences among contemporary societies by suggesting that the ancestors of civilized man were as primitive as contemporary savages. It became the role of anthropology to search for the laws of this assumed uniform development of culture, an effort which has been construed as premature (Boas 1904: 516). Nevertheless, the resultant unilineal evolutionary theory established anthropology as a recognized discipline.

Emphasis of these pre-professional anthropologists tended to fall into one of three categories: those regarding the evolution of specific institutions, scientists or archaeologists interested in anatomy, biology, or geology, and those working with Spencerian social structures

and functions (Burrow 1970:235). The list of individuals contributing to the developing anthropological framework at this stage is lengthy and includes Maine, McLennan, Lubbock, Waitz, Bastian, Bachofen, Klemm, Retzius, von Humboldt, and Lartet.

"Anthropological societies developed in response to the need to study the origins and development of man as a biological species and to extend the science of ethnology beyond racial history, character, and customs" (Voget 1975:133). Within twenty years, from 1859 to 1879, societies were founded in Paris, London, Berlin, Vienna, Stockholm, and Washington. Anthropology became an integrating discipline with ethnology, linguistics, archaeology, and physical anthropology uniting to form a new science of man.

Three major influences distinguish professional anthropology from the stage discussed above. Foremost of these was E. B. Tylor (1832-1917) who rigorously adopted a unilineal evolutionary approach and defined the science of culture. His "insight that culture was learned rather than inborn and socially determined rather than racially" remains fundamental in modern anthropological thought (de Waal Malefijt 1974:159). Perhaps most important to this thesis is the fact that Tylor won academic recognition for anthropology when he was awarded a Readership at Oxford University in 1884 and the Chair in 1896 (Burrow 1970:235); de Waal Malefijt 1974:145; Penniman 1965:141). From this point anthropology may be regarded as professionalized.

The remaining two influences in the professionalization process which warrant mention are provided by Morgan (1818-1881) and Frazer (1854-1941). The former directed anthropologists to the importance of fieldwork

and first hand observation and data collection. Morgan also established the value of kinship and its interrelationships with other cultural institutions. Popularization of anthropology had been credited to Frazer whose books presented the worth of studying humanity in an interesting manner (de Waal Malefijt 1974:159). Whatever the flaws in the theories of Tylor, Morgan, and Frazer, their contribution to recognition of a new science of humanity as anthropology remains significant.

It has been the intent of this thesis to develop the history of the intellectual environment which contributed to professionalization of anthropology. By definition, professionalization coincides with academic recognition, therefore, this thesis has reached its logical conclusion. One must be aware, however, that professionalization is a process which for anthropology only began at this point. Many more individuals have been involved in this process and considerable discussion has been accorded these people elsewhere (Voget 1975; Harris 1968; Garbarino 1977).

SUMMARY AND CONCLUDING STATEMENTS

[T]he events and conditions which led up to the period when anthropological questions became the concern of specialists and organized disciplines, require exploration as an anthropological problem--as a significant chapter in man's pursuit of knowledge about himself as part of his cultural adaptation (Hallowell 1965:316).

This thesis has undertaken an investigation into these events and conditions in an effort to shed greater light on the professionalization of anthropology, hence increasing our understanding of ourselves as professionals. Since this unveiling has necessarily been lengthy, a recapitulation may be in order.

Our concern has been with the change in perception concomitant with the transition from an interest in humanity to the objective, systematic study of humanity by specialists. Answers to anthropological questions provided by a culture's traditional knowledge, "i.e., a body of observations, beliefs, and socially sanctioned dogmas which parallel folk knowledge about other aspects of the phenomenal world" was defined as folk anthropology (Hallowell 1965:306). The transition from folk to professional anthropology began with events in the Renaissance and concluded with academic recognition of anthropology by Oxford University in the late nineteenth century.

Initially, then, folk anthropology may be correlated with the traditional world view of the Middle Ages. The medieval world view was dominated and circumscribed by the Church. Supernatural causation served as the explanation for unknowns and uncertainties. Legitimation was sought in the sacred which could not be disproved and required recourse

to faith (see Rappaport 1971a, 1971b). The replacement of supernatural explanations for the origin of man and his universe with natural explanations necessitated a change in legitimating factors from sacred to secular, from theological to scientific, from fictive to empirical. The nature of this transition through time from the Middle Ages philosophy to that of the late nineteenth century, when anthropology was distinguished as a social science in its own right, has been presented.

Two particular discoveries of the Renaissance contributed significantly to the dislodging of traditional world view. On the popular level, the Renaissance was characterized by the rise of capitalism. The creative genius of the successful entrepreneur was rewarded with increased wealth and prestige. Merchants and craftsmen were the first to benefit substantially from capitalism; but, anthropology also gained from the entrepreneurs' greed. Continually seeking faster, more reliable trade routes, daring monarchs and merchants invested in maritime operations, the way having been paved by Prince Henry, Columbus, Magellan, and others. In addition to wealth in resources, however, the voyages and expeditions revealed a greatly expanded geographical world with tremendous cultural and biological diversity. How scholars have attempted to explain this unexpected and overwhelming diversity is a necessary question since the data forced a re-evaluation of the traditional world view. Renaissance interest in native populations was directly proportional to the degree of exploitation intended by the Europeans. Morality was not a factor since natives were seen as being scarcely human. As time progressed imperialistic attitudes with racial justifications developed and were eventually modified by a sense of missionizing or burden. In each situation,

capitalistic considerations took precedence.

