SOCIAL CLASS AND ARTERIOSCLEROTIC HEART DISEASE[1]

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Epidemiology is no longer concerned with only the medical factors involved in the interaction of host and environment. As now conceived, it deals with a more complex network of interrelationships, formed by the host, his natural environment, and—as an added factor—his way of life. This modern approach requires the development of a special methodology applicable to the greatest possible number of areas and circumstances.

Introduction

Considerable interest has been shown in recent decades in the study of diseases in relation to social conditions. Among the factors which have aroused this interest are the relatively new concept of "stress," the well-known problem arising directly from the interrelationships between man and society, and the substantial increase in coronary thrombosis, particularly in males and from middle-age on. Although both of these factors have been explored from many standpoints, the possibility that the former may play a significant role in the etiology of the latter has stimulated a considerable amount of research.

There appear to be no generally accepted definitions—as far as their application to epidemiological studies is concerned—of the parameters involving social factors as such. The very complexity of these factors, which often include a considerable number of interdependent subfactors, makes it difficult to apply the conventional procedures of epidemiology to them, and this becomes a serious obstacle to any attempt to draw valid conclusions.

Epidemiology has inevitably gone beyond the restricted field of medical ecology in the strictly biological sense—that is, the study of the interaction between a host and his natural environment—and entered the field of medical ecology in the wider sense, which considers the relations between the host, his natural environment, and his way of life, which is to say, with the social environment as a necessary addition. To meet the challenge posed by this wider field to the development of knowledge and research, it is necessary to take into consideration, in addition to the traditional factors of sex, age, marital status, geographic distribution, seasonal changes, etc., the parameters defined by social conditions or groups or those related to them. This makes it immediately evident that there is a need to develop a special methodology applicable to the greatest possible number of areas and circumstances.

Stevenson—successor to William Farr as chief medical statistician of the Office of the Registrar General of England and Wales—had the idea[4] of delineating the social groups on the basis of occupations. He divided the population into five social classes based on: (1) the level of

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[1]Examination of a methodology applicable to Latin America, developed as a by-product of the Inter-American Investigation of Mortality.

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[4]As cited by Morris (2), pp. 53-54.

training required by the occupation or the role it plays in production, and (2) the social prestige enjoyed by each profession. Within this context, the five original classes, which have been widely used in the national statistics of England and Wales, are:

Social class	Occupation	Examples
I	Leading professions and business	Physician Stock broker
II	Lesser professions and business	Schoolteacher Shop owner
III	Skilled workers	Office worker Construction foreman
IV	Semiskilled workers	Machine operator Farmer or fisherman
V	Unskilled workers	Messenger Construction worker

Classes I and II, together with the nonmanual workers included in Class III, can be said to constitute what are generally called the *middle classes,* while the skilled manual workers in Class III and the workers in Classes IV and V are the *working classes.*

In considering this new and somewhat generalized parameter of employment used in today's epidemiological studies, a number of precautions should be taken into account:

1) *The social classes,* to the same extent as, and in certain respects even more than, the other parameters of employment currently used in epidemiology (sex, age, place of residence, seasonal factors, etc.) constitute categories each of which includes a large number of complex factors (the so-called "umbrella" categories) which are often limited to describing in broad outline the distribution of epidemiological phenomena to provide a basis for useful hypotheses and new directions for research.

2) It is generally true that *social classes* constitute more firmly defined categories to the extent that the term is applied to more stratified social structures which are generally endowed with less occupational mobility and in which, as a consequence, a person's occupation is linked more closely and persistently to his social status. When these conditions are combined, especially in developed countries where there are numerous and well-defined occupational categories, it is possible to form social classes which are homogeneous and also allow a certain number of subdivisions. Conversely, in less stratified societies (for example, certain postwar societies), in which there is more occupational mobility and inconsistencies of status or prestige between or within groups, the differences among classes are less pronounced and there is a consequent reduction of their usefulness as parameters in relation to certain phenomena.

3) In comparing the developing countries—including the Latin American countries—with more developed nations, it would seem that they are characterized, on the one hand, by greater stratification of their social classes and, on the other, by a smaller number of occupational categories, less sharply defined categories, and probably a lesser degree of mobility among them. The three latter factors appear, however, to pose a serious obstacle to the construction of groups representing social classes as clearly defined or as numerous as those existing in other countries. Nevertheless, the possibility of identifying a number of social classes limited to three major groups and based on either of the two components cited above, namely, level of training and prestige, offers a possible means of classification, which would be roughly as follows:

a) Using the first criterion—level of training—occupations requiring primarily mental activity would be considered the first class; occupations in which manual labor predominates would be the third class; and a second or intermediate class would include groups of occupations not clearly identifiable as belonging to either of the first two. There are various precedents for this type of attempted classification, such as, for example, the studies by McDonough and others in 1963 (*3*) on the prevalence of coronary heart disease and levels of blood cholesterol found in men in the 40-74 years age group of the white population of a county in Georgia (United States). There are also the studies of Stanowski and others in 1954 (*4*) on patients with confirmed myocardial infarction or coronary insufficiency without infarction.

b) Using the second criterion of social prestige, the first class would be formed by persons enjoying high "collective prestige" by reason of their occupation, either because of the advanced technical training it requires, its influence in the economic community, or for both reasons—in other words, what is traditionally called the "upper class." The last, or "lower" class, would be that in which the attributes of the first class were lacking or only present to a very limited extent. Here again, there would be an intermediate class comprising occupations not clearly identifiable with either of the preceding groups or having some of the characteristics of each.

Objectives and Background

The principal aim of this paper is to study the relationship of a certain number of diseases or groups of diseases with social factors. An attempt will be made, by this means, to throw light on the dynamics of disease—and, indirectly, on that of health—on the basis of an aspect which up to now has been generally less used in this Hemisphere, by adding it to those factors considered classical in epidemiology, such as sex, age, place of residence, and seasonal conditions.

Using semi-processed material from the Inter-American Investigation of Mortality, an analysis was made, for 12 cities, of certain causes of mortality in adult males on the basis of social classes defined according to occupation. Although the nature and methodology of this investigation have already been described (*1*), it is considered advisable to present them here in summary form.

Studies made in the 1950's (*5*) had made it quite evident that there were wide geographic variations in mortality caused by various diseases, particularly the chronic and degenerative ones such as cardiovascular diseases. Although these differences were quite apparent and significant, it was impossible to draw conclusions from the national data serving as source material, since the methods of registration and certification of causes of death varied significantly from country to country, as did the terminology and nosological concepts of the diseases involved. Stated another way, it was not possible to determine, when faced with a particular difference, if it was real or simply an apparent difference resulting from the use of one or more of the factors mentioned above.

The basic objective of the Inter-American Investigation of Mortality was to eliminate these factors of error or reduce them to a minimum, and to construct a reliable and comparable picture of mortality in different areas. With this in view, the Pan American Health Organization, aided by institutions and individuals in various countries, undertook to carry out the study described herein, the immediate goal of which was to investigate a total of more than 40,000 deaths which had occurred over a period of two years in 12 cities (10 in Latin America, one in the United States, and one in England and Wales). For the purposes of the study some 4,000 deaths in a two-year period (1962-1964) were selected—generally through sampling methods—in each of the cities. Each death was investigated within a few days of its occurrence. The investigation was divided into two parts: a first stage (conducted by nurses, social workers, etc.) in which, in addition to confirming the personal data, an inquiry was made into the medical care received during the course of the disease leading to death, as well as the data concerning the place of residence and occupation of the deceased; and a second phase, carried out by a physician, which took account of all the information from the clinical, anatomo-pathological, or other sources regarding the disease or diseases the deceased had suffered, with a view to achieving a reliable determination of the underlying cause or causes of death. Following a review at the central level and a direct classification of the cause of death if there was a single cause of death the information on the remaining deaths (approximately half) was sent to two medical referees who, after studying all the anatomo-clinical information derived from questionnaires, made an independent determination of the underlying cause or causes of death. In doing this, the referees adhered as closely as possible to the rules established by the International Classification of Diseases and, through a weighting system, broke down the unit represented by a single death—when more than one cause was involved—and assigned the causes in fractions indicating the extent to which, in their opinion, each cause was responsible for the death.

Material

The data on which the present study was based—derived from semi-processed material yielded by the Inter-American Investigation of Mortality—consisted, for each of the 12 cities,

of the deaths distributed by causes and occupations, as well as by sex and 10-year age groups, ranging from 15-24 to 65-74 years. Moreover, since the study referred essentially to occupation groups and to social classes, the analysis was restricted to male residents of each of the cities and the parameters used were causes of death, occupation, and age.

Causes of Death

The causes of death were selected primarily in accordance with the concept of the underlying cause established by the World Health Organization and, consequently, the determination was made by applying, insofar as possible, to the data contained in the investigation of each death, the rules of classification recommended by the International Classification of Diseases.

However, owing to the weighting system that was used–according to which it was possible to attribute as many as four different causes to a single death–the causes are not distributed on a unit system (one cause for each death) but rather on a fractional basis, the size of the fraction depending on the numerical weight attributed to a given cause in a particular death. The most important element in computing the causes of death on which this study is based is, therefore, that of the weight given to each cause, which can range from 1 (in the case of a single cause) to one-sixth (for a cause which, according to the methodology used, was considered least likely). The total for a given cause does not, therefore, represent the number of persons whose death resulted from it (actually, many of the figures contain decimals) but rather the numerical weight attributed to the cause within the general pattern of mortality.

Understood in this way, the computations which served as a basis for this analysis consist of tabulations which provide, for each city, the numbers of deaths weighted according to causes and subdivided according to occupation, sex, and age. Furthermore, in order to increase the size of the figures, the number of causes was reduced to 74; in doing so, however, every possible precaution was taken to preserve the nosological identity or epidemiological affinity of causes placed in a single group.

It was possible to specify the occupation of the deceased in 90 per cent of the deaths occurring in adult males (15-74 years of age) and, as will be noted in Table 1, while there are some variations in the percentages for different cities, it was possible, in general, to obtain satisfactory information regarding the occupation of the men who were at the time of death or had been engaged in a given occupation.

Occupations

The second parameter, which is actually the basic point of this study, refers to the social class of the deceased, defined here in terms of occupation. In the introduction to this paper a brief description is given of the number and nature of social classes used in the official statistics of England and Wales, as well as the method employed to determine the occupational composition of each class. A similar method was applied in the present analysis. However, since most of the cities included in this study are in developing countries, it was deemed advisable to consider certain social factors which distinguish these from cities in a developed country such as Great Britain.

As previously pointed out, in making social-class distinctions based on occupation and applying them to less-developed countries, the three following premises should be taken into account:

1) A relatively stratified social structure and one in which an occupation can be readily identified in terms of the prestige or status which a person enjoys in the community.

2) A smaller number of occupations and less clearly defined limits between one and the other, together with greater inter-occupational mobility and, consequently, less association between the occupational status and the social status of an individual.

3) The possibility of establishing a small number of large, poorly defined groups, that is, very large social classes based primarily on the degree of prestige or status conferred by an occupation.

TABLE 1–Number of deaths in males, 15-74 years of age, and number and percentages of deaths with occupational status specified, in each city, 1962-1964.

City	All deaths	Occupation specified	
		Number	Percentage
Bogotá	1,628	1,583	97.2
Bristol	2,547	2,439	95.8
Cali	1,676	1,364	81.4
Caracas	1,700	1,340	78.8
Guatemala City	1,793	1,626	90.7
La Plata	2,317	2,220	95.8
Lima	2,417	1,883	77.9
Mexico City	2,200	1,855	84.3
Ribeirão Prêto	619	568	91.8
San Francisco	2,447	2,346	95.9
Santiago	2,490	2,228	89.5
São Paulo	2,532	2,363	93.3
Total	24,366	21,815	89.5

The latter procedure was employed in the present analysis and resulted in the establishment of three classes (A, B, and C) based on the International Standard Classification of Occupations (Appendix 1) which was, in effect, the one used to classify the occupations included in the study. In the procedure used to determine the classes, three persons (an epidemiologist, a general physician, and a librarian) well acquainted with the structure of Latin American societies decided unanimously into which of the three following social classes a person primarily engaged in a given occupation should be placed:

Class	Occupation	Examples
A	Leading professionals or executives	Engineers Executives of large companies
B	Lesser professionals and businessmen and skilled workers with predominantly "mental' duties	Nurses Traveling salesmen Typists
C	Skilled manual workers and semiskilled or unskilled workers	Carpenters Bricklayers Messengers

For the 12 cities as a whole, 13 per cent of the deceased males had been engaged in occupations classified in Class A, 20 per cent in Class B, and 67 per cent in Class C.

Age

As already mentioned, the sample of population studied–expressed in terms of the distribution of the deaths in the different cities–consists of resident adult males in each city. "Adult males" refers to males of 15-74 years of age, and "resident" means that the deceased had been living in the corresponding city for a certain time before his death.

Results and Comments

The classical study by Whitney (*6*) of the National Tuberculosis Association of the United States–a study based on death certificates of 10 states–clearly showed the high degree of variation of death rates according to occupation. The frequently cited rates for respiratory tuberculosis in males 15-64 years of age who had engaged in gainful employment are reproduced in Table 2.

The table shows that the death rate for tuberculosis of the respiratory system among unskilled workers (184.9 per 100,000 population) was seven times greater than the value of 26.2 among the professional men. In a similar study made 15 years later in the State of Tennessee and covering the three-year period 1944-1946 (*7*) it was found that although the variations were smaller among white males, the

TABLE 2–Standardized death rates from all causes and from tuberculosis of the respiratory system for gainfully occupied males in selected occupations, 15-64 years of age, in 10 states (U.S.A.), according to socioeconomic class,[a] 1930.

Socioeconomic class	All causes (rate per 1,000 population)	Tuberculosis of the respiratory system (rate per 100,000 population
Professional men	6.7	26.2
Proprietors, managers, and officials	7.9	43.2
Clerks and kindred workers	7.8	65.8
Agricultural workers	6.2	46.5
Skilled workers and foremen	8.3	72.1
Semiskilled workers	10.1	102.1
Unskilled workers	14.5	184.9
All in selected occupations	9.1	87.5

[a]Whitney, J. S.: *Death Rates by Occupations.* Selected data from Table 8, page 32.

rate for laborers was three times higher than that for the professional group. These earlier experiences served for testing the adequacy of the grouping of social classes (A, B, and C) developed on the basis of the material collected in the Inter-American Investigation of Mortality. Unfortunately no figures were available on the size of the population exposed to each risk (the distributions by occupation); this made it necessary to resort to another method of analysis. In a preliminary examination of the material, it had been found that the proportions of the deaths due to tuberculosis were correlated with the death rates for the same disease. Consequently, in this analysis by social classes (A, B, and C) the percentages of deaths caused by tuberculosis (Table 3 and Figure 1) were calculated in relation to the total number of deaths for each class.

Of the 12 cities included in the study, Lima had the highest death rate from tuberculosis, 67.0 per 100,000 population; in males the same rate adjusted for age was 87.1 per 100,000 and the proportion of deaths due to this disease was 15 per cent. The proportion of deaths from tuberculosis was 10 per cent for Class A, in contrast to 17 per cent for Class C. In Santiago, which had the second highest death rate from tuberculosis, the comparable values of the percentages of deaths from this disease were 3 for Class A and 11 for Class C. The tendency of the percentages of deaths from tuberculosis to be higher in Class B than in A and still higher in C is repeated in all the other cities except the four where the death rates for tuberculosis per 100,000 population, adjusted for age, were the lowest. These cities were Caracas (11.4), La Plata (8.8), San Francisco (7.0), and Bristol (3.7). The percentages were based, therefore, on very small numbers of deaths from tuberculosis (Table 3), and though a tendency to increase is evident from Class A to Class C, the numbers of deaths from tuberculosis in these four cities are too small to afford a useful basis for discussion. The results noted above indicate a higher proportion of deaths from tuberculosis in Class C, which includes laborers and unskilled workers, than in Class A, composed of professionals and managers of large companies. Thus, the results obtained in this analysis agree with those made earlier with tuberculosis death rates and tend to confirm the generally-held concept of the epidemiology of the disease.

Since tuberculosis mortality showed a differential selection among the social classes adopted for this study (A, B, and C) which was expected, this being consistent for most of the cities studied, and since the characteristics of this selection strongly suggest that these classes, as constructed, are useful parameters for similar studies on any other disease, an analysis was made of mortality from arteriosclerotic heart disease (category 420 of the 1955 Revision of the International Classification of Diseases). However, because of the marked differences in the death rates by age groups and the large number of deaths caused by this disease, the death rates are presented separately for the 15-54 and 55-74 age groups.

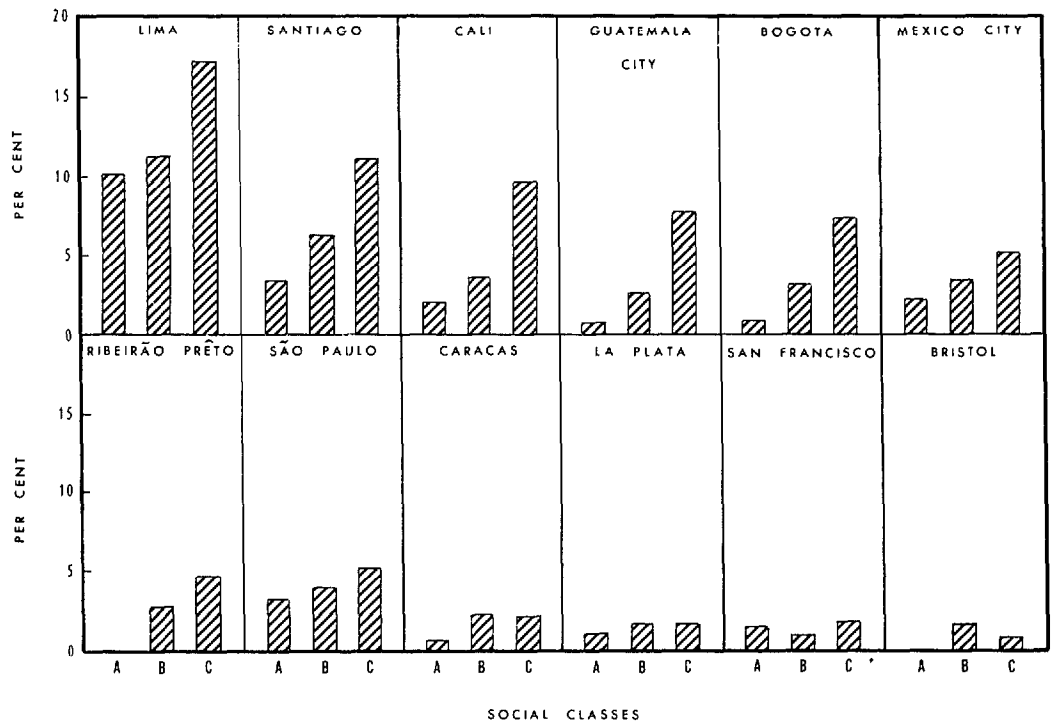
It is considered useful to comment first of all on the findings obtained in Bristol and San Francisco. These cities had shown very high

Table 3–Number of deaths from all causes and number and percentage of deaths from tuberculosis in males, 15-74 years of age, in the three social classes in each city,[a] 1962-1964.

City	Class A			Class B			Class C		
	All deaths	Deaths from tuberