

NORTHERN EVOLUTIONISM, 1933 - AND ITS 19TH-CENTURY NEOKANTIAN BASIS

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ABSTRACT: Evolution theory in the North in 1933, as revealed in a college text, was being employed to account not only for organic evolution and man's origins, but to the past and future course of man's social and political institutions. Moral progress via social dissolution and chaos are enunciated. The foundations of the country were declared to be obsolete and to have been replaced by an evolutionary view of the state. Trends in government, education, religion, morality and the family are explored. This total evolutionary package is shown to have originated with Friedrich Albert Lange in 1875, who put forth what we call the classical theory of evolution, or classical Darwinism, and argued that mankind was evolving to the atheistic communist state founded on Idealism. Evolution was via social dissolution and chaos. Lange's Vol. II of the *Geschichte des Materialismus*, 1875, 2nd edition revised enlarged, may be viewed as an attack on Darwin, Marx, D. F. Strauss and T. H. Huxley. Hopefully, enough philosophic background is presented to make his arguments intelligible. Huxley's views are presented sufficient to demonstrate that evolution in the North in 1933 (and current) continues to be an attack on him. Lange was labeled a Neokantian by Hermann Cohen who succeeded him at the University of Marburg. Reactions of Engels, Lenin and Stalin to Neokantian or communist Idealism are also presented.

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Introduction

One of the most continuously divisive issues North versus South in the United States in the past 4 decades has been the issue of evolution. Examples attacking Fundamentalists' opposition abound yet no one has questioned what Northern texts presented for evolution. Nor did challenges arise within the scientific community when Muller (1959) proposed that federal funds be used to prepare texts stressing evolution "in the face of antiquainted religion" although opposition to such texts by lay groups in California created a furor among evolutionists in the 1970s. Have we erred in our failure to ask questions?

Recently a text stressing the evolutionary viewpoint, circa 1933 and already in its 2nd printing, came into my possession. For those of us in organic evolution it is important that we know what evolutionism meant at the time of this past critical period in history as revealed in a text in which the names of those soon to dominate world affairs are never mentioned --Hitler, Stalin, Churchill and Roosevelt.

I am calling it "evolutionism" because it is an -ism, one to which the North seems to have been peculiarly susceptible. First, the New England literary group, 1820-1860, embraced German Idealism, which is evolutionary oriented and secondly, Herbert Spencer's writings popularized evolution in a climate already receptive to it. Johann Fischl (1953, p. 331) attributes the Northern philosophical shift from Jeffersonian Idealism (actually Lockean philosophy) to German Idealism to Ralph Waldo Emerson who learned German philosophy from Samuel Taylor Coleridge. Coleridge had introduced German

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philosophy into England where it caught on in literary circles (Durant, 1975, p. 433) although Oxford did not "discover" German philosophy (Kant and Hegel) until after 1870 (McGovern, 1941, p. 155).

The philosophical link between Kantian Transcendentalism and Emersonian Transcendentalism seems less well known in the American academic community outside such tomes as the Durants' Rousseau and Revolution (1967, p. 551). In fact, the late eminent Harvard historian, Samuel Eliot Morison, confuses Jeffersonian and Emersonian Idealism, presuming the underlying philosophical basis of the New England literary movement in the 1820s to be that of the Virginia political theorists of the 1770s (Morison, 1965, pp. 222, 272, 525-527). On the contrary, Lockean philosophy was anathema to the German Idealists-Kant, Fichte, Hegel-and later diverse successors (McGovern, 1941; see also Band, 1977), while Fischl (1954, p. 5) declares that "the history of German philosophy after the middle of the 19th century becomes a description of a catastrophe."

Into the muddle of philosophical premises flowed English evolutionary thought, as it did into Germany. The fact that Darwin confined himself to organic evolutionary aspects while Herbert Spencer and Thomas Huxley sometimes said different things seems to have been overlooked in Northern academica.

The apparent derivation of classical evolutionary theory

Charles Darwin has been labeled the author of the classical theory of evolution, also called classical Darwinism (Lewontin, 1974, pp. 196-197). This is erroneous. However, the traditionally accepted version is, at best, an independent and late development. As all of us familiar with the genetic load controversy of the late 1950s and early 1960s well know, the classical theory of evolution makes the following assumptions: populations are well adapted to their environment and largely genetically homogeneous; hence most mutations are deleterious; natural selection is largely purifying. Only rarely does a mutant occur which is more advantageous than the existing wildtype or established allele in the population. Then the more advantageous one displaces the existing allele via the process of natural selection. Climate is usually considered to be static, so the classical theory of evolution largely depicts a static world except on the geological time scale.

Most of us assumed that this view of populations and species arose in the early decades of the 20th century, largely as the outcome of the Morgan school in the United States, Bateson's group in England and classical mathematical population genetics. Dobzhansky (1955, 1958) seems to have encouraged this view. Clarke (1975) also agreed with the early 20th century origins but stated that classical Darwinism, or the classical theory of evolution, is not due to Darwin but to Darwin's interpreters.

Darwin emphasized small changes. As Darwin stated (1872, p. 431) natural selection acts solely by accumulating slight successive favorable modifications. He was also cognizant of neutral variations (Darwin, *ibid.*, p. 60), variations which might become adaptive to the organism under changed conditions.

Superficially Bateson (1894) appears to be a source of the future classical Darwinism. This is only superficial, but is consistent with a pattern of allowing the English to take the credit--or blame--for matters concerning evolution when attention should have been directed elsewhere.

Bateson's own proposals for the study of variation appear to have been a reaction to the decades of accumulated speculation on the adaptive nature of all morphological traits (Bateson, 1894, p. 10) yet little had been added to the study of variation since Charles Darwin's own works. Bateson's research offered an alternative to the prevailing opinion that all natural processes are

continuous, hence variation is also always continuous (ibid., p. 16).

Bateson himself clearly recognized that variation could be both continuous and discontinuous, but felt that the two types represented different processes (p. 18) i.e. monomorphism and dimorphism were not to be confused with variation around the given class mean (p. 37). Hence Bateson (pp. 28, 60, 68) proposed that the proper study of heritable variation was discontinuous variation, meaning that the change is large (p. 61). This preserved Darwin's emphasis on chance but returned to Thomas Huxley's suggestion of evolution by jumps (Huxley, 1864) for Huxley thought that Darwin had overworked the idea of "natura non facit saltum." Upon reading the copy of Materials for the Study of Variation which Bateson sent him, Huxley commented favorably since he felt it marked a return to the consideration of factual data instead of speculation (Bibby, 1972, p. 46). Too it abandoned or circumvented Darwin's pangenesis. Huxley too had questioned that and in 1869 proposed that heredity might have a molecular basis (see Bibby, p. 45).

Bateson considered his own view to offer no support to the theory of natural selection accumulating slight variations (Bateson, loc cit., p. 80). Since biometricians felt that the proper study of variation was continuous variation, as Darwin had emphasized, this set the stage for conflict, especially after the rediscovery of Mendel's work and the rise of the newly developing field of genetics which seemed to support Bateson's views on the importance of discontinuous variation. Most students of organic evolution know of the conflict between the biometricians and the early Mendelians (see, for example: J. Huxley, 1942, 1958; Stebbins, 1966). Mendelism led to the eclipse of Darwinism from about 1895 to 1925 (J. Huxley, loc cit.). In fact, in biology the fluctuating variations, the small variations of Darwin, were assumed to be non-inherited and mutation theory to have deposed Darwinian theory (Eubank, 1933a).

Resolution of the conflict between the biometricians and the Mendelians is commonly dated from Fisher's 1918 paper and Wright's 1921 series, and the additional genetics work which demonstrated that variations could be of all types. Restoration of the effectiveness of natural selection to bring about population changes came from classical mathematical population genetics with its theoretical mathematical demonstration that natural selection could substitute one allele for another in a population (Fisher, 1930; Wright, 1932; Haldane, 1932).

This 20th century reunion of mutation (discreet heritable variation) with natural selection has been called "synthetic theory" by Mayr (1966, pp. 1,8; 1977). Population geneticists also apply this term to the synthesis achieved by Simpson, Mayr and Stebbins in the fields of paleontology, zoology and botany following Dobzhansky's publication of Genetics and the Origin of Species in 1938. These works banished Lamarkianism from further biological consideration, but at that time left untouched other issues raised by the 3 originators.

Fisher (1930) stressed that even a hundred unfixed loci could produce an enormous amount of heterozygosity. Wright (1968) recalled however that the assumption was that populations and species were largely genetically homogeneous. Fisher (loc cit.), like Darwin, postulated that environmental change was continuous. Haldane (1932) opted for random changes in conditions; Wright (1932, 1968) stressed static conditions.

In his own book Fisher (loc cit.) included topics on man and society, infertility among the higher social classes as a possible cause in the decline of past civilizations, and a discussion of conditions for permanent civilization as a possible counter to a philosophical view of history popular on the Continent which regarded the rise and fall of civilizations as successive phases in the cycle of growth and decay (p. 197). Fisher also notes that evolutionary theories of the earlier period had excited little interest in the mid-19th century until Darwin's own work but after then evolution became not merely History but Science

(pp. 197-198). Decades earlier, Thomas Huxley had remarked that one of the reasons Darwinism was so well received in "the land of learning" (i.e. Germany) was because of the prior existence of a priori theories on evolution (Huxley, 1888a). Huxley himself (Huxley, 1864) has supported Darwinism because it not only explained progress in organic evolution, but stability and regression as well. Gradual progress toward perfection formed no part of Darwinism.

Haldane (1932, pp. 156-164) injects philosophy into evolution in his discussion of mind, materialism, idealism and the possibility that for the first time mind can take charge of the evolutionary process. And so in their highly acclaimed works demonstrating the effectiveness of natural selection to change gene frequencies, we also find Fisher and Haldane discussing man, society, civilization and philosophy in connection with evolution. In the ensuing decades it would seem that we have become ignorant of the issues.

Northern evolutionism, circa 1933

A. From organic evolution to modern history

Let us now turn to the topic of evolution as it is dealt with in a text published in 1933. It is called an Introduction to Western Civilization, a conglomerate of chapters on biology, anthropology, history, political and social science, economics, religion, education and ethics authored by different individuals and intended for an introductory text in the social sciences in the American college classroom. In the North. It is sufficiently broad to have been useful in other fields. Evolutionism is the overriding theme of the book. Some of the topics current then have been revived in recent years.

Herbert Spencer, we are told, applied the evolutionary concept to the whole universe and his work became the accepted "gospel of progress" (Hedger, 1933b, p. 304). Continuing, Thomas Huxley, "Darwin's bulldog," is credited with maintaining that Christianity was no longer worthy of support even in its system of moral values (ibid., p. 301). Altogether, the treatment of Darwin, Spencer and Huxley is as described by Morison (1965, pp. 774-775).

Having been told that mutation theory has been held to refute Darwinism, we are nevertheless informed that evolution is placed among the greatest discoveries of modern times (Eubank, 1933a, pp. 27-28). Discussing man, Eubank (pp. 46-47) points out that man's physical evolution seems to have ended 20,000 years ago, brain size has not changed since Cro-Magnon although knowledge has increased greatly; mental evolution is continuing via education, not organic processes. However, in social development man has yet to meet successfully the challenge of community life and the problem of human relations. Thus the text will concern itself with the "study of man as a social animal."

As we shall see, this means the "sociopolitical evolution of man." The continuing sociopolitical development of man was precisely the concern of the Kantian law of progress upon which was erected the wonderous evolutionary oriented metaphysical schemes of the later German Idealists and the Marxists (McGovern, 1941, pp. 151-152). Following Kant, J. G. Fichte transformed the Kantian law of progress into the philosophy of history depicted somewhat metaphysically as the struggle between the Self and Not-Self or Ego and Non-Ego, where the first (Self, Ego) represents Idealism or God and the second (Not-Self, Non-Ego) represents Materialism or hedonism or individualism. G. W. F. Hegel, Fichte's successor, made evolution part and parcel of the theory of progress, metaphysically the unfolding of the World Spirit. F. A. Lange later used Idealist philosophy to construct a modified Darwinism, fuse Kantian and Darwinian evolution to argue that mankind was progressing to communist Idealism and to attack Marx for giving communism the wrong philosophical basis. Of these 4 Kant

died 16 years before Herbert Spencer was born, Fichte 6 years before Herbert Spencer was born and Hegel when Spencer was 11. Only Lange was contemporary with Spencer but Lange's ideas seem to have been used largely without acknowledgement. Only post World War II are German historians of philosophy beginning to disentangle the two rival communist doctrines (Fischl, 1953, 1954; Bloch, 1972) without however discovering Lange's impact on genetics and organic evolution. Now let us return to topics treated in the 1933 text and discover where Northern evolution was headed.

The early chapters take up the topic of human culture: the capacity of man for culture (Brown, 1933a), the role of biological factors in culture (Quinn, 1933a), the role of geographical and social factors in culture (Eubank, 1933c,d). In these chapters we meet with such ideas as a changing society is likely to be a chaotic one (p. 63); colonial New England town meetings encouraged democratic attitudes and ideals of government while Virginia's representative government fostered aristocratic attitudes (pp. 91-92); stealing is a serious offense when private property is a foundation for existence (p. 92); the State is the crystallization of the general will (the capitalization is mine and is a device used by McGovern when the meaning is the Nation-State); public opinion is the ultimate factor in social change because government itself reflects public opinion (p. 108).

Given the time period, 1933, and what was to come, Quinn handles the biological issues well here. He points out that the human infant is plastic and becomes more a product of his culture than his heredity (p. 74). He also refutes arguments of the Racial Determinists who rank the Negro inferior based on presumed degree of divergence from the ape (p. 75) without knowing the argument itself derives from Kantian evolution (see Band, 1977). Then as now the role of women in Society was of concern and shown to be a product of cultural, not biological, limitations (p. 81). Again, no evidence that the biological inferiority of women is associated with Hegelian doctrine.

The next section deals with the development of Western Culture. Brown (1933b,c) reviews the state of knowledge of primitive man; West (1933a,b,c) traces historical development from Oriental beginnings through the Greeks to Roman and Byzantine; Hedger (1933a,b) then continues from Arabic to Medieval to Modern. The latter is dated from the Renaissance. Moral decay precedes the rise of successive cultures. The same trend is noted in the modern period. The cultural succession is Hegelian and so is the formula for evolution via social dissolution and chaos which was employed also by Hegel's successors, as Lange.

Following the Protestant Reformation (i.e. Luther) we pass into the period of the Old Order, the age of Revolution, the rise then domination of the Bourgeoisie from the 1870s to 1914 and are told that Karl Marx initiated the new age of revolt between individualistic capitalism and militant proletarian socialism (Hedger, 1933b, p. 295). Hedger points out that the conflict is between philosophies: between individualism which envisages a society of individuals possessing well-defined rights and competing with one another for individual satisfaction and achievements and socialism in which the individual is supposed to achieve a more satisfactory life by his complete subordination to community interests and cooperation with his fellows (pp. 294-295). In this chapter Hedger (pp. 299-302) also points out that the rise of science from Copernicus to Darwin has acted to undermine religion--and here we are led to believe that Darwin and Huxley can be used to support atheism and that the "gospel of progress" comes from Spencer.

Quinn (1933b) closes the section with an introduction to the nature of institutions. His chapter thus acts as a preface to the next five sections successively titled: the descent of economic institutions, the descent of political institutions, the descent of domestic institutions, the descent of educational institutions and the descent of religious institutions. The titles

are obviously paraphrased from Darwin's Descent of Man, but the topics follow from Hegelian evolution. Although Hegel was a proponent of conservatism as it applied to the glorification of the Germans, he left the door wide open for the continuing evolution of the State and Society via guidance by the "universal class." This can also be viewed as a regression to Fichtean (and earlier Platonic) philosophy in which the scholars are to rule and to tell men what is right. This surfaces, but only Plato is mentioned.

B. Evolution of man's institutions

The amount of material covered in these sections is so extensive full treatment is best left for elsewhere. From the contents however it is not difficult to imagine that more groups than just the Fundamentalists would have been enraged; nor do the various authors themselves agree on such matters as the obsolescence of the family, the obsolescence of religion, morality, representative government or national sovereignty. To one born in the 1930s and thus a member of the post World War II generation of college students and Ph.D. products what is surprising is the steadfast silence about how evolution was being used in some segments of the academic community in the 1930s. For instance, how could Dobzhansky in Mankind Evolving (1962) have accused H. J. Muller of reviving Platonic communist idealism without knowing that not only was it part of the radical eugenics movement in the 1930s, it was repeatedly asserted to be part of the theory of communism that Russia had been unable to enforce (Introduction to Western Civilization, 1933, pp. 482, 552, 618, 642). One wonders how far the powers of government are to be extended based on the philosophy that all rights come from the State (pp. 460-461, 474). One wonders how propaganda and special interest groups are defined (pp. 547-548, 688-689) if the philosophy of John Locke as incorporated into the Declaration of Independence and Constitution which assert the dignity and worth of the individual and deny absolutism (absolute monarchy or totalitarianism, pp. 456-476, 478-479) is declared to have been replaced by an "evolutionary view of the State" (p. 456) which has unlimited sovereignty in the scope of its authority over individuals and groups within the State (p. 461). In its extreme form it carries us into communist idealism. Yet we are told that progress in new directions is led by a very small minority (pp. 549) and that educational institutions are the most important agencies for progress (p. 688).

Dobzhansky (1962, pp. 323-324) himself defined progress in terms of increasing governmental regulation of the individual and more recently (Dobzhansky, 1975) argued that equality of opportunity could only be guaranteed after socioeconomic equality has been achieved. A somewhat similar proposal may also be found in the 1933 text (p. 549), associated in this case with freedom of speech for the advocacy of revolution to bring it about; a different opinion states that "absolute equality of incomes" would probably be unwise (p. 417) while another asserts that the State does have the right to prohibit the teaching of political doctrines which advocate violent overthrow of the government (p. 686).

Noting that some of the authors of some chapters in these different sections have voiced complaints of propaganda and special interests dominating education and restricting academic freedom, we might glance quickly at some of the information presented in these sections on the descent of: economic, political, domestic, educational and religious institutions, and ethics.

In a series of chapters Hennig traces the development of modern economy. Here the student encounters some historical facts pertaining to the discovery of the New World and the development of the United States. The student is told that greed for profits stimulated Portugal, Spain, France, the Netherlands and England to seek water routes to the East to bypass Mohammedan middlemen and Italian monopolies who controlled the overland trade routes. This led to the

discovery of the New World. Later the desire to spread Christianity also contributed to the exploration of unknown lands (Henning, 1933a, p. 362). Given the founding of the United States, greed for land combined with farming practices ruinous to the soil and the influx of hordes of land-hungry emigrants from Europe to push the frontiers westward (Henning, 1933c, p. 388). Otherwise, the economic development of the U. S. follows that of Europe: from agricultural to industrial to imperialistic (having colonies) finally to one world (Henning, 1933b,c).

Industrial expansion was associated with the philosophy of laissez-faire and individualism, which assumes that the maximum of social welfare is derived from a minimum of governmental interference. Adam Smith's Wealth of Nations (1776) provided the classical philosophical statement. In the modern world this has produced problems. Unemployment is a condition inherent in the capitalistic system. Thus the two major economic problems are to find ways to increase production and to insure a more equitable distribution of what is produced (p. 417).

Henning's questionable historical stance seems to be dropped in his more balanced treatment of the economic situation and theoretical remedies. Reviewing (p. 417) social legislation enacted beginning in the latter part of the 19th century and questioning the wisdom of pursuing equality of incomes, he does note that the existence of poverty and unemployment in good times as well as bad caused some to become critical of individualism (capitalism) in the 19th and 20th centuries. The socialists would substitute social need as the principle motive in economic life, hence seek to control production and distribution and eliminate private profit. The radicals propose revolution, the moderates urge reform via education and constitutional processes, farthest left are the communists. Some opponents of socialism have proposed economic planning. But Henning notes that any central planning committee or governmental agency directing production is itself acceptance of socialistic principles. Alternative measures like unemployment insurance, old age pensions are suggested (pp. 420-423).

Hedger (1933c) closes the section with a discussion of modern imperialism, State worship and patriotism as its expression. Beginning in the 1860s and especially after the unification of Italy and Germany, a change of opinion took place about the State and government. Both were now considered to be good, the future belonged to the great Imperial nations and the blessings of civilization were to be shared with the backwards peoples. The State must organize, direct, control, safe-guard society. So-the all powerful State became a thing to be worshipped. Nationalism was its cult (p. 434). Colonialism saw the spread of Western culture and the development of international rivalries. Hedger notes that for an economically interdependent world, it fostered closed self-sufficient systems. Thus the solution to imperialism requires international controls to curb the rivalries of the imperialistic States and to protect the exploited peoples (pp. 448-449).

Not being an historian, precisely what countries Hedger had in mind when he implicated patriotism with State worship and imperialism I cannot say. But certainly at no time have the people of the U. S. ever indulged in State worship.

The descent of political institutions introduces the 1933 student to political theory as well as to forms of government. Gardner's discussion is inadequate and incomplete, though well-intentioned. He reviews briefly divine right and the social contract theories of Hobbes, Locke and Rousseau, noting important differences between them. Hobbes assumed that when individuals came together to form a State, they gave up all rights to the sovereign, the king. Locke, however, believed that the function of government was limited and that the people did not surrender all rights. Gardner (1933a) points out that Locke is the philosopher of the "bloodless revolution of 1688" in England where it settled forever the pretensions of divine right, absolutism and established the

supremacy of Parliament. Locke's doctrine was incorporated into the Declaration of Independence and into the idea of limited government in the Constitution (pp. 456-457). Rousseau believed that popular sovereignty was the only justified basis for political society; hence although all gave up all natural rights in forming a State, each was to share directly in the political process. Gardner then mentions the force theory of 16th century French jurist, Jean Bodin, who held that the State comes into being by force. However Gardner (p. 457) points out that the foregoing theories have been rejected in favor of an evolutionary view of the State.

The modern view is that social institutions evolve. State sovereignty is defined as unlimited in the scope of its authority over individuals and groups within the State (p. 461) although where sovereignty lies (who makes the laws) distinguishes between authoritarian and democratic government.

Gardner himself fails to recognize the evolutionary implications when he also accepts the definition that rights possessed by the individual are those granted by the State (p. 474) and reiterates the view that the doctrine of natural rights as subscribed to by Locke and Jefferson is now passe, as is the corollary that the function of government is minimal (p. 473, 478). Thus what rights the individual enjoys actually depends on the extent to which the State exercises its power, or to the question, What is the function of the State?

Discussion of the underlying theories on the function of the State brings the 1933 student back to individual versus socialism again, or how little or how much power the State can assume over the individual. At the extremes one group regards the State as superfluous, the other extreme sees the State having total control over the individual. Five theories on State function can be identified: the anarchists regard the State as unnecessary. Individualists would limit the State to a peace keeping role; they emphasize the dignity and worth of the individual, self-reliance and individual freedom of judgement and action. Collectivists would impose some regulation while Socialists call for public ownership of land, factories, capital and transportation. Among the Socialists are different philosophies; radicals advocate class war, moderates see change via education and constitutional means. On the extreme left is Communism which sees the State not only supplying all the needs of the individual, it will control domestic relations and the family will disappear. Gardner (1933b, p. 48) notes that Russia has been unable to achieve the ideal of communism, which comes from Plato.

The 1933 student gets next an overview of government--from ancient Rome to modern democracy as in the U. S. and England and dictatorships then existing, as in Italy. Shumate (1933, pp. 527-528) points out that modern dictatorships differ little from older absolute monarchies except that they retain the pretense of operating under a democratic Constitution and have legislative deliberation though it is mostly a debating society.

Stene (1933) takes up the political problems facing society, pointing out that we cannot decide what government should do until we decide what kind of society we want to build. Are only a few to have wealth or do we want an "equable distribution of the fruits of production?" Do we want to retain the family? When should government assume new functions? Democracy is commonly believed to be the best form of government in which an informed public can make its wishes known. However Stene questions especially whether newspapers provide reliable or biased information, or if the public can be educated about any but a few problems confronting society. When alternatives to democracy are considered, he points out that no mechanism has been developed for setting up a dictatorship or an aristocracy of talent where the "best minds" can determine government policy. So far no form of government has proved itself better than

all others; government is still an experiment.

Stene (1933) also takes up the question of how government should be organized. Here the student encounters alternative proposals that the legislature should be chosen to reflect interest groups: farmers, professors, doctors, etc.; others argue for proportional representation. The more government has to do, the more it must assume authority over personal liberties. On the other hand, in the question of civil liberties, wants cannot be made known unless citizens can express opinions freely. Here we encounter the right of advocacy of a more equitable distribution of goods via revolution and also the view that progress is initiated by a small minority. Stene concludes by informing the student that government is the only agency which can protect the welfare of mankind and direct the progress of society and if it is managed--by a few or by many--for the betterment of society as a whole, it is serving a worthwhile purpose.

The international scene is not neglected, and the student learns that the League of Nations and World Court represent a step, though fall short, towards meeting the needs of a World Society (Vinacke, 1933, p. 597)

Quinn (1933c,d,e) returns to consider the topic of domestic institutions. He discusses the family in Hebrew, Greek, Roman, early Christian and Teutonic cultures, the feudal, Renaissance and modern periods. The student finds the source of communist Idealism in Plato's advanced ideas on eugenics, in which matings are of superior to superior with child rearing in special institutions by those trained for the task. That men and women are more or less equal also traces to Plato, but the Roman wife had far more duties and responsibilities in the care and supervision of the home and servants than the Greek wife; women even managed estates and entered politics as husbands went off to war. Not until the Women's Movement emerged in England were some of these ideas revived in the late 18th century. Colonial and frontier America however placed high value on women and the family in general. Comparing Northern and Southern colonies though, Quinn repeats the 19th century Northern Abolitionists' claims of moral degeneration in the South.

Feudalism placed emphasis on the group; the Renaissance precipitated the move to individualism. However the transition from an agricultural to an industrial society and urbanization placed even greater stress on the family as a unit, and industry took over the task normally done by the wife in supplying food and clothing.

In contemporary society the State is the ultimate guardian of the children and maintains the right to interfere when it thinks necessary; religious instruction, once a home task, has been turned over to the churches, while education too had been moved from home to school. Kindergartens had become part of the public school system, and some nursery schools were prepared to take the child much much earlier.

Indeed, radical eugenicists proposed human reproduction according to selected desirable criteria with children raised in special institutions away from untrained mothers, since the latter do not know how to enable the child to develop to his fullest capacity. Conservative eugenicists, however, were concerned about the numbers of mentally defective children, a consequence of marriage laws in many states allowing the insane, mentally deficient and those with venereal diseases to marry (Quinn, 1933c, pp. 642-643, 652). Quinn himself notes that no substitute for the family has been found and that stable family life is indispensable to optimum personal development of parent and child. He sees the need for more stringent marriage laws and more uniform divorce laws. He comments that American society at that time, the 1930s, was showing symptoms of disintegration (p. 637), and analogizes between our own cultural diversity, cultural indigestion and moral decline (at that time!)

and that of cosmopolitan Rome. However, his targets for the alien influence--blacks and orientals--seem off base even then, and especially 40 years later.

Eby (1933a,b) discusses education, mostly a target for his attack. Yet he never specifies what the ideal education consists of, beyond specifying that "the ideal product represents the perfect adjustment of the individual to the changing society" (p. 691). His arguments and statements merit close attention. How receptive were 1933 ears? Were the seeds which sprouted today's illiterate high school products being sown then?

Education is defined as a "social process directed...toward the realization of socially accepted values" (p. 659). Its major function is to extend, conserve and transmit all the cultural values and ideas to succeeding generations, yet mostly it takes on the function of transmitting cultural biases, of furthering the group ideal. Among his examples are Germany-service to the State, and America-citizenship. Discussing education in classical times, the student is told the Greek ideal was the development of personality since the life of the individual and that of the State were synonomous. This required the development of all aspects of the individual--physical, intellectual, moral and aesthetic, the "good life" as expressed by Plato (p. 662). The Roman ideal was that of service--soldier, lawyer, statesman--so education pursued practical aims. After Rome, Church-dominated education largely persisted until the 19th century. In medieval days education was international in character and when universities arose their student body as well as their faculty were international; Latin was the language of instruction. Secularization and humanism appeared in the Renaissance (pp. 666-667, 671-672) and added vitality for a time.

The 19th century saw the rise of nationalism, along with the need for technological schools to serve the Industrial Age. Hence education became nationalized and lost most of its cosmopolitan character as popular governments established schools to make education more accessible to the masses. Eby notes that in France the government made a successful attack on Catholic education since religion was still regarded as allied with the monarchy. In England however extremists were not successful although "a compromise measure did create non-sectarian schools" breaking the monopoly of the Anglican Church (p. 671). Having been told that T. H. Huxley denigrated Christian values on p. 301, naturally the student could not be told that, in essays published in 1870 and 1892 as in his work on the London School Boards (Huxley, 1870a, 1892; Bibby 1959, 1972 p. 84) Huxley endorsed Bible reading in the schools both for literary merit and for instilling morality.

Despite his criticisms of Western European education as being nationalistic and industrially oriented, Eby favors the European system of secondary education which separates those bound for University from the "allsortans" destined for vocational and trade schools, business and commerce. Thus, the systems in France, Germany, Italy and England select for an "aristocracy of intellect." He notes that in Germany education in the secondary schools has a new aim "to adjust the individual to the new political order," to transfer the loyalty from the pre-war Imperial government to the post-war republic. Eby's and Mann's (1972) version of what really was going on are quite different.

Discussing schools and social progress, Eby claims that schools have been effective so long as they have adjusted content and method to a changing civilization. In each age, however, schools ultimately have tended to become rigid, static and unable to adjust to social needs until they "were seized in a later age, readjusted by means of revitalized curriculum and methods and made to function again as effective instruments of social progress" (p. 675).

Turning to American education, Eby (1933b) realizes that the perpetuation of a democratic form of government depends upon an intelligent citizenry, hence schools for the masses. He points out that state-controlled, tax-supported

public school education originated in this country, beginning in 1647 in the Massachusetts Bay Colony.

The growth of the public school system, including universities, the amount of money expended and the numbers employed attest to America's faith in education, both as a means of instilling morality and intelligence, without which democracy cannot work. Yet Eby is critical of education at that time, for numerous reasons. Notably the schools are seen as bastions of conservatism, as tools of propagandists. Academic freedom is a problem in the fields of science, economics, sociology and American history. In particular he decries banning the teaching of organic evolution in the schools.

Although mass education "has given dignity, confidence and poise to lower groups, " it results in mediocrity. Superior ability is not challenged, "cultural progress is retarded" (pp. 682-683). Too much of higher education is utilitarian: pre-law, pre-med, pre-engineering.

Yet for all Eby's claims of cultural education's ability to produce leadership for continued progress, for understanding the problems and values of the modern age, he never defines what constitutes cultural education. The older definition was what the past considered to be of highest worth, i.e. classical literature, hence training in the classics. For contemporary society, this no longer holds, culture must be "redefined and reconciled with present-day life." The ideal represents an "attitude of mind" not subject matter. (p. 684). And so the 1933 student is given a rosy picture of what education of the future will produce--original, resourceful, creative leadership. Science, business, industry and education will be humanized. There will be a new advance in Western Civilization; education must assume this responsibility for the schools. Yet the 1977 fact is that education has become so degenerate (despite the vast sums now spent) that state governments must impose a junior high reading level competency before a high school student can be "awarded a high school diploma for occupying school space, kindergarten through grade 12.

Shafer (1933a,b,c) presents a sometimes magnificent, sometimes perplexing, sometimes perceptive treatment of religion. He comments that the current argument that religion is a tool of capitalism is merely analogous to 18th century arguments that religion is a delusion fostered by priests, while any attempts to capture religion either by the State or well-meaning groups as a means of transforming society end up perverting religion instead and so kill it for a time.

Religion takes its rise from extraordinary experience. The more developed religions maintain that man can communicate with ultimate Reality and that the means necessary to salvation have been made known to him. If this is so, then religion is fundamental and cannot be made to serve the State or society without perversion or degeneracy. Thus, whatever service religion performs to society is merely a secondary by-product. It is primarily religion that has given man courage despite hardships, faith that life is important, has kept men modest in prosperity, curbed brutality, fostered the early developments in art, architecture, fine arts, literature and conserved the past (Shafer, 1933a, pp. 703-704).

Religion is both constructive and conservative, but Shafer adds that it is perhaps only possible to be splendidly constructive on a conservative basis. The constructive activity of religion fosters the development of man's humanity. Religion however does not relate to the development of the physical sciences or the biological and behavioral sciences that deal with man's animal past. Religion does concern itself with how man uses this knowledge.

Shafer then quickly reviews the more primitive religions--animism, totemism, polytheism, then the older higher religions--Buddhism, Zorastrianism, and Judaism before turning to Christianity. Mohammadanism is omitted both for

space limitations and because 19th and 20th century attacks on religion would pertain equally to Mohammadanism and to Christianity.

Of early Christianity, Shafer (1933b, p. 729) concludes that it triumphed because "it presented to men, and enabled them to realize in experience," a truer, better humanity than had hitherto been conceived or seen." He notes too that historic Christianity is not a gospel of social welfare or social reform. The change of attitude fostered by Christianity is conducive to social welfare because the "born again" or "twice-born" man is indifferent to those elements of material well-being that are of greatest concern to the "once-born" or "natural" man. This change of attitude Shafer calls an "inward change, " one by which the "born again Christian" (to use a current or 1977 term) realizes that no human is in a satisfactory inward condition and so he strives, despite others, to keep trying to be honest, to be just, to be faithful in the performance of his duties. By contrast, "natural man" assumes he is in a satisfactory state, clamors for his rights, thinks in terms of the present life, and is conscious of needs to be satisfied if the good life is to be enjoyed here (pp. 712, 740). Ironically, this is almost a paraphrasing of T. H. Huxley:

Assuredly, the Bible talks no trash about the rights of man; but it insists on the equality of duties; on the liberty to bring about that righteousness which is somewhat different from struggling for "rights," on the fraternity of taking thought for one's neighbor as for one's self.

Huxley, 1892, p. 58

This does not mean that the true Christian is indifferent to the improvement of earthly life; rather, devotion exclusively to earthly well-being is the antithesis of what the Church has stood for through the centuries (Shafer, 1933b, p. 741).

Reviewing briefly the history of Christianity from the late Middle Ages through the Renaissance, the rise of Protestantism and on to modern times, Shafer (1933c) feels that the Reformation permanently weakened Christianity and made it more vulnerable to the enemies of religion, although he acknowledges that the Reformation promoted individualism while Calvin, founder of Presbyterianism, gave guarded encouragement to modern business. Nevertheless, the last 3 centuries, according to some historians, have seen the triumph of reason over superstition, where superstition is defined as Christianity. Reason in this case supports the growth of the exact sciences and the rise of historical criticism post-Hegel, the schism finally culminating from the Darwinian theory of evolution.

Shafer's gloom is that produced from a lop-sided view of history, chiefly Continental, plus some long concealed facts such that science did become atheistic in Germany post-1850 and thus Darwinian evolution was merely used to bolster an atheistic outlook already pervading in science and philosophy (Band, 1977). Shafer therefore lacks the perceptiveness of Huxley (1892, p. 57) and Schaeffer (1976, p. 110) that the Bible "has been the greatest instigator of revolt against the worst forms of clerical despotism" (Huxley) and has enabled man to "control the despotism of the majority vote or the despotism of one person or group" because Biblical absolutes are available to judge society (Schaeffer).

Shafer might have been considerably more cheered about the conflict between science and religion had he known that Huxley had also asserted that he did not think the human race would ever be in a position to dispense with the Bible (Huxley, *ibid*, p. 58) and that the full weight of Huxley's opposition to developments in Germany is contained in the statements:

I have nothing to say to a Philosophy of Evolution
 Huxley, 1892, p. 41

morality is not to be established by immorality
 Huxley, ibid., p. 54

When Shafer turns to attempts to reconstruct Christianity in the period, he finds that the "modernism" of some Protestant churches and the "Humanism" of the Unitarian church are merely stages enroute to Communism. The modernists propose to use science and technology to enable man to achieve the richest life in the present world; the humanists believe that the chief end of man is to glorify human life and to enjoy it while it lasts. Communism is also claiming that it alone will enable everybody to realize the richest life through the inalienable "right" of mankind to the fruits of applied science, but the religious "modernists" are in the untenable position because Communism is unalterably opposed to religion.

On the other hand, as a backlash against the militant atheism of the intellectuals and the modernism of the Protestant churches, Fundamentalism can be viewed as an attempt to preserve historic Christianity. Nevertheless it goes too far in proclaiming the literal truth of all Biblical statements. However both Fundamentalism and the growth of the Roman Catholic church in the past century demonstrate that historic Christianity is not dying.

The reconstruction of Christianity for which Shafer hoped did not come to pass (and probably isn't needed anyway). Yet despite the grossest misuse of science by Nazi Germany, post-World War II scientists can still reaffirm the "harmless" link between science, evolution and atheism.

The text closes with a consideration of ethical standards and problems in contemporary society. Ames (1933a,b), unlike Huxley, makes no mention of the Bible as a source of ethical conduct and standards. Instead the 1933 student is told that "the study of ethics makes it harder, not easier, to pass judgement," "in real ethical problems, we are presented with alternatives, both of which look good," (p. 774); "the only ethics of value is that which teaches consideration of time and place" (p. 788).

Ethics is the study of morality. But ethics, like psychology, deals with choices. Hence social psychology has been valuable, the student learns, because of its studies on the social value of self. As he grows, the individual takes on the values of the group; no group--large or small--can survive if the general interests are not shared by most of its members (p. 775) but note (p. 787) that society at that time was in a state of flux, groping for a moral standard more adequate for the times, a "new ethics," we might say.

The student also learns that the individual is not a self-contained unit. "A self includes other people," "virtue lies in the development of a self with increasing interests in other people and consideration of their welfare" (pp. 775-776). Eventually this will be revealed to come from John Dewey, yet the student never learns that the ultimate source of gibberish about the "self" is Fichte who regarded it as a fragment of the Universal Self and that both the non-identity of the individual in the group and the rule of scholars re-emerge in Fichtean philosophy.

Ames then quickly surveys the development of ethical concepts in primitive people through Hebrew, Greek, Roman, early Christian to Renaissance and modern. Here again the student learns more about Plato's philosophy--that the State should make sure each child has worthy parents, should take charge of the child's education, that the most able should be the rulers and guardians of the State while the rest become artisans and farmers.

Turning to modern developments in ethics, he discusses Kant, J. S. Mill and John Dewey (pp. 782-786). Kant argued for a Universal Absolute, i.e. that

moral judgments must be universal; each person should do what he ought to do (immorality is to do what one likes to do). So, in Kant's ideal community, each does as he ought and every one will consider everyone else before acting.

Kant believed that people should be judged by their good intentions; Mill felt that people should be judged by what they accomplish, not by what they intend. Mill felt that an act is good if it promotes the general happiness, i.e. the greatest good for the greatest number, the creed of the Utilitarians (Mill became an English prime minister whereas Kant, who taught that truth could be discovered by thinking about it = reason, was a monkish-like University professor at Koenigsberg).

John Dewey taught that the self was naturally social, so the question is How can a narrow self become a wider self? (p. 783). The answer is "through education," and the student learns that Dewey is the originator of the concept that virtue lies in widening sympathy with others and their needs. To Dewey, good is what is chosen after careful reflection--bad is what is rejected.

As for absolute moral standards? Of course not. The student gets more jibberish about "little selves" and "wider selves." One fervently wishes that Huxley's plea to make philosophy part of science instead of liberal arts had been heeded (Huxley, 1878, p. 51). Could so much have been made out of so little for so long, the Fichtean Ego having already in those days entered psychology (Huxley, *ibid.*, pp. 86, 96, 133).

When Ames (1933b) turns to ethics and contemporary society there is decided ambiguity about moral questions--lying, stealing, murder, sex, homosexuality (term not used but implied by "sexual maladjustment" p. 793), endorsement of the role of psychology and new knowledge about inhibitions being applied in education. Birth control methods made the question of sex life a personal matter. The ethical question of who are fit to be parents is admitted to be too complex to discuss "here" (p. 791).

Ames proclaims that the fruits of science are concentrated in the hands of a few who exploit the rest, complains that the government is corrupt, and tells the student that "the outward form of government is frequently secondary in importance to the intelligence and spirit of those who operate it" (p. 799). One is reminded of Mann about Germany in the pre-Hitler days and of the adverse role of the social sciences in the universities and the negative part played by the intellectuals during the existence of the Weimar Republic (Mann, 1972, pp. 369-418). About the United States, Morison (1965, pp. 904-909) comments on the discrepancy between the decency maintained by the common man versus the overemphasis on sex.

Corruption also exists in the medical and legal professions, too, in 1933, according to Ames, and he raises the possibility of socialized medicine. Ames (1933b, p. 795) reminds teachers of the need to adapt education to a changing society and changing needs. When he turns to the problems of war, again the 1933 student finds patriotism being equated with nationalism and a State religion (p. 802) and is told that man's behavior must be modified via education towards internationalism and a hatred of war, that national hatreds can only be opposed by the "spirit of youth" (pp. 801, 803). At least there is the realistic admission that one nation cannot disarm if others don't and that another war (the future World War II) would be more disastrous than the previous one (the past World War I).

Have 4 decades passed or do we merely imagine it to be so? Ames' closing chapters on ethics make it abundantly clear we are not dealing with an underlying philosophical basis dependent upon a depression to promote atheism, amorality, societal transformation via education and communist idealism. In short, we are not dealing with Marxism. In the philosophy of

of evolution we are dealing with what comes after Marxism, or alternatively a form of communist philosophy competing with Marxism.

F. A. LANGE AND NEOKANTIAN COMMUNISM

Introduction

What indeed is supposed to come after Marxism? or How can there be a communist philosophy competing with Marxism? And why don't we know anything about it? Possibly for the same reason we don't know anything about the 19th century origin of "classical evolutionary theory." One was linked to the other when F. A. Lange published Vol. II of his revised enlarged Geschichte des Materialismus in 1875.

In chronological order, and the dates are important: Lange published the original edition of the Geschichte des Materialismus in 1866. Karl Marx published Das Kapital in 1867. Thomas Huxley's Lay Sermons, Addresses and Reviews in England came out in 1870, in the U. S. in 1873; in this he suggested in a footnote in his essay On Descartes' discourse..(1870) that Lange's Geschichte des Materialismus be translated into English. Then Darwin's Descent of Man appeared in 1871 and his final version of the Origin of Species in 1872. David Friedrich Strauss published Der Alte und Neue Glaube in 1872 in which he linked Darwinism, materialism, atheism and laissez-faire. Marx's "inverted Hegelianism," as it is sometimes called, had been undone by Strauss, although both Marx and Strauss were members of the "Hegelian Left."

Friedrich Albert Lange, who was a professor of philosophy at the University of Marburg, revised his Geschichte des Materialismus to produce a modified Darwinism which he then subsumed into Kantian evolution, having first given a new interpretation to the Kantian law of progress (law of development or progressive development), borrowed from post-Kantian German Idealism and proceeded to argue that mankind was evolving toward the atheistic communist society founded on Idealism, all the while attacking Marx for giving communism the wrong philosophical basis. He also made liberal use of ideas originally suggested by Thomas Huxley both in constructing his biological evolution and in its philosophical application--to the detriment of Huxley.

I have been told that Charles Darwin read German with great difficulty. Huxley was fluent in it, having initially become interested in German via Thomas Carlyle (see Bibby, 1959) and thoroughly mastered German philosophy.

However neither Bibby for Huxley nor Barrett for Darwin can recall one mentioning Lange to the other. Thus Huxley may have protected Darwin too well while continuing his own social crusade to provide a sound education for all children, opportunities for university education, a decent standard of living for workers, to use science in the service of humanity and to keep both science and education out of politics.

Engels supported Marx, developed dialectical materialism and put science on a Marxist basis (see Fischl, 1953; Bloch, 1972).

Lange's 2 volume German work was republished in 1882, 1898, 1906, 1908 and 1921. It was translated into English by E. C. Thomas as 3 volumes, I (1877), II (1880), and III (1881), hence appeared in English before Marx's Das Kapital which was translated and published in 1887. Lange's History of Materialism was subsequently reissued in English only twice, as 3-volumes-in-1, in 1925 and 1950.

Lange was labeled a Neokantian in the 1898 reissue by Hermann Cohen, his successor at the University of Marburg and founder of the logical abstract school of Neokantian socialism/communism. This designation was retained by Bertram Russell when he wrote the introduction to the 1925 English edition,

but who pointed out that Lange was factual in the part before Kant, speculative in the part after Kant. This means that Lange was constructing a speculative philosophy.

However, Lange's philosophy of evolution needs a basic summary of the philosophy of Kant, Fichte and Hegel as found in McGovern (1941) to decipher it. If so far only Thomas Henry Huxley in the 19th century and William Montgomery McGovern in the 20th have demonstrated a working knowledge of Fichtean philosophy, and McGovern's statement is still true that not much of Fichte has been translated into English, it may help to account for why the History of Materialism, Vol. III of the 2nd edition revised has been overlooked in the English speaking world.

That it is the lost work of political philosophy is ably demonstrated, for McGovern does not know who linked Darwinism to the Kantian law of development (law of progress) to create survival of the best (McGovern, 1941, pp. 151-152). Vol. II in German becomes part of Vol. II in English and all of Vol. III. We will only be concerned with the contents of Vol. III.

Lange's organic evolution as classical Darwinism

As noted before, Lewontin (1974, pp. 194-196) claimed Darwin originated the classical theory of evolution, also called "classical Darwinism". Clarke (1975) expressed the belief of most of us that it originated in the early 20th century but had nothing to do with Darwin. Clarke proves right that "classical Darwinism" owes nothing to Darwin; Lewontin proves right that its origin is pre-Mendelian.

Friedrich Lange, though a professor of philosophy, had learned his science from Hermann von Helmholtz, later founder of the Neokantian physiological school (Fischl, 1954, p. 18), and is so startlingly modern he probably deserves credit also as the "father of radiation genetics." Indeed it would be impossible to say that he has not influenced the field of genetics and radiation genetics.

When Lange begins his discussion of evolution, he first considers geological evolution. He points out Kant's contribution through his nebular or condensation hypothesis, i.e. the universe evolved from matter loosely diffused in space. Lange echoes Lyell that the same processes at work now are also those which are responsible for the formation and changes in the earth's crust in the past and concluded

we can regard the condition of the earth's crust and the
progress of the changes taking place in it as comparatively
stable.

III, 5-6

Writing in 1887, Huxley (pp. 99-104) pointed out that Lyell's Uniformitarianism merely maintained that geological processes were not more rapid or more vast in the past than currently and that Lyell consistently drew attention to the fact that catastrophes (volcanic activity, earthquakes, flooding) were consistent with his doctrine.

Lange has a different intent. He wishes to put the cessation of life on earth into the far distant future and its beginning into the far distant past and stabilize current conditions so that we may "seek the peace of the soul in what is given...in the eternity of natural laws" (pp. 7-11).

Turning to organic evolution, stability likewise plays a key role among Lange's postulates. To account for the production of variation however, including the more favorable variants of evolutionary importance, Lange links two postulates Darwin had firmly rejected: evolution by sudden change and the law of development. Ironically Huxley (1864) had cautioned Darwin that he made too much of "nature non facit saltum" and had himself put forth the

idea that evolution might involve large changes.

First, Lange emphasizes species stability and species equilibria. In part it explains the absence of intermediate forms:

If, namely we propose that those forms have in the course of long spaces of time so formed and marked themselves off from one another as we now see them before us, it necessarily follows that from this they must in general possess a high degree of stability, and that varieties and intermediate forms can no longer easily arise...so long as the relative life-conditions of these species do not change with climate, cultivation, and other circumstances...the best adapted forms must necessarily keep the ground; and in fact, not only those which are best adapted in themselves but also the best adapted combinations of those species which, in the competition with each other, enable as it were the maximum of life to be maintained...

III, 43

Nature here strives freely...after a definite model, where a halt is made.

III, 44

After every important change in the conditions of existence there has resulted...a rapid development of some forms and a retrogression of others.

III, 45

All the various principles which modern inquirers have introduced into the doctrine of descent, as eg. migration, the isolation of species, &c, are only more or less happily apprehended special aspects of the decisive main principle of the disturbance of equilibrium, which must necessarily produce the stability of species where conditions long remain identical.

III, 45

Lange himself knew no more about the origin of variation or Mendel's work than did Darwin. So in his theory of organic evolution he made the appearance of variation dependent upon sudden changes, which he said were generated according to the law of development. Hence, biologically he used it as our mutation (Band, 1975).

Comparing his theory to Darwin's, Lange pointed out that Darwin placed chief emphasis on continuous change, imperceptible to ordinary observations but which become apparent over long periods of time. However Darwin also postulated continuous minute heritable variations in organisms.

Lange claims that Darwin emphasized only the preservation of the some few favorable variants and the elimination of the bulk of the unfavorable ones that arise by chance. He admits however that when slow changes in the conditions of existence occur, as gradual elevation or subsidence of continents, then slow modifications of forms may follow. Here he astutely anticipated Lerner's concept of genetic homeostasis, that is the resistance of organisms to genetic change (Lerner, 1954, 1958). Lerner's concept of genetic homeostasis depends upon heterozygosity and evidence for it was obtained in the South Amherst, Mass. Drosophila melanogaster natural population (Band, 1972a,b) at the time of the Northeast drought (Namais, 1968, 1969). Resistance to change as postulated by Lange, as we shall see, is that of the pure line opposing selection pressure unless the desired variation can be induced upon which selection can then act.

But even in this case (i.e. slow change) it will appear to us more probable that the organic forms oppose a certain resistance to the change in their life conditions, which maintain their state unaltered until, when the disturbing

influences reach a certain height, a disturbing crisis
breaks in.

III, 48

Lange then points out that this does not exclude a gradual modification, nor is his view of the attainment of equilibrium to be taken to mean a condition of absolute immutability--and he does use the word "immutability" (p. 46).

Returning to the idea of sudden change, he writes:

Let us again remember that we have to deal with long periods of time, and that the general tendency to variation must have been greatest at the beginning of these periods.

III, 46

That Lange's concept of evolution incorporated long term stability in contrast to Darwin's continuous change was briefly pointed out by Band (1974, 1975) who also noted that Lange made use of the law of development which Darwin rejected.

The law of development per se originated with 16th century Jean Bodin, whom we have already met as the author of the theory that the State comes into being by force. The world view then was generally pessimistic, believing the "golden age" to be passed; man and the state of things had gotten progressively worse since the Garden of Eden. Bodin offered a more optimistic philosophy; he looked around and saw that things were getting better (McGovern, 1941, pp. 56-57). Nevertheless, this philosophy remained out of fashion until the 18th century when it appears to have been revived in France by Lamark (Darwin, 1872, pp. 17-18) and Turgot (Durant, 1967, pp. 77-78) and in Germany by Kant (McGovern, 1941, p. 151) and so entered both Continental philosophy and biology. Both were evolutionary oriented.

In 1755 Kant proposed that the universe evolved from matter, as duly noted by Lange (see also Huxley, 1869). Kant also hinted that man evolved from apes and applied the law of development to man's social evolution (Lange, III, p. 86; McGovern, loc cit, pp. 151-152). Hedger (1933b) seems to have neglected the fact that the law of development and man's evolution were primary concerns of German philosophy long before Herbert Spencer was born. Barzum (1947) too mentioned but neglected to go into the evolution in German philosophy.

In biology prior to Lange's treatment the law of development seems to have been regarded as an alternative to natural selection. Darwin critically examined Nageli's and Mivart's views (Darwin, 1872, pp. 194-195). Huxley criticized Kolliker (Huxley, 1864) and Lange also criticized Kolliker (Lange, III, p. 52). Lange notes too that Nageli proposed and Darwin opposed that in organisms there is an innate tendency to progressive development, that Kolliker also thought that the law of development of organisms was incompatible with Darwinian natural selection. Calling Darwin "one-sided" Lange asserts:

The whole difficulty of understanding lies in rightly apprehending the notion of the law of development

III, 55

Compatible with the chemistry of his day, Lange then analogizes between the unknown operation of the law of development and the known theory of carbon compounds whereby an enormous and complicated multitude of organic acids can be built up from very simple principles. Furthermore, he applied the concept of mutability to the latter without discussing how external changes in the environment can generate internal heritable variants which will subsequently be acted on via natural selection (Lange, III, p. 56).

This idea seems to have originated also with Huxley. Prior to the publication of the Origin of Species, Huxley had written Lyell that changes in organic compounds could generate a vast series of modifications and later to Hooker that what is needed was work on the law of variation. In an 1869 essay Huxley proposed that hereditary transmission was molecular and that adaptation to conditions

was the result of favoring the multiplication of those molecules most in harmony with the conditions (see Bibby, 1972, pp. 44-45)

In 1875 Lange postulates:

The law of development gives the possible forms; natural selection from their enormous multitude chooses the actual forms.

III. 57

Among this luxuriant multitude of forms comes now the struggle for existence, ordering and sifting, and establishes the equilibrium described above...Whether those forms to which natural selection finally leads, and which it renders stable, are finally at the same time the purest types according to the law of development, may remain undetermined; but at all events we shall assume that the stability of species is the greater the more often this coincidence is attained.

III, 58-9

Ironically Barzum (1947, p. 64) claimed it was Charles Darwin who linked the well-known theory of natural selection to the century old development theory. Partly refuting Barzum's claim, Mayr (1964) commented that Darwin rejected the law of development in the first edition of the Origin of Species.

In the later edition of Origin of Species Darwin proposed that natural selection acted slowly to build up harmonious or coadapted combinations of organisms in relation to each other or to their environment (Darwin, 1872, p. 109), and also acted slowly in order to modify and bring about coadapted changes in body parts (ibid, p. 203). Then he employed the argument for co-adaptation as an argument against the law of development and evolution by jumps (ibid, p. 227). Since Dobzhansky obviously adapted his own argument for coadapted gene pools from Darwin's previous arguments on coadaptation, Lewontin must have overlooked this in assigning the "classical theory of evolution" to Darwin.

Lange, having already in the above talked about pure lines, then proceeds to the assertion that is a characteristic of "classical theory:" The rare favorable variant.

Adaptations proceed from the conservation of relatively fortuitous formations.

III, 66

these laws indeed do not immediately produce what is adapted, but they produce a multitude of variations, a multitude of germs, in which the special case of what is adapted, of the persistent is perhaps relatively very rare.

III, 67

He has thus achieved what he set out to establish:

What we call Chance in the development of species is, of course, no chance in the sense of the universal laws of Nature.

III, 35

Lange then discusses that man is the product of just such improbable variations and that even in the highest activities of man

this principle of the conservation of what is relatively best adapted still plays its part. Even the great discoveries and inventions, which form the basis of higher civilizations and intellectual progress, are still subordinate to that universal law of the conservation of the strongest.

III, 67

Lange then asserts that there is a "teleology which is not only compatible with Darwinism, but is almost identical with it" (p. 66) and that this teleology is to be found in Kantian philosophy (p. 69). Indeed, when Lange injected his interpretation of the law of development into biological evolution, it cannot be said that he also did not have in mind its larger Kantian application to man's cultural evolution. Given that Strauss had linked Darwinism, Materialism and laissez-faire, an essential step in linking Darwinism and Idealism would be to link Darwinism with the Kantian law of development. Of course, this has other consequences also, since Lange is going to argue for communist idealism. The struggle for existence becomes more sinister, a struggle between competing communist philosophies. But of Lange's derivation later.

To sum up his treatment of organic evolution, we find that Lange in 1875 had already joined those who anticipated that hereditary variation is molecular, that mutation might involve chemical changes. Although he did not specifically distinguish phenotypic and genotypic effects, he had anticipated that natural selection can sift out only variation already existing in the population, the essence of Johannsen's bean experiments (see Peters, 1953). He anticipated that populations could resist genetic changes as a consequence of environmental change, the essence of Lerner's genetic homeostasis.

Lange had proposed that populations were largely genetically homogeneous and that evolution was via the rare favorable variant, and hinted that most mutations were not favorable. He emphasized static conditions and equilibrium populations. In short, he authored the classical theory of evolution. In the 20th century this was to become a support for population genetics and ecology. In genetics Muller used it repeatedly to revive idea of breeding superior humans.

Lange also anticipated that many mutations could be produced all at once. This is how radiation acts. Whether or not Muller himself knew of Lange's ideas is impossible to say. Still the fact that no indebtedness to him has been acknowledged (when it should have been) makes it ludicrous to berate Darwin for similar failure to acknowledge earlier evolutionary predecessors.

Lange's treatment of mankind evolving

A. Philosophy of history

Before proceeding, we must digress into an area unknown to most of us: philosophy of history or how a particular philosopher imagines history to be unfolding. It is a game open to anybody because, as Fischl (1953, p. 68) says, "Each theory of history can bring together facts, and history is so rich in millions of occurrences that each theory contains the convenient occurrence and neglects the inconvenient."

Philosophy of history is evolutionary oriented. Beginning with Kant physical and political evolution are joined. Consequently philosophy of history and philosophy of evolution may be used interchangeably. Lange's organic evolution is part of his own philosophy of history or of evolution, i.e. his past and future predictions for man.

In his own theory of organic evolution, Lange has already introduced 3 arguments from philosophy of history: denial of individuality, homogeneity (pure line) and survival of the best. Much of what is to follow is taken from McGovern (1941) since Lange himself provides no clues. Other sources include Bloch (1972), Durant (1963, 1965, 1975), Huxley (1871, 1890a,b,c) and Mann (1972).

It is convenient to begin with 16th century Jean Bodin, many of whose ideas were later picked up by Kant, and whose theory of the State originating by force was accepted by many social scientists in the 19th and 20th century. As noted previously, Bodin originated the idea of progress in men's affairs. He also

originated the theory of sovereignty that the State shall have sole authority over all persons and corporations within its borders. Living in France at a time when some Dukes paid only nominal allegiance to the King, Bodin declared that progress is toward centralization and unification of authority, and maintained that supreme power must reside in one person or a group of persons. Nevertheless, Bodin's sovereignty turns out to be less absolute than Hobbes. In any event, it is evident that Gardner (1933a, p. 467) did not credit to Bodin all that should have been credited to him in political theory.

Rousseau is the next Frenchman to consider. With Rousseau ideas on education also become involved in philosophy of government and theories about the individual. To Rousseau, private property is the root of all evil; to protect property force was organized and became the State while law was developed to facilitate government and make the weak obey the strong. Rousseau described 2 types of inequality: that arising from natural or biological causes (age, sex, health, intelligence) and that arising from unnatural causes (economic, social, political and moral differences). Rousseau introduced the notion that society has a "general will" which tends always to the preservation and welfare of the whole and is the source of the laws. The sovereign power of the State lies in the "general will of the community" which in practice is determined by the majority vote of all the citizenry acting as a legislative body. However, Rousseau forgot to define who could vote. Since he regarded civilization as evil, Rousseau advocated withdrawing the child from society for his education; a benign tutor would allow the child to do nothing from 6 to 12, expose him to a little reading after that, to religion by 18 and by age 20 he would have read a few books and somehow managed to learn a craft or trade. Now Rousseau and his mistress did have children who were promptly turned over to a foundling home. His a priori theories on the inherent goodness of children and on education never had to be assaulted by experience. As to the New England town-meeting extolled by Eubank (1933c, pp. 91-92) as an example of a direct democracy (in the Rousseauite form)? All who could participate had to be Church members, for New England was Puritan and the rosy picture given us by Morison (1965, p. 70) and to some extent Eubank should be tempered by a more recent appraisal as found in Cooke (1974, pp. 81-88).

Kant was both scientist and philosopher. In the sciences he made contributions to astronomy, biology, geology, physics, psychology and anthropology. In the field of philosophy he founded German Idealism. He believed in the supremacy of the spiritual over the material (mind over matter), of the supremacy of pure reason plus intuition over experience and the supremacy of universal moral law over the wishes and desires of the individual. He retained the concept of the individual but redefined freedom as what universal abstract reason tells us what we ought to do. With Leibnitz, he founded the transcendental school. He agreed with Bodin that the State comes into being by force and that private corporations--temporal or ecclesiastical--should be subject to State control and inspection. He retained Rousseau's concept of the "general will" which is always right, but said that it could be expressed by one man or a group. Given the religious fanaticism and dictatorial nature of New England Puritanism, no wonder Kantian philosophy appealed to their 19th century descendants. Forgotten too by the modern intellectuals is the fact that New England Puritanism equated material success with God's blessing long before the Industrial Revolution and the invention of such terms as "capitalist" and "proletariat, justified selling blacks into slavery because it brought them into contact with Christianity and was just as certain of its intellectual superiority in the 1600's as prevails today among the modern evolutionary atheists. Let us at all times remember, the confusion between Jeffersonian Idealism and German Idealism was made in the North and not in the South!

Kant applied the doctrine of progress to argue that man's bad instincts could lead to good results, to developing the State, science, art and crafts. Furthermore, he felt that eventually all separate States (countries) must be joined into a really powerful league of nations capable of maintaining eternal peace and that this would be brought about through the State's bad qualities, i. e. fear of war combined with increasing capacity to wage war. Thus from Kant the ideas that man progresses morally and toward internationalism.

Johann Gottlieb Fichte, who followed Kant, transformed the Kantian law of progress into the philosophy of history. Yet Fichte himself is contradictory. Early in his career he supported the French Revolution; later he decided that men have no right to rebel against their rulers. For a while he was an internationalist, then became a nationalist and attempted to define the nation-state both on the basis of language and economic self-sufficiency. If each State had the capacity to be self-sufficient, it would reduce international tensions. But the State Fichte glorified is the "State-as-it-ought-to-be;" scholars should rule, teach men what is right, guide them towards moral perfection after which the State would no longer be necessary.

Fichte is the father of socialism (McGovern, 1941, p. 246; Lange, III, p. 349). Thomas Huxley sensed that any attempt at State Socialism would revive both the philosophies of Rousseau and Fichte.

The basis of Fichte's philosophy is mind or Self (Ego), which also becomes involved in his evolutionism, his theories of government and of education. Unlike Kant he did not retain the uniqueness of the individual. Instead the Self creates the Not-Self by which we become aware of the external world. Self is an active moral agent, the outer world is non-moral. Self by struggle realizes its own inherent goodness. All men possess selves but each is merely a part of the Universal Self; the individual is a ray, a fragment, a piece of the whole. Eventually the Universal Self will be completely and perfectly realized in the individual selves, and the individual self will triumph over the outer world and be completely free and moral. A philosopher acquainted with the soul of man and its necessary stages can tell at what stage man has passed through and what lies ahead.

Fichte postulated 5 stages in the evolution of man: 1) prehistory, 2) ancient history when man feared his rulers, 3) the era when man became hedonistic and overthrew his rulers, 4) the era when man elected to be ruled by heroes and scholars, 5) the era when men became completely righteous. The latter is often referred to as the Christian millennium or in Fichtean terminology when the Universal Self is completely and perfectly reflected in the individual selves and is the basis for Fichte's idea on the disappearance of government. Huxley (1871) argued that the Fichtean Utopia was when moral man knew what was right and only acted in the best interests of others. Fichte himself thought that man had progressed to stage 4 in his own day, a point which Huxley (1888b) disputes.

Nevertheless Fichte retained the idea of superior and inferior races but felt that even superior races differ. Though he did not equate race and language, he did feel that each nation should be free to develop its own national culture. The State being a social organism, culture was an expression of the dynamic spirit of the nation. Fichte maintained that all rights come from the State which must be able to assume far-reaching controls over the individual. The blueprint for his economic State is laid down in his Der Geschlossene Handelsstaat (1800). Here the State assumes control over production and consumption, of the numbers divided into agricultural, manufacturing and professional classes, of prices and wages.

Fichte glorified heroes and scholars initially, but later came to believe that only the scholars should rule since only they contributed to mankind's

progress. Initially Fichte proposed a central committee with representatives in every district answerable only to the committee. The ephors, the elected representatives of the people, could challenge the decrees of the committee, but the people themselves would have to vote on whether to accept the committee's decree or uphold the ephors' challenge. Later, Fichte decided that the people had no right to rebel against their rulers, did away with ephors, decided scholars should rule, of whom the wisest would be appointed dictator. This, of course, is all very theoretical. Fichte, like Kant, was a professor but fancied himself the "master scholar" eminently suited to guide the German people to the supremacy that was rightfully theirs (McGovern, 1941, pp. 212-13). As noted earlier, Fichte began as an internationalist and a supporter of the French Revolution, but after the capitulation of the German states to Napoleon Fichte's sentiments shifted.

Like Rousseau, Fichte too felt children should be removed from their parents to be educated--in State boarding schools where their will and character could be more perfectly moulded by the State. The goal of education was to "transform the character and dispositions of its citizens" (McGovern, *ibid.*, p. 220). Thus we find elements of Fichtean philosophy in Gardner's assertion that "all rights possessed by the individual come from the State," in Eby's proposal for education to remake society and in Dewey's "narrow and wider selves" This does not mean they were championing nationalism.

Philosophy of history as developed by the German Idealists pyramids. Fichte built on Kant, Georg Wilhelm Friedrich Hegel built on Fichte's system. In fact he felt he had solved the problem of the Self in an alien world. What Hegel did was to "discover" the unity of all existence, a Universe which continues to unfold such that whatever happens, happens because it is right. According to Golo Mann (1972, p. 46) Hegel's was a system for interpreting the present in the light of the past, not for predicting the future. Mann (*ibid.*, p. 48) also calls it the most dangerous philosophy ever devised. William McGovern gives us more detail, especially on Hegelian philosophy as a philosophy of evolutionism. Since Hegel felt that physical evolution had ended with the emergence of man, Hegel's transformation of the theory of progress into a theory of evolution means the continued spiritual development of man. Social, legal, political institutions, ethical, artistic, religious and philosophical ideas evolve. Human ideals evolve, progress and evolution are neverending; though passage of world history from one stage to another may involve a break with the past--a period of anarchy--this is necessary to progress from the lesser to the greater good. Evolution meant survival of the best and via the law of development, evolution toward a definite goal.

For Hegel, the goal of evolution was the perfection of the Nation-State. The individual is swallowed up into the State which is the embodiment of the Universal Mind or World Spirit. Thus the World Spirit takes the form of World History, which is the rise and fall of States, each with its own mission and contribution to make to the advancement of mankind. Hegel traced history from Oriental beginning to Greek to Roman to Christian era to the glorification of the Prussian State. So it is partly Hegel's historical unfoldings we meet in the Introduction to Western Civilization, as well as the Hegelian idea that man's different social institutions evolve.

Government to Hegel was the rule of the few over the many, these few being subject to a supreme head of State. His legislative body was less a law-making body than for ruling on generalities. Bureaucrats handled the details of the actual laws.

He divided society into agricultural, industrial and universal classes, similar to Fichte, but felt that the universal class was to guide the interests of the State and Society. Thus, while Hegel himself glorified War between nations as the triumph of the World Spirit in History, he left the door open

to "evolution under the guidance of the universal class," back to the State-as-it-ought-to-be (assuming it is possible to get a bunch of intellectuals to agree on anything!), back toward the internationalism of Kant.

Barzum (1947, p. 43) mentions German philosophy as a source of evolutionary thinking, but gives no further information. He is probably correct (Barzum, *ibid.*, p. 56) that Darwin's natural selection was devised to remove evolution from "metaphysical perfecting tendencies," yet fails to identify Lange's History of Materialism, 2nd revised edition, as still another German evolutionary philosophy, this one linking a modified organic evolution to yet another formula for achieving metaphysical perfection. However, it is not easy to unravel without access to a book like McGovern's.

Post-Hegel, philosophy became atheistic and materialistic. On the Socialist question, intellectuals split right and left, with Karl Marx representing the Left, and David Friedrich Strauss of the school of historical criticism the Right. Yet, so important to later Materialism in Germany is Strauss, Fischl (1953) begins his book with him. Das Kapital was published before Der Alte und Neue Glaube; we will touch on Marx's theory of history first.

Marx's was an economic theory of history which transposed the Hegelian war between nations into war between classes. However, Golo Mann (*loc cit.*, p. 84) points out that the idea of class struggle in history dates from von Stein; the French Revolution had brought power to the propertied middle class which ruled the people in its own interest; next time it would be the proletariat who would seize power. Fischl (1953, pp. 57-58) points out that Marx took over from Ludwig Feuerbach (1) his antitheological campaign, (2) his struggle against mysticism and abstraction as in the Idealism of Hegel and (3) his emphasis on mankind as godly while the individual is meaningless. Thus both Fischl (*ibid.*, pp. 50, 58) and Cole (1957, p. xxxi) stress that Marx, like Hegel, emphasized a collective oneness. Hegel saw the individual only through the State, Marx only through society or rather, the capitalists banded as a whole together against the workers as a whole. Marx's theory of history is thus not an Hegelian synthesis since Marx predicted the working class would annihilate the capitalists-industrialists and the State would cease to exist since it was the instrument of power for the ruling class. There would be no need for the State when land and estates, factories and capital belonged to the workers (Fischl, *loc cit.*, p. 65). Barzum (*loc cit.*, p. 77) too notes that Marx postulated the disappearance of the State as also does McGovern (p. 126). Nevertheless, Fischl (pp. 78-80) does not underestimate the hope, the optimism Marx generated among the workers. Fischl (pp. 75-76) points out too that while Haeckel and Weisman thought Darwinism was opposed to Socialism, Marx and Engels interpreted Darwinism differently. In the struggle for existence all the citizens should have the same basic opportunities. Sons of workers and farmers should not be discriminated against; ability should decide, not social position of the parents. (Sons of workers and farmers have always had the same basic opportunities as other citizens in this country.)

Das Kapital (1867) might otherwise have remained a valuable social commentary (Wolfe, 1958) had not David Friedrich Strauss in Der Alte und Neue Glaube (1872) used Darwinism and an atheistic Materialism to support laissez-faire. Both Fischl (1953, pp. 12-16) and Lange (III, pp. 326-337) concur that in this work Strauss asked 4 questions: Are we still Christians? Have we still a religion? What is our conception of the universe? What is our rule of life? To the first he answered no, to the second yes; accepted a mechanical view of the universe, a world formed according to the nebular hypothesis of Kant-Laplace theory including the mechanical evolution of life, including man. As for a rule of life, Strauss pointed to historical studies, national poets and musicians for inspiration. The Bible was just Jewish history.

According to Strauss, it was better for German children to read German history. Although Huxley begins Vol. V of his Selected Works with a quotation (in English) from Strauss' Old and New Faith, Huxley himself states specifically (Vol. V, p. 383) that he is not a follower of Strauss.

Strauss especially seems to have angered Lange for several reasons: First, he presumed he spoke for all the "universal class--scholars as well as civil servants, military men, business men and landed gentry. Secondly, while claiming that Materialism and Idealism pass into one another, Strauss saw philosophy leading only to Materialism. Thirdly, Strauss was anti-Socialist.

However, on the question of excluding a Creator from the Universe, it does not begin with Darwin. Nor does he endorse the idea. In the Descent of Man (1871, p. 65) he writes:

The question [whether man was primitively endowed with belief in God] is of course wholly distinct from that higher one, whether there exists a Creator and Ruler of the universe; and this has been answered in the affirmative by the highest intellects that have ever lived.

Darwin even stated in the sixth and final edition of the Origin of Species (1872, p. 443) that his views on organic evolution were not opposed to religion. Dampier (1971) makes it clear that British science was never atheistic and points to the Continent where Fischl is certainly among those who confirm Dampier.

Strauss was labeled the "father of the new Materialism." However, Fischl (loc cit, p. 12) says that the outline of a materialistic world view was already present in the studies of Schopenhauer, F. A. Lange's work and in natural science.

If our survey of philosophy of history has been somewhat extensive, it serves to point out that science, philosophy, political theory and religion had all become ensnared in "history" or "evolution." It should speed the understanding of how Lange applied his theory of organic evolution to the larger question of mankind evolving, or his own conception of how science, philosophy, political theory and atheism charted a new course for man's further evolution.

Mankind evolving: In formulating his own theory of mankind evolving, Lange's biology, psychology, physiology, ethics and economics are augmented by German Idealist philosophy and the arguments of 18th century French communists and socialists Morelly, Mably & Linguet, especially as summarized in Rousseau's writings. Lange also argued that the Marxist proletarian materialistic revolution becomes progress to the ideal of communism (socialism; Bloch, 1972, p. 300). His affect on science and on world history has been tremendous, even if heretofore unsuspected in the English speaking world

that man only raised himself up from an animal pre-existence
by internal development and so first became man was treated
by Kant as obvious.

III, 86

Lange "establishes" when modern man emerged by noting that primitive European races (determined by fossil evidence) appeared to have been as advanced as "the most uncultured savages of our time" (p. 98).

He then endorses the idea that there are superior and inferior races and individuals, to lag behind in development for thousands of years might in itself be a sign of inferiority (p. 107).

Reviewing the state of knowledge on the brain, psychology and the senses, he argues that the same mechanism which produces sensation also produces one's idea of matter. The struggle between body and mind ends in favor of mind.

Lange (p. 204) has thus reversed Marx who wrote in the preface to the second edition of Das Kapital:

In my view, on the other hand, the ideal is nothing other than the material when it has been transposed and translated inside the human head.

Marx, 1873, p. lix

Though asserting that he objected to Hegelian philosophy, Lange proceeds to argue, like Hegel, that when the "struggle between Body and Mind ends in favor of Mind, the true unity of all existence" is guaranteed, but then he continues that since we don't know what Mind is, we must accept a transcendental order of things (pp. 223, 228, 230). Thus Lange preserves the non-uniqueness of the individual, but wriggles free of the Hegelian glorification of the State-as-is.

Lange's homogeneous population at the level of organic evolution has become the homogeneous group. Denial of individuality at the group level does not seem to hinder recognition of heterogeneity between groups, or in man's social existence to disturb the relation between the rulers and the ruled. Neither Fichte nor Hegel nor Lange were arguing for equality. They were attempting to (1) argue against the uniqueness of the individual; (2) emphasize that man is an animal which thinks and therefore mind is more important than body, i.e. idea over matter or idealism over materialism; (3) intone subservience to higher authority. Rousseau's concept of a "general will which is always right" had been transmuted into Fichte's Universal Self (Ego) and Hegel's World Spirit. All 3--Rousseau, Fichte and Hegel--then used philosophical concepts to launch into sociopolitical doctrine. By arguing that we don't know what Mind is and so must accept a transcendental order of things, Lange stays within German Idealism but moves forward--or back.

When he turns to political economy (economics), he asserts that

Political economy has so far made little effort to
reduce the distribution of wealth to correct principles. III, 241

Lange equates Materialism, Egoism and individualism and says that Egoism comes from the body, the "central point of the phenomenal world" (p. 245). But if our fellow men are parts of our own being, then moral development can come through contemplation of the world of man and occupation with its problems. Thus materialism = greed = the Fichtean not-self. The "sense of community" (p. 241, 260) = communism (p. 253) = the Fichtean Self. Every advance in civilization which has produced art and science at its maturity has also resulted from the curbing of Egoism and the development of human sympathy (p. 246).

Picking up Hegel again, Lange claims that "there is a natural moral progress" (p. 246), moral ideals progress according to which man shapes the world about him (p. 247); a similar dissolution of moral ideals and preparation for a new and higher standpoint seems at present to be going on (p. 248)

This argument of moral collapse as preparation for a new higher order is proclaimed repeatedly (pp. 261, 269, 334, 354, 361). It is also linked with other arguments that the miseries of the current times have been brought about through law, property and inheritance (p. 263; see also Durant, 1967, pp. 28-30), and that the current of progress lies in developing a sense of community (pp. 241, 260). To the question, What is Right? Communism is the higher right (p. 264). Obviously, Marx picked the wrong philosophical basis!

Nevertheless, Lange agrees with Marx on revolution--here:

Nay we may even conjecture that a five or six-fold repetition of great and bloody social revolutions, even at intervals spanning centuries would at last check the pleonexia [greed]

of the rich and mighty by fear more effectively than it would be done by devotion to common interests and by the principle of love.

III, 252

Lange is convinced that the success of small communes (which have cropped up and disappeared throughout history) can be translated into nations permanently, although he recognizes that there is a tendency for homogeneous groups to become heterogeneous with time. He does not say how to prevent such heterogeneity from arising in the future.

Having linked organic evolution with mankind evolving to the communist state, Lange then turned his attention to ethics and religion. He concluded that everything that is ethically verified is equally justified and that reason can be substituted for religion:

Kant's minimum of God, Freedom and Immortality can be dispensed with.

III, 283

Lange carried on the 19th century German intellectual tradition of atheism and advocated using science to overcome the superstition of religion, beginning in the schools. His views are thus in direct contradiction to Huxley's, and can probably be interpreted as an attack on Huxley--as we shall show. Lange actively involved the State in using science to destroy religion:

When the state at last determines to introduce instruction in natural science into all primary schools, a great and beneficial advance will have been attained.

III, 298

...an effort will be made to employ the State and the School in order gradually to withdraw the ground from under religion in the life of the people and systematically to prepare the way for its disappearance

III, 344

There must be maintained...unconditional freedom of teaching for strict science as well as for its popularization.

III, 357

When scientists have argued that science was not opposed to religion or organic evolutionists that evolution was not atheistic, they have done so without knowledge of developments in 19th century Germany. Hegel made God synonymous with the State. Beginning with the Young Germany movement and spreading to the Neohegelians, atheism gained ground and moved into the sciences in 1850. Locke and Hume had made it unnecessary for later English philosophers and scientists to indulge in the same metaphysical speculations that wracked the German groups.

We may certainly raise the question, How objective is a science whose primary purpose is to destroy religion? Yet isn't this precisely the argument used by Hedger (1933b, pp. 299-302) that the history of science from Copernicus to Darwin had been an attack on religion? Isn't this same lack of objectivity reflected in Eby's 1933 treatment of education? The demand for academic freedom is coupled with the protest that culture must be "redefined and reconciled with present-day life."

Lange was concerned about the vacuum the removal of religion might create and recognized that myth could be substituted instead. Fischl (1953, p. 237) confirms that Nietzsche was strongly influenced by Lange's philosophy. Lange devised his own myth, adapted from Fichte:

The mighty Fichte announced the dawn of a new historical epoch by the outpouring of the Holy Spirit upon all flesh.
The Spirit, of which it is prophesied in the New Testament
...is no other than the Spirit of Science, which has revealed

itself in our days. It teaches us...the absolute unity of human existence with the divine...the kingdom is the kingdom of liberty, which is won by the absorption of our own will into the will of God....All doctrines of the resurrection of the dead in the physical sense are only misunderstandings of the doctrine of the kingdom of heaven which is in truth the principle of a new constitution of the world. Fichte was entirely in earnest with his requirement of a transformation of the human race by the principle of humanity itself.

III, 349

Thus, in place of Fichte's Universal Self and Hegel's World Spirit Lange offers the Spirit of Science. Note, he has made German Idealism atheistic. Although he has claimed Fichte was an atheist (p. 351), McGovern does not agree (p. 126).

Earlier Lange had mentioned that a humanistic cult had been founded. It was devoted to promoting festivals to honor the lives of great men, to establishing important cultural centers and international congresses for the advancement of the sciences and the arts. This he felt was a healthy beginning for the age of humanity since it contained no germ of religion (III, p. 300).

Yet Lange's Spirit of Science, unity and new world constitution are no recipe for the glorification of humanity. It translates as the enslavement of humanity. Words like unity, liberty, God acquire different meanings in German Idealism and his formula is probably best translated as: the nothing individual exists solely to serve the State which owns all and controls all scientifically. Plato has been revived!!

Lange maintains a lofty attitude however. Criticizing both the Socialists' Materialism and revolution and Strauss' Materialism and laissez-faire (pp. 328-333) he maintains:

Ideas and sacrifices may yet save our civilization and transform the path that leads through desolating revolution into a path of beneficent reforms.

III, 344

Materialism is the lowest form of philosophy (pp. 324, 335) for it always keeps to reality (p. 335). Genuine Idealism sets up beside the phenomenal world an ideal world; in the natural sciences, Materialist and Idealist follow the exact same methods, but what to the Materialist is definitive truths, the Idealist knows to be only appearance (p. 324).

Man needs to supplement reality by an ideal world of his own creation (p. 342). If the New is to come about and the Old to disappear, then there must be both a world-kindling ethical idea and a social influence powerful enough to lift the depressed masses (p. 355). He continues:

Let knowledge be spread, let truth be proclaimed in every street and in every tongue, let come of it what may, but let the battle for emancipation, deliberate and mortal battle, be directed against the points where the menacing of liberty, the hindering of truth and justice have their roots--against the secular and civil institutions by which ecclesiastical societies secure a corrupting influence and against a perfidious hierarchy that systematically undermines the freedom of the peoples. If these institutions are removed...then the extremists opinions may move side by side without fanatical encroachments

III, 356

Lange then assures, as in Fichte's final system of government, that the masses will have no way to rebel against the "scholars." He does this by advocating destruction of the Church. For the following lofty reasons:

Every ecclesiastical organization of a community of believers is already a state within a state, and may at any moment encroach upon the secular province. There may be circumstances in the conditions of civilization by which such a power may be justified, and may, in fact, be destined to shatter a rotten and outlived form of government

III, 357

However, more and more the State is having to assume functions formerly left to the Church. So in the new age when the individual man will surrender his own will to the "will that guides the whole" (p. 360), the political Church is a threat.

we must guard against...losing ourselves in the labyrinth of a so-called separation of Church and State.

III, 357

Only with the dissolution of the political Church is an unconditional freedom of creed possible.

III, 357

Lange clearly views the religious revolution and the social revolution as linked (p. 359). This is also what emerges in the 1933 text, Introduction to Western Civilization and was obviously part of H. J. Muller's thinking too in the 1930s when he advocated human selection programs in Russia in a State beyond middle class morality (see Carlson, 1967).

At the conclusion of his book, Lange returns to the feeling of revolution in the air and that mere Materialism will not be a sufficient basis for the new era:

Often already has an epoch of Materialism been but the stillness before the storm....Whether this battle remains a bloodless conflict of minds, or whether...it throws down the ruins of a past epoch...and buries millions beneath the wreck, certain it is that the new epoch will not conquer unless it be under the banner of a great idea, which sweeps away egoism and sets human perfection in human fellowship as a new aim in place of restless toil which looks only to personal gain.

III, 361

Having already decried patriotism (p. 218), Lange's History of Materialism seems to share many ideas in common with the college text Introduction to Western Civilization: a non-Darwinist view of organic evolution, human history follows the Hegelian formula of progress through social dissolution and chaos; Marx sounded the new era of revolt; there exists the likelihood that evolution may avoid revolution by using the State to transform itself. Through the schools, science and education are to destroy religion; all existing values are under attack. Materialism is the creed of the day; "greed" has brought ruin. The new Socialist era preaches the ideal world, the brotherhood of man, the sense of community. 1875? 191?, 1933??, 196?.

SOME PHILOSOPHICAL PROPONENTS AND OPPONENTS

That Lange gave us "classical evolutionary theory" in 1875 and used it to argue for man's evolution to the communist society founded on Idealism is now established. What happened after that? Lange died in 1875, yet obviously he was attacking the Marxists. He was also attacking Thomas Huxley, perhaps more so than he was attacking Darwin. Thus a number of questions arise. What about later Neokantianism? How did the Marxists react? What about Huxley? The questions will be treated briefly, because a lot of the information, except that pertaining to Huxley, is still in German. Virtually all the historical details, 1875 to date will probably have to be reexplored.

A. Proponents or presumed proponents

German Neokantian philosophy: Fischl (1954, p. 7) understates the situation when he says that there was no true revival of Kant, least of all in the field of philosophy. Nor was every revisionist who uttered "zuruck zu Kant" a Neokantian.

Lange's writings joined those of Materialists Vögt, Büchner and other radicals in the rhetoric of the then German Marxist Party (Fothergill, 1953, p. 121) during the political unrest of the 1870s. Dampier (1971, p. 309) tells us that in Germany the radical left argued that the aristocracy had been freed from the effects of natural selection and had become degenerate. The left as well as the right had their eugenics theories, though only the right has been damned for Social Darwinism.

Lange's use of the Kantian law of development in the development of his theory via abstract reasoning provides ample justification for Cohen's labeling him a Neokantian. Fischl (1954, pp. 7-21) divides later Neokantian philosophy into 3 branches: logical Neokantianism having a mathematical emphasis and originating with Hermann Cohen, founder of the Marburg school. He succeeded Lange and lectured there from 1873 to 1914; value theory Neokantianism associated with the Baden school and having a psychological emphasis; metaphysical Neokantianism having a physiological emphasis and originating with Hermann von Helmholtz, from whom Lange learned science. All branches extended into the 20th century though all exponents of each school may or may not have remained socialists and communists in ideology, as was Cohen.

Cohen republished Lange's Geschichte des Materialismus, 2nd edition, revised enlarged in 1898 and agreed with him that technically correct Socialism was founded on the unright of Materialism (Bloch, 1972, p. 303). Cohen attempted to reduce jurisprudence to a mathematics of ethics or to a single scientific principle (Bloch, *ibid*, p. 105).

Russian Neokantians: Russian Neokantians sought to bring about Marxism via legal reforms and published in czarist journals. Contrary to the German Neokantian philosophical groups, the Russians retained a religious emphasis. The Bolsheviks referred to them as "legal Marxists" (Fischl, 1953, p. 82). The label became attached, because Shapiro (1962) refers to the turn-of-the-century legal Marxists without recognizing them to be Neokantians.

Thus Lange had definitely created a turning point. He had opened the door to the State transforming itself into the Ideal Communist State under the guidance of the intellectuals. This seems to have veered in 2 directions: (1) artificial equality as in Cohen's unisexuality (Bloch, *loc cit.*, pp. 105, 301-302), (2) artificial human selection as in Plato's Ideal State. Both are directed toward family breakdown and are two sides of the same philosophical coin. Plato held that total democracy (as would be achieved via a system of artificial equality) results in anarchy, which then gives way to some form of dictatorship (see Durant, 1939, p. 520). Dictatorship is required to impose human artificial breeding. The best example is Hitler's Nazi Germany though this could hardly have been what Lange had in mind when he authored Vol. II of the revised Geschichte des Materialismus. Huxley (1894, pp. 21-22) did foresee it. Furthermore during the time of unrest in Germany in 1878, Huxley reminded the English that Hume had argued for moderation in demands made on government because of the theory that complete democracy ultimately produces dictatorship (Huxley, 1878, p. 23).

The Columbia connections: Bloch (1972, p. 86) tells us that a lot of psychology was idealistic, *a priori* (theory without fact) and Neokantian. Although Fischl (1953, pp. 350-362) classifies John Dewey as an American positivist, he says Dewey is hard to place since he was first a conservative but later a progressive. Fischl both emphasizes and criticizes Dewey's relativity, his definition that

what is good is any means which serves to achieve the purpose. Dewey felt that natural science had outstripped the spirit of science [Geisteswissenschaften, p. 355], and that a new ethic was needed for a technical age. Dewey preached freedom; the philosophy of action required freedom (p. 354). He believed in the collective society, democracy and the coming of the international State or World State (pp. 355-356). Dewey first taught at Michigan, then Chicago, then moved to Columbia University in 1905. He died in 1952. One suspects permissiveness in American education enters by way of Dewey.

Alfred Adler took his medical degree in Vienna in 1894, taught at Columbia University and was invited to come to the Pedagogical Institute in Vienna in 1925 because of his "advanced Socialist theories." His individual psychology for curing mankind's neuroses fits the pattern of a priori ideas which require freedom from restraint. Since parents made children feel inferior, children were to be brought up by society and to be equal to their teachers; sexual experimentation was to be encouraged. Men and women were to have equal rights, and private property was to be abolished in order to remove the distinction between rich and poor which causes the poor to develop inferiority complexes (Fischl, 1953, pp. 227-232). Adler makes use of the following postulates: all acts lead to life's aims; there are no bad traits in children; all are equal. Adler's theories, similar to Cohen's, preach an artificial equality among the members of society. Morison (1965, p. 907) comments that moral laxness set in in the United States 7 years before World War I; he also decries (p. 907) how scientific doctrines become distorted before they reach the masses without himself knowing how a godless sex-oriented society "evolves" from Newtonian and Darwinian theories of the universe and of evolution--or why. Since Ames (1933b) advocated that new knowledge about inhibitions be incorporated into education, one suspects he had something like Adler's individual psychology in mind. Fischl (loc cit., p. 231) criticizes Adler's contrived "equality" as well as the unwarranted generalizations Adler (and Freud and others) made about sex.

Barzum (1947) has already been mentioned as having credited Darwin with linking the law of development to the theory of evolution by natural selection and of having stated that German philosophy was evolutionary oriented though he did not elaborate on the subject. Barzum was educated at Columbia and his book, Darwin, Marx, Wagner may have presented ideas current there about which later findings cast doubt. For instance, he also describes Lange's History of Materialism, 2nd edition, enlarged, revised as a "sympathetic but uncompromising critique of both materialism and idealism by a man trained both in science and philosophy" (Barzum, ibid., p. 114) and provides us with a Thomas Henry Huxley (pp. 67-74, 96-97, 110-115) that no way resembles the Thomas Henry Huxley of Bibby's biographies. Since Barzum was an educator at Columbia, he helped maintain the attack on Huxley within the American (Northern) educational world, an attack which was evident in Introduction to Western Civilization (1933). Perhaps unknowingly, for one of Huxley's greatest contributions to the English-speaking world was in the field of education, from elementary level to University and professional training. This also includes the education of women.

Barzum (p. 54), in a slightly different way, continues to enunciate the evolutionary view of the State which Gardner (1933a) said had replaced previous theories. The remark that the Revolution taught French thinkers to question arbitrary political innovations (p. 54) seems to be a criticism of the U. S. Constitution as Corning (1974) and Stetten (1975) were to do in more recent years.

Barzum (loc cit., p. 56) does correctly assert that Darwin's natural selection freed evolution from "metaphysical perfecting tendencies" which dominated German evolutionary philosophy and called attention to the fact that the History of Materialism needs a new translation (p. 115). He also describes the decadence

of Europe at the turn of the century: increasing homosexuality in Germany, perversion in the literature and art of every country, corruption in politics. Lange's recipe of evolution via social dissolution re-enacted.

3. Opponents

Marx, Engels, Lenin, Stalin: Precisely what Lange hoped to accomplish among Marxists is not known. From letters quoted by Zirkle (1959) we know that Engels and Lange corresponded but that Marx and Lange did not get along. Marx seems to have published no major work comparable to Das Kapital (1867) after that date although he did leave Vol. II of this work in fairly finished condition. Engels had Vols. II and III published in 1885 and 1894 respectively (Cole, 1957, xiii). Engels referred to Marx's materialism as "historical materialism" and after Lange's Vol. II of the revised Geschichte des Materialismus appeared in 1875, he developed dialectical materialism and bound it to modern science (Fischl, 1953, p. 66). Works Engels authored exclusively appear also after 1875 (Fischl, ibid. p. 55).

Lenin at the turn of the century had to battle against both Russian Neo-kantians and the "Auflösung der Materie," enhanced now by the breakdown of the solid atom in physics. "Auflösung der Materie" translates literally as the breakdown of materialism. Fischl (ibid., p. 87) tells us that in philosophy it means Materialism is to be superseded by Idealism. In his chapter titled, "Bürgerliche Auflösungen der mechanischen Materie," Bloch (1972, pp. 296-303) discusses both Mach and F. A. Lange. Against the various philosophies that materialism must give way to idealism, Lenin wrote Materialismus und Empirio-kritizismus, 1909 (Fischl, 1953, p. 87; Bloch, 1972, p. 308).

Whether Engels or Lenin sanctioned family breakdown is not discussed by Bloch or Fischl. Apparently Engels did view marriage as "legalized prostitution" and became an apostle of "free love" with all children to be born out of wedlock and turned over to state institutions for care and upbringing (Meyer, personal communication). However, this is Rousseau's own lifestyle (Durant, 1967, pp. 18, 24, 187-188) and not an endorsement of proposals that the State exercise control over such unions or select in future generations those who will and those who won't produce progeny. Neither is it an endorsement of legalized unisexuality as Cohen sought to achieve (Bloch, 1972, pp. 105, 301-302). Nor does it approach Adler's total sexual permissiveness.

Fischl (1953, pp. 116-117) does point out that Lenin held that so long as the Bourgeoisie was not completely destroyed, then in matters of morals and morality, "good" and "bad" ought to be associated with "proletariat" and "bourgeoisie." The teaching of philosophical Idealism was banned in Russian universities in 1922 (Fischl, ibid., p. 90) although Cohen had apparently attempted to plead that the two communist ideologies were not in conflict (Bloch, 1972, p. 303).

Stalin ultimately seized power after Lenin's death and he too had to cope with a resurgence of communist Idealism, notably in the proposal to institute human breeding especially aiming at the development of superior humans. However, Stalin's definition of equality under communism is not that of Adler's in the 20s and 30s, whose doctrines had spread into Germany. Adler's "equality" is ultimately derivable from Rousseau's artificial equality as is Cohen's unisexuality.

Bloch (1972, p. 438) states the problem succinctly when he writes that in the West Idealism is looked upon as good and Materialism as bad and in the East it is vice versa. Bloch, of course, had the advantage of knowing what Lange and later Neokantians as Cohen did to Idealism in constructing a theory of mankind evolving in competition with Marx's own theory of history. Yet most of us in the United States would say that our own Idealism still has to be founded on Lockean philosophy as expressed by Thomas Jefferson, by George Mason (as

the author of the Virginia Declaration of Rights which became the Bill of Rights) and by James Madison as father of the Constitution. Yet this is the philosophy declared obsolete in 1933 and under attack again in the 1970s.

William Jennings Bryan and his era; Initially I was not going to include consideration of Bryan. However he and his time emerge as important for many reasons, of which two will be explored here. These may help to explain or at least account for the perpetual attack upon him within the "enlightened academic community."

In his acceptance speech as the Democratic Party's Presidential candidate in 1896, he states:

The Democratic Party is pledged to defend the Constitution and enforce the laws of the United States and it is also pledged to respect and preserve the dual scheme of government instituted by the founders of the Republic...Our revolutionary fathers, fearing tendencies toward centralization as well as danger of disintegration, guarded against both.

Bryan, 1896, p. 410

Control of education was one of the areas not delegated to the central government but reserved to the states. Bryan, in effect, represented Tennessee's right to exclude evolution from the schools. In the trial he demonstrated that evolution was used in many ways in biology, which created confusion (The Scopes Trial, p. 538). In 1933 we have seen that evolution was being used also to evolve the all powerful central government, and to argue for control of and changes in education.

Recalling Eby's (1933a,b) claims that education represents an attitude of mind not subject matter, and is a social process directed toward socially accepted goals, Dr. Fred Davison's 1977 appraisal of what is happening nationally at the university and college level due to federal intervention is chilling:

The government and particularly the regulation writers with their egalitarian zeal have undermined the ability of many colleges and universities to fulfill their educational responsibilities.

Davison, 1977, p. 52

Dr. Davison is President of the University of Georgia. He calls attention to the fact that a spokesman for the American Council on Education, testifying before a Congressional Committee on Education back in 1958, advised that the control of education be left to the states, as it always had been. However, as Davison says, the admonition fell on deaf ears as the history of the 1960s and 1970s shows.

Geneticists of course recognize that the Darwin Centennial provided Muller (1959) with the opportunity to push for biology texts in grade and high school having an evolutionary emphasis, and called for the government to fund the production of such texts in the face of "antiquainted religion" using arguments analogous to Lange's.

At the trial also, Bryan called attention to the fact that the use of Bible reading in the schools to teach morality was being attacked. He pointed out that in New York evolution was in and Bible reading was out of the public schools, and lawyers were then fighting release time for pupils to attend a church instead (The Scopes Trial, pp. 538-539). Bryan did not elaborate further. Nor have subsequent evolutionists mentioned it, although it was confirmed by the state of New York who however could not say who instituted the original suit (see Band, 1974).

Now the mid-1920s were still a time of prosperity, yet the sexual revolution in the North had already gotten underway about 1910. Morison confirms

Barzum that it seems to have been part of a phenomenon of the Western world and to have affected some countries earlier than others (Morison, 1965, p. 908). In the North Morison ascribes it to a decline in religion owing to "Darwinism" (though Catholics were largely unaffected by the negative impact "Darwinism" had on other groups) and to a rise in a pseudoscientific version of psychology; others attributed the sexual revolution to a reaction to prolonged Puritanism (Morison, 1965, pp. 904-909).

Considering past 19th century history in America, it seems man's memory is indeed short. For 25 years before the start of the Civil War, Northern Abolitionists, journalists, writers, etc. had accused Southerners of being immoral, their civilization decadent, encouraged slave insurrections and labeled the Constitution a pact with Hell though the North had joined with the far South to prolong the importation of slaves (Mumford, 1915, pp. 29-32, 221-222). Disguised as intellectual liberalism, we find the North swallowing the bait, happily preparing to become a new Corinth, while berating the South for "Fundamentalism." Marx mistook the American Civil War as an omen for the revolutionary process in Europe (Marx, 1867, p. 1 [50]) but nothing happened except the German unification effected by Bismark and the further rise of nationalism. Is it possible that Lange realized that the continuous preaching of decadence and greediness might on the one hand be a better technique to incite revolutionary violence and on the other hand possibly enable scholars to prepare to effect remedies without revolution? If one wishes to have evolution via social dissolution, one has to create a climate of social dissolution.

A second fact forgotten was the visit of Thomas Huxley and his wife to Tennessee in 1876 to visit his sister. Bibby (1959, p. 236) tells us that

The good townfolk were not content until Huxley had given them a lecture, 'The Testimony of the Rocks', which with typical thoroughness he based on the local geology of Tennessee.

After visiting also at Vanderbilt University, the Huxleys then went to Baltimore where Huxley gave the principal address at the opening of Johns Hopkins University. Thomas Huxley was a firm advocate of Bible reading in the schools both as literature and to teach morality. He was offered a position at Harvard, but declined. Nevertheless, through his involvement with education, elementary through university levels (Bibby, 1971) Huxley exerted an enormous influence on the English speaking world. This seems to have lasted considerably longer in the South than in the North, for it would seem that by the 1900s what was called "Darwinism" in the North in reality was not.

Thomas Henry Huxley: Before turning to Huxley we should at least briefly mention Charles Darwin. As stated earlier it is still not known if Darwin found out about what Lange had done to the theory of evolution by natural selection, even after the 1881 translation of that particular section of the Geschichte des Materialismus 2nd edition revised appeared. There was probably not much he could have done anyway. He had not tried to tie evolution to atheism. Dam-pier (1971, p. 317) tells us that Darwin was very reticent about the philosophic import of his work. Too, in the final version of the Origin of Species he had argued at length against the applicability of both the law of development and evolution by sudden change to the theory of evolution by natural selection. Coadaptation is the consequence of a slowly acting natural selection upon the available variation. Darwin's argument for coadaptation was used to refute the applicability of both the law of development and evolution by sudden change (Darwin, 1872, p. 227). Thus in constructing his "balance theory of gene pool organization, Dobzhansky borrowed the term "coadapted" from Darwin. Dobzhansky was talking about selection building up harmonious combinations of genes;

Darwin spoke of harmonious combinations of parts (*ibid.*, p. 203) or harmonious combinations of organisms in relation to their environment or to each other (p. 109)

Turning to Huxley we find the true genius of the 19th century biological, philosophical and educational world. In his brief biographical sketch of his father, Leonard Huxley (1920, p. 8) tells us that Thomas Henry Huxley read German almost as fast as he read English, that he learned it as a youth in order to read both German literature and philosophy and that it was to have "undreamed of consequences in his future." Apart from his initial suggestion that the Geschichte des Materialismus be translated into English in 1870 and his comment that it had been when his essay on Descartes was reprinted in Methods and Results in 1894, Huxley makes no mention of Lange seemingly. We are not even told that the edition referred to in 1870 was the first or 1866 edition, but the edition translated was the much enlarged 2-volume edition appearing in 1873 and 1875.

If one reads Huxley's Lay Sermons, Addresses and Reviews in which the essay on Descartes appeared, and then reads Lange's revised History of Materialism Vol. III, one is inclined to think that Lange may have taken some of Huxley's arguments and employed them in a different way in an attempt to lure Huxley into the communist fold. However, Bibby's several excellent biographies, his collation of so much material makes that view untenable. Granted that Huxley read French, German, English and philosophy written in Latin between midnight and 2 a.m. during the years 1854-1860 (L. Huxley, 1920, pp. 24-26) he would have been well aware of the turn of events Materialism had taken in German philosophy and science by that date. However materialism as a modern philosophy begins in England with Hobbes (authoritarian) and Locke (limited government; father of Anglo-American democracy) and was not atheistic. In one of his early essays Huxley (1868) commented that he doubted if the average English schoolboy knew that England had had its own bloodless revolution in 1688. The account of Hobbes and Locke and how English nonatheistic materialism became atheistic on the Continent would certainly have merited the translation of the History of Materialism into English.

However, we have already noted that Lange used Huxley's speculation on molecular inheritance and evolution by jumps in formulating his own theory of organic evolution. Just as he took the law of development which Darwin said did not apply to organic evolution, so Lange took topics from Huxley--science, education, and a knowledge of political philosophy--to destroy the very things Huxley prized most: truth and objectivity in science, a stable society in which education aids advancement, a moral society, education as the preservation of knowledge of Western Civilization as well as for living in a scientific age.

Huxley was among the earliest scientists and educators to champion the education of women

The mind of the average girl is less different from that of the average boy, than the mind of one boy is from that of another.

Huxley, 1865, p. 72

Bibby (1971, pp. 34-35) reviews Huxley's efforts on behalf of the education of women.

On race and inequality, in 1867 at a Birmingham lecture he had pointed out that the English would have seemed as uncivilized to the Romans of 2000 years ago as the 19th century primitive tribes did to the English (Bibby, 1959, pp. 92-93). Thus, primitive does not also mean inferior.

The theme of Huxley's "On the Physical Basis of Life" (1869) was the essential unity of plant and animal life, and it was greeted as gross Materialism (see Bibby, 1959, p. 92). In 1870, however, he pointed out that beginning with Descartes, one philosophical path leads to Materialism and the other to Idealism.

In 1871 he affirmed that there was no escape from Locke's conclusion that we have no real knowledge of either the "substance of matter" or the "substance of mind" (see Bibby, 1972, pp. 107-108). Yet by the time Lange postulated his own "unity of all existence" he had subsumed a good deal of bad science into worse philosophy, preserving racial and individual inequality and other arguments typical of German Idealism. Those who might like to think he revived Spinoza (see Durant, 1963, pp. 633-643) should keep in mind how much he relied upon Fichte and Hegel in constructing his whole philosophy.

In fact, Huxley's two essays, "On Descartes' discourse" (1870b) and "Bishop Berkeley on the metaphysics of sensation" (1871b) may have inspired Lange to do his worst. In the first, Huxley professes materialism only so far as it affords a rational framework for the conduct of science. In the same essay Huxley (1870b, p. 176) referred to the "self" and "not-self" as hypothetical but useful assumptions and (*ibid.*, p. 193) stated that the only freedom he cared about was the "freedom to do right." Both are from Fichte. In the 1871 essay on Berkeley, Huxley attacked Leibnitz for attacking Newton and Locke (Huxley, 1871b, p. 250), asks the question Why materialism should be any more inconsistent with the existence of a Diety or the immortality of the soul than Idealism (*ibid.*, p. 251), points out that Berkeley discovered that the "vigorous following up of the argument which leads us to Materialism inevitably carries us beyond it" (*ibid.*, p. 252). It is in this essay too that Huxley confesses that had he to choose between absolute materialism and absolute idealism he would accept the latter (*ibid.*, p. 281) but that Locke makes it unnecessary and Huxley feels that Philosophy will eventually have to accept Locke's conclusion. Lange's entire arguments were directed to the contrary, with materialism not only giving way to idealism but to an atheistic communist idealism in which science in the schools is used to attack religion. Huxley (1870b, p. 195) had said that science and philosophy were neither Christian nor Unchristian but Extrachristian and have a world of their own, which is secular.

Huxley's early days as a medical student had acquainted him with the appalling living conditions and pitiful wages of London's workers. Thus he viewed education as a means to improve the lives of the workers and to promote social mobility. Karl Marx had envisioned the triumph of the workers only after the world-wide collapse of the capitalist system and the complete degradation of the workers (see Marx, *Das Kapital*, last chapter). However, the function of government is to promote peace and education promotes a peaceful way to self-improvement and social mobility. Huxley (1870a and later) championed the role of education in providing an escape from dehumanizing poverty. In arguing for government support of education he endorsed Locke's statement that "the end of government is the good of mankind" as the finest statement ever written on government, and pointed out that the answer to the question, "but what is best for mankind?" probably has no set answer but changes as conditions change (Huxley, 1871a, pp. 278-279). Huxley (1874) reviewed the improvements science and technology had made in English life in the past 100 years and endorsed the social reforms that had already been instituted. Among the latter of course were the establishment of state-supported schools for children of the poor to provide an elementary education. Huxley's work as a member of the London school board set the shape of English elementary education for three-quarters of a century according to Cyril Bibby (1959, p. 162).

Darwin sometimes felt that Huxley was a less-than-enthusiastic supporter of his theory of evolution (Bibby, 1972, p. 43). Huxley himself referred to it as being able to account for progress, stability and regression (Huxley, 1864). From his own molluscan research he knew that stability still permitted considerable diversity, from his philosophical readings he knew the goal-oriented direction of German philosophy. After Vol. II of the Geschichte des Materialismus

appeared in 1875 Huxley was able to stress stability as compatible with orderly change when he wrote his analysis of David Hume's philosophical essays (Huxley, 1878). Hume argued that man established society in order to administer justice (ibid., p. 17) and that a government having an hereditary prince, a nobility without vassals and people voting by their representatives formed the best monarchy, aristocracy and democracy (ibid., p. 16). However, according to Huxley, Hume appears to have been the first to analogize between society and the individual (actually government and the individual); he put forward the idea that every government must come to an end, that death was unavoidable to the political as to the animal body and postulated that government would end in absolutism for reasons of near anarchy associated with popular democracy. This, he says, "may teach us a lesson of moderation in all our political controversies" (ibid., p. 23). Huxley pointed out however that:

A state answers not to an individual, but to a generic type,
and there is no reason, in the nature of things, why any
generic type should die out.

Huxley, 1878, p. 24

Huxley then elaborated on the improvements which had come about in English life and in government since Hume's day while still maintaining representative (Parliamentary) government. Earlier, employing Hume's justice argument, Huxley reiterated that it was the duty of the state to provide for education so that members could form just opinions (ibid., p. 19).

In this 1878 work Huxley pleads that philosophy belongs in science (ibid., p. 51), that philosophy is the answer to the question, What can I know (p. 57) and that the laboratory is the forecourt of the temple of philosophy (p. 61). He states again that Locke declared that philosophers ought not to meddle in things beyond their comprehension or engage in disputes about things of which we have no knowledge (p. 66), and that Hume adopted a similar attitude. In a veiled criticism of German science and philosophy Huxley declares, "Whether there is something in the mind...which is not mind; are questions which can nowise be settled by direct observation" (p. 75), and refers to "pure metaphysicians" having expanded on Fichte by adding a third element--the ego, the non-ego and a relation between the two (pp. 86, 133). This apparent anticipation of the Freudian ego, id and super-ego appears to have originated in Lange's Vol. III and explains a perplexing paragraph (III, p. 339) in which Lange talks about a "something else, of a power that now compels us and now is dominated by us" as a seeming link between non-ego and ego. Huxley again may be criticizing Lange when he asserts that Hume declared the Spinozan assertion of mind in everything to be the true atheism (pp. 195, 212); hence Lange's "Mind" which establishes the "unity of all existence" (III, p. 228) is no revival of Kant's ideas of the Noumenon or Ding an sich, the Kantian equivalent of the soul (Huxley, 1878, pp. 201, 210-211, 228). When Huxley compiled his essays for publication in 1893, he included in the preface to Vol. VI his caustic opinion of Platonic philosophy as "the grandest example of the unscientific use of the imagination extant" (Huxley, 1893b, pp. viii-ix). Fischl (1954, pp. 71-21) also declared that Neokantian philosophy was no revival of Kant, especially as it was incorporated into the 3 philosophical schools arising after Lange's death.

Not until the 1880s did "revived Rousseauism" or Utopian Socialism (the latter refers to the fact that both Fichte and Marx made the disappearance of the State part of their philosophical systems and even Stalin had to give an answer to when the State would disappear [Fischl, 1953, pp. 112-113]) start gaining ground in England. Unlike Lange and Rousseau, Huxley would not use education to destroy but to preserve knowledge of the rise and development of

civilization. In 1882 he reviewed what he considered essential subject matter in elementary education: science, history of England, geography, good English literature and works from other countries in translation, grammar and composition, art--especially drawing to improve observation, music and if time permits, Latin and German. In science he would also include political and social science (Huxley, 1882, pp. 183-188). To the very end he remained an advocate of Bible reading to instill morality (Huxley, 1889b, p. 268; 1892, p. 56).

Neither would he use science to destroy religion or to attack morality. As if in direct rebuttal to Lange, Huxley wrote:

every one of the speculative difficulties which beset Kant's three problems, the existence of a Deity, the freedom of the will and immortality, existed ages before anything that can be called physical [natural] science and would continue to exist if modern physical sciences were swept away....Moreover these difficulties exist just as much on the hypothesis of Idealism as on that of Materialism

Huxley, 1886, pp. 139-140

[Science] knows the safety of morality lies...in that fixed order of nature which sends social disorganization upon the track of immorality.

ibid., p. 146

Yet in 1933 Eby was not only abandoning traditional education, he was excluding lower groups from the new cultural education aimed at the elite who were then to foresee the needs of the State and guide it. And in the establishment of a non-sectarian national school system in England in the 1870s, he seems to be referring precisely to Huxley and the retention of Bible-reading for moral instruction when he states, "The extremists in the movement failed to have their way." (Eby, 1933a, p. 671). Ames (1933) actually linked moral progress to the achievement of liberal attitudes toward homosexuality, claimed that new knowledge about inhibitions ought to be incorporated into education and stated that the medical profession was corrupt. Hedger (1933b) had no difficulty pointing out that all the advances in science from Copernicus to Darwin argued for a purely mechanical universe. But his proclamation that Huxley did not think Christian values worth supporting is in gross error, as Huxley himself reveals:

Whoso calls to mind what I may venture to term the bright side of Christianity--that ideal of manhood, with its strength and its patience, its helpfulness to the extremity of self-sacrifice, its ethical purity and nobility, which apostles have pictured, in which armies of martyrs have placed their unshakable faith, and whence obscure men and women like Catherine of Sienna and John Knox, have derived the courage to rebuke popes and kings--is not likely to underrate the importance of the Christian faith as a factor of human history...

Huxley, 1889a, p. 234

That we should rejoice in the good men, forgive the bad men and pity and help all men to the best of one's ability is surely indisputable. It is the glory of Judaism and of Christianity to have proclaimed this truth, through all their aberrations...

ibid., p. 257

In Fichtean philosophy educators are justified in teaching lies (McGovern, 1941, p. 236); to Hegel and the post-Hegelians facts were made to fit theories (*ibid.*, p. 285). Dewey made "good" that which one chooses to do. Small wonder Fischl (1953, p. 360) reports that Robert Hutchins, President of the University of Chicago, in 1943 denounced Dewey and Freud who saw men only as higher animals. Hutchins advocated a return to older values of truth, goodness and beauty; the Great Books program helped reaffirm these ideals.

It is true Huxley professed agnosticism. However, the 19th century was a time when the Established Church in England had seemed to turn its back on the poor after Parson Malthus used his analysis that population growth outstripped food production to conclude that to help the unfortunates merely prolonged their sufferings. Controlling education, the Church had resisted the introduction of science and it had also resisted advances in medicine. At the same time some too readily held to predestination. Although Schliemann had used the Greek epic poems as a guide to locating the ancient city of Troy and other sites, among Bible scholars no serious attempts seem to have been taken to refute D. F. Strauss' charges of the Bible as myth or to deal with other arguments put forth by the school of historical criticism.

The Church's attitude toward much of the above did change and it even adopted a less hostile attitude toward science and evolution (see Huxley, 1887, An Episcopal Trilogy). However areas of conflict about the Bible did remain, as Huxley's essays attest. None of the disputants seemed willing to accept [St.] Paul's statement that "now we see through a glass darkly."

Because of the incorporation of both Materialism and Idealism into political philosophy in Germany, especially communist philosophy, he could not subscribe to either of them as a *Weltschaunung*. Therefore apparently Huxley seized upon agnosticism, deriving it from Hume (see Huxley, 1878, 1889a,b). This avoided the problems created by the identity of mind and soul, or mind as a thing apart from the brain (Huxley, 1878, p. 94).

Besides his efforts in education (Bibby, 1959, pp. 89-230; 1971), Huxley expanded his social crusade to other areas. He argued (Huxley, 1888b) for minimum wages decades before such laws were passed in England. He pointed out that wages ought to be high enough for workers to maintain a decent standard of living, that society becomes a powderkeg when too many are forced to live like animals. Das Kapital appeared in English in 1887. Huxley (1890c) joined others on the Continent in pointing out that capital was not antagonistic to labor. Hedger (1933b) merely ridicules all such social legislation that was enacted in the Western industrial countries and in England at that time, maintaining that the conflict is really between philosophies: individualism and socialism where the latter means "complete subordination to community interests."

Huxley especially deplored Darwinian or organic evolution being entangled in political doctrines (which of course is the overriding theme of the 1933 college text!). To Huxley the real problem confronting society was overpopulation. Whereas laissez-faire groups argued that all such struggles were for the "good of society," an argument Huxley found repulsive, Socialists ignored the problem; Socialism would bring Utopia (Huxley, 1890b, pp. 427-428). Huxley argued:

It is an error to imagine that evolution signifies a constant tendency to increased perfection.

Huxley, 1888b, p. 199

The theory of evolution encourages no millennial anticipations.

Huxley, 1893a, p. 85

Huxley deplored a priori reasoning. As applied to political philosophy it led on the one hand from Locke through the French Physiocrats to anarchistic individualism and on the other from Hobbes through Morelly, Mably and Rousseau to "revived Rousseauism" or "regimental Socialism" which proposes to use the power of the State to "wage war against natural inequalities and to set artificial equality in its place" (Huxley, 1890b, p. 393). Huxley (1890a, pp. 301-310) discusses Rousseau's definition of "artificial equality" but demonstrates that "free and equal" as used by the Roman Jurists was based on practical experience (*ibid.*, p. 311). In Germany prominent biologists August Weismann and Ernst Haeckel, who were anti-Socialists, also denounced an "artificial equality" associated with Socialism (Fischl, 1953, p. 75).

In his arguments for unisexuality, Cohen who followed Lange, can certainly be accused of attempting to revive Plato's assertion of no innate differences between the sexes. Indeed the 1933 student was reminded of this aspect of Platonic philosophy. Gardner's (1933a) evolutionary view of the State in which sovereignty is unlimited in its power over the individuals and corporations was intended by Ames (1933a,b) to be applied in a Rousseauite or regimental Socialist' sense. Davison's (1977) concerns grow out of the ever increasing governmental intrusion onto the college campus in the name of guaranteeing "equality." Yet among traditional Marxists, neither Engels nor Lenin seemed to have endorsed Cohen's unisexuality and Stalin refused to go as far as Adler and his associates in defining equality.

Lange's 19th century thesis seems no different from what Huxley ascribed to the 18th century French communists and socialists as Morelly and Mably:

that several ownership is the root of all evils in society, that the golden age [of man] would return if only the State directed production and regulated consumption and that the love of approbation [praise] affords a stimulus to industry sufficient to replace all those furnished by the love of power, of wealth and of sensual gratification.

Huxley, 1890b, p. 402

Small wonder Huxley could say that there was nothing new about the Socialist doctrines of his day, and that the real problem was, What should society do and what should it refrain from doing (*ibid.*, p. 427; 1888b, p. 228)?

In a final warning about the dangers of attempting to apply organic evolution to man's social and political problems, of linking organic evolution to "survival of the best" Huxley wrote:

Only the strong and the healthy, carefully watched with a view to the progeny best adapted to the purpose of the administrator, would be permitted to perpetuate their kind...a despotic government, whether individual or collective, is to be endowed with the preternatural intelligence and with what I am afraid, many will consider the preternatural ruthlessness, required for the purpose of carrying out the principle of improvement by selection, with the somewhat drastic thoroughness upon which the success of the method depends.

Huxley, 1894, p. 22

Huxley seems to have anticipated both Gardner (1933b) and Quinn (1933d,e) that in communist idealist theory family relations are to disappear and a scientific breeding program enacted with child care in suitable institutions. Derivable from Plato via Lange, part of the radical eugenicists' proposals of the 1930s, how similar were the proposals of Muller in Russia before Stalin threw out Mendelian genetics? In more recent times preternatural ruthlessness can also

accompany enforced relocation to achieve agricultural self-sufficiency, as in Fichte's system.

Combining Thomas Jefferson's brilliance with an overdose of Patrick Henry's pugnacity, Thomas Henry Huxley seems to have been prophetically named. From exactly the same sources of philosophy as the 18th century Virginians--ancient Greek, Roman, English and French Enlightenment (see Morpurgo, 1976, pp. 99-100, 146) plus German philosophy, Huxley updated Locke to the modern scientific and technological world.

Another of Huxley's great contributions was to save science in the English-speaking world from the atheism that boggled Germany. Quoting Edmund Burke, "We know, and what is better, we feel inwardly, that religion is the basis of civil society, and the source of all good and comfort..." Golo Mann (1972, p. 91) feels Burke did more justice to the human situation, and is closer to the truth, than Marx--or the host of philosophers and scientists of both right and left who followed later in Germany.

Of no less importance was his efforts in England to keep evolution from becoming entangled in political theory. Opting for the same non-static world as Darwin (Huxley, 1894, p. 5) and expressing a pronounced aversion to mathematical arguments dictating natural phenomena (see Bibby, 1972, p. 50) Huxley assured that organic evolution eventually became open to field and laboratory studies. Neither did man's destiny have to be that forecast by warring philosophers and philosophies. Darwin's evidence for organic evolution and Huxley's defense on the philosophical side argued against a future discovered by "a priori reasoning." That Huxley proved too much a prophet of the 20th century may be due to the 19th century tendency to leave philosophical opponents unnamed.

Who would have suspected that Lange was attacking Huxley? Would we know that Nietzsche was significantly influenced by Lange were it not for Fischl (1953, p. 237)? Or when Lenin attacks the "*ding an sich*" (*ibid.*, p. 88) do we suspect he is attacking Neokantian philosophy? Both of the latter proved to be as influential in their own countries in this century as did Thomas Huxley in England.

Viewed retrospectively, evolutionism in the North in the early 1930s, as revealed in a 1933 college text, was a renewal of the attack on Huxley, on truthfulness in science and education, on morality, on the concept of representative government, private enterprise, the family and religion. Nationalism was also attacked; internationalism a projected goal. That all have been revived today is obvious. The issues include: attacks on the Constitution (Corning, 1974; Stetten, 1975), science and atheism (Mayr, 1977a), individualism versus cooperation and a sense of community (Bevan, 1977; Mayr, 1977b) the obsolescence of nationalism and the need for a global political community (Tucker, 1977). Etzioni (1977) has declared the family an endangered species, while the rise of sexual permissiveness is fully documented in everyday life. Taylor (1977), by contrast, commenting on today's social scene, feels that futurologists failed to predict the social changes because they failed to ask the right questions.

Ironically, Woodrow Wilson (1917) himself forecast the problem:

Cunningly contrived plans of deception or aggression, carried it may be, from generation to generation, can be worked out and kept from the light only...behind the carefully guarded confidences of a narrow and privileged class.

Woodrow Wilson (1917, p. 51)

Wilson proposed the League of Nations, an idea remarkably close to Kant's own idea of society evolving to world government. Lange had himself

seemingly prophesied an eventual world society based on his views--not Marx's. Equating leadership with rich talents and intellectual energy (Lange, III, p. 337) he also probably led his disciples to believe that theirs was the superior intelligence. Thus while Wilson also stressed democratic governments based on American (Lockean) concepts (loc cit., pp. 7, 15-16) the Neokantians of Wilson's own day could continue to promote social instability.

The Neokantian philosophy brought into existence by F. A. Lange is now over a century old. Nevertheless, the American academic community has remained largely ignorant of him, his version of "Darwinism" and philosophy of history, and of those who elaborated on his ideas. Taylor's (1977) complaint that futurologists failed to predict the changes that have taken place since World War II is secondary to the real issue: we were not supposed to discover Lange's theory of history of mankind evolving, via social dissolution and chaos, to the atheistic communist world in which Idealism replaces Materialism.

Perhaps those of us in evolutionary biology who strongly opposed Muller's attempts to revive communist idealism post-1950 should be just as unalterably opposed as Thomas Huxley was to its 19th century appearance and continuing persistence. Thomas Jefferson, who was the first to propose state-funded education but failed to secure agreement, in a letter continuing to endorse such a tax, wrote to Whyte [George Wythe ? who taught both him and John Marshall law]

Preach, my dear sir, a crusade against ignorance....Let our countrymen know that the people can protect us against these evils.

Thomas Jefferson (1786)

"Defanging the [Neokantian socialist/communist idealist] wolf", to borrow and update a phrase from Jefferson, via education is the only peaceful and lasting way to go about it.

ACKNOWLEDGEMENTS

A year spent at the University of California, Davis learning starch gel electrophoretic techniques also enabled the search for the source of the teaching of science via an atheistic mechano-materialistic world view which (hopefully) would give way to Idealism. My thanks to Lucas Book Store, Berkeley for being able to locate a copy of Lange's History of Materialism. Routledge and Kegan Paul, Ltd, last publishers in 1950, have declared it public domain, thus enabling extensive quotation to establish Lange's authorship of classical evolutionary theory and its relation to the problem of mankind evolving.

Doubleday and Co. have no record of how many editions were published of Introduction to Western Civilization, but have advised that the 1933 (2nd edition) was the first to be published by their company and that the book was republished again in 1939. Given changes on the world scene between 1933 and 1939, most probably considerable changes were also made between the 2nd and 3rd editions of the text.

Dr. Alfred G. Meyer of the University of Michigan very kindly enlightened me on Engel's advocacy of free love, which did not include an endorsement of homosexuality.

Dr. Cyril Bibby, Principal of Kingston-upon-Hull College of Education, for Huxley and Dr. Paul Barrett at Michigan State University, for Darwin, do not recall any written record of one mentioning Lange to the other. However, Dr. Bibby advises that most likely Huxley did tell Darwin, but Darwin was not a controversialist and left such matters to Huxley.

Profs. Theodosius Dobzhansky and I. M. Lerner were both unaware of Lange's treatment of organic evolution and how he applied it to the problem of mankind evolving.

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Note Added: Since Virginians may now claim to have celebrated the first Thanksgiving on these shores before the Pilgrims arrived, to claim now that Jefferson was the first to propose a tax for the support of public education despite the educational system instituted in the 17th century in the Massachusetts Bay Colony may be a) foolish or b) another Virginia grab for a "sacred New England tradition."

In the Bay Colony however Church controlled everything--education, political system, even social life. Jefferson wanted an educational system not under the domination of any one doctrinaire church. His plans also called for reforms at William and Mary, and this he felt led to initial defeats (Morpurgo, 1976, p. 187).

Elected Governor of Virginia, Jefferson as a member of the Board of Visitors was able to institute some reforms and helped to create the first Chair of Law in this country, a Chair of Medicine and elevated modern languages to a separate Chair while abolishing the Chair of Divinity (ibid., pp. 187, 189). William and Mary became a university.

Contrary to claims of New England parsons and Federalist editors who denounced Jefferson later as an atheist and a Jacobin (Morison, 1965, p. 358); Jacobin = supporter of Rousseau's social contract and "civilization is evil" notions, Durant, 1975, p. 7), Morison notes that Jefferson was a Christian but no Rousseauite (loc cit., p. 359). Morpurgo (1976, p. 186) concurs on Jefferson's religious attitudes while no Virginian and no student at the College of William and Mary or Jefferson's own University of Virginia would be so absurd as to try to link Jefferson with Rousseau.

That Jefferson did not agree with Rousseau is shown by Jefferson's attitude toward private property where he successfully instituted such reforms as the right of women to inherit and dispose of property and abolition of entail and primogeniture, by his regard for the "antique virtues of sound scholarship and classical learning" in addition to the practical sciences (ibid., p. 184), and by his belief that schools should produce a literate populace.

Jefferson believed that children could learn to read, write and do arithmetic in 3 years, the extent to which he advocated total support for public education for all girls and boys. Thereafter parents who wanted their children to continue should pay, although Jefferson believed that the state should provide scholarships for the most academically talented boys, rich or poor, for the 6 years of grammar school after the elementary level; if they maintained their academic standing, he also advocated financing their education at William and Mary. Thus the association between poverty and learning disadvantaged seems to be a 20th century "straw man" as are so many other issues.

To the extent that Jefferson had already proposed public funding of elementary education, he nullified in the 18th century the "individualism = laissez-faire" arguments of Henning (1933a). Having advocated not only the public funding of elementary education for all children but also of talented students, regardless of background, all the way through college, he also refuted in 18th century Virginia the association between class structure and occupation that prevailed on the Continent. He had more than done his share to abolish the slave trade, to contain slavery and to prepare for its eventual abolition, also in the 18th century but with no success.

Since Huxley through advocacy of minimum wages and universal (male) suffrage had bent capitalism from laissez-faire, Hedger's ridicule and the bulk of the individualism versus socialism issues pervading the 1933 text appear largely straw issues, manufactured in 1875 in Germany when passions were already aroused and class hatred existed.