At an intellectual level, one sees a preoccupation of scholars with origins. This reflects a concern for self-understanding. The search for origins resulted in an identification with ancient Greek and Roman civilizations and the incorporation of Classical ideas into Renaissance world view. Turning to Classical scholars for inspiration marked the first major weakening of the hold of the Church. Increasing secularization was accompanied by development of a humanistic attitude. The discovery of human history and its pursuit was a prerequisite to formulating a science of humanity.

Hallowell (1965:308-9) specified the development of a firm spatio-temporal framework as a necessary condition for professionalization. As this discussion has demonstrated, the initial changes in these conceptualizations occurred in the Renaissance, with a recognition of history and increased geographical awareness due to maritime exploration.

Despite these early stages of conceptualization change, the prevailing Renaissance system of knowledge must be regarded as theological or fictive (to place this discussion in Comtean terms). Ideologically, the authorities directing attitudes were theologians and the overall intellectual atmosphere had a fundamentally sacred air. Renaissance scholars expanded tremendously the pool of data in need of incorporation by the human mind. It took centuries to weaken effectively the hold of the traditional Christian world view and to develop an acceptable alternative world view based on this new information which would permit or even encourage the serious and complete study of humanity.

When seventeenth century astronomers became aware of the heliocentric

nature of the universe discrediting the traditional terracentric world view, scholars began to seriously question the supernatural tenets assumed by the Church. The contributions of two philosopher-scientists, Bacon and Descartes, set Western civilization on an irreversible course toward the establishment of a new system of knowledge. The former emphasized inductive reasoning and empirical methods, thus stimulating the search for general laws via hypothesis construction and testing. Descartes stressed deductive reasoning and mathematics, proposing a mechanistic world view based on a perfectly ordered, unified, and interlocking universal science. Humanity was separated from nature by virtue of an ability to reason. In general, explanation shifted from a supernatural realm to a natural one. Serious decline in the authority of the Church accompanied this shift as increasingly science was inclined toward for legitimization. Dissention within the Church furthered the deterioration of sacred authority.

Interest in humanity has been established as primary in Renaissance thought. Recognition of the potential for scientific methodologies in understanding humanity led to their application to social phenomena in the seventeenth and eighteenth centuries. Mere interest had now been exceeded and bona fide study had begun. Thus the second stage in the development of anthropology was achieved. The appeal to reason as an explanation of human distinctness suggests the reliance upon metaphysical notions. Theologians no longer exclusively dominated the intellectual environment. Rather, philosophers stimulated the patterns of knowledge influencing the period.

With the growing awareness of human diversity, more and more effort

was expended in explanation attempts. In the eighteenth century the public world view still accepted Christian order, but the intellectuals generally questioned this tradition in favor of Cartesian natural order. Humans, separated from nature by virtue of reason and society, hence unified psychologically as a species, were assumed to have become diverse as a consequence of differential experiential or environmental exposure based on the Lockean tabula rasa notion.

Progress from simplicity to complexity was an assumed universal law of nature. Application of this principle to social phenomena became the focus of the eighteenth century social philosophers, resulting in several proposed theories of development. Despite the tendency toward developmentalism, the eighteenth century world view remained static, based upon creation of species, immutable over time. By the end of the century, the entire geographic world had been mapped, a cosmopolitan atmosphere characterized the European intellectual climate, and generalized social sciences had been established. The study of humanity was well underway, although the specific concerns of anthropology were yet to be formulated.

Late eighteenth century events significantly altered the intellectual environment which followed. The French Revolution (1789) contributed a philosophy of liberty, human dignity, and the rights of man. It created a new social class--the bourgeoisie--and abolished serfdom. Evangelical and pietistic movements arose in reaction to the Revolution, furnishing a strong conservative element in the otherwise liberating environment.

In England, the Industrial Revolution produced a philosophy of

political economy based on the theory of laissez-faire. Individualism, a market system based on competition, and materialism were promoted. Social change was evidenced in urbanization as population concentrations shifted from the countryside to towns and a new class structure developed. To facilitate operation of industrial machinery, public education commenced. The ramifications of this event alone would have a tremendous impact on the intellectual environment which had previously been restricted to an elite few. Given the combination of factors of change already discussed, it is not surprising that a major conceptualization change should have occurred within such a transitional environment.

Romanticism, a nineteenth century ideology expressing opposition to Enlightenment rationalism, was the most pervasive influence in the century. Founded on the doctrines of Rousseau and Kant, romanticism stressed the inner qualities of humanity, the emotional or mystical. Rather than abstracting humans from nature by virtue of reason, romantics placed humanity solidly within nature. This was a necessary condition for the acceptance of evolutionary theories as they pertain to organic life, particularly human.

Until the mid-nineteenth century a static world view had been maintained in Western civilization. Geologists and comparative anatomists had revealed that structural change occurred through gradual and uniform natural processes requiring a greatly expanded time depth. The work of Darwin provided the mechanism by which such evolution could take place as well as substantial data supporting the contention that evolution had and still was taking place. Darwin did not formulate evolutionary theory. He merely provided the evidence which made it believable and

acceptable to the scientific world which had been dabbling with evolutionary notions for some time. Chambers had made evolution known to the popular community earlier, significantly influencing the mid-century intellectual environment. Recognition of inorganic and organic change was fundamental to the shift from a static to a dynamic world view. That the dynamic equilibrium model adopted, i.e., evolution, was favorable to the professionalization of anthropology is easily demonstrated by its seeming support of and adoption by social evolutionists and early nineteenth century ethnographers, the two groups influencing early anthropologists.

The same intellectual climate in which evolutionary theory developed, saw the divergence of the social sciences. Comte figured prominently in this process by presenting sociology as a holistic social science. Society as a system should be studied in terms of its organization (social statics) as well as its progress through time (social dynamics). Comte's ideas were advanced by Spencer who more fully detailed a social evolutionary theory. The influence of Comte and Spencer on the intellectual environment must be admitted to have encouraged the eventual acceptance of anthropology.

A quarter of a century after the publication of Darwin's Origin of Species, anthropology was acknowledged as a distinct discipline worthy of advanced study. It developed most directly out of the interest in ethnology evidenced in the early nineteenth century. The racial ideology based on the notion of European supremacy which dominated the nineteenth century contributed substantially to the ethnographic data base. Through the manipulation of these data, scholars presented literature in support

of racial notions. Consequently, the value of seriously studying non-Western populations was realized albeit for ethnocentric reasons. That ethnology was referred to as the science of races, that its proponents assumed the doctrine of progressionism, and that Tylor was a product of this line of reasoning reflects the direct relationship between nineteenth century racial ideology, unilineal evolutionary theory, and professional anthropology. Since racial ideology arose as an explanation for cultural diversity, it may be suggested that the trend to explain human diversity revealed as a consequence of the Age of Discovery moved from purely fictive, monstrosity-oriented explanations through environmental determinism, to racial determinism.

These latter two explanations, while consciously attempting to achieve scientific status, must be categorized as at a metaphysical stage. The reason for this opinion is that ethnology still was concerned with demonstrating the abstract assumptions of progress and racial superiority. Comparative methodology was generally not used relativistically and the value of first hand observation was yet to be realized. Only after professionalization does anthropology begin to approach a scientific system of empirical knowledge. Whether or not such a level, in fact, has been achieved is a question which is still debated.

Modern anthropological explanations developed well after the discipline professionalized in 1884. The 'dark ages' connotation given this pre-professional period by Stocking is interesting in this light. The period may be regarded as a black box. Entering this black box is a confused, generalized social science. Emerging from it is anthropology as a professional discipline—far from mature but, at least, distinct.

FOOTNOTES

1. Shapiro (1964:338) commits four centuries to the age suggesting that by the mid-nineteenth century, virtually all the geographic world was known to Western civilization. This correlates nicely with the requirements set by Hallowell for the professionalization of anthropology. The impact of increasing geographical awareness on this process will be demonstrated by tracing its development through the history and culture of the four centuries and through an explication of its effects on ideology.
2. Ruybroeck's name is spelled variously, depending on the reference.
3. The English translation appearing in 1555 was titled: The fardle of façons, containing the aunciente maners, customs, and lawes, of the peoples enhabiting the two partes of the earth, called Afrika and Asie (Hodgen 1964:133).
4. The European concept of savage innocence is founded on another interesting premise. Jones brings the association between nakedness and innocence to our attention. "It has been remarked that because Europeans in the fifteenth and sixteenth centuries were heavily clothed and made much of the ritual of costuming, nakedness struck them the more forcibly. It is also true that nakedness is part of the iconography of innocence in medieval and Renaissance art" (Jones 1964:16-7). The fact that New World inhabitants were unaware (by European standards) of religion, law, clothing, books, money, and so forth contributed to a notion of a Golden Age of innocence.
5. Theist has been substituted for deist but, judging from the synopsis, natural religion is being discussed by Voltaire.
6. Harris contradicts this by stating, "it would be rather pointless to refute the determinism Montesquieu attributes to geographical factors" (1968:42). Several other sources emphasize the functionalist tendencies of Montesquieu representing the position taken in this paper.
7. Whether or not archaeology may be regarded as a science is a controversial issue which goes beyond the scope of this paper. For a discussion of this issue the reader is referred to Spaulding (1968:33-9).

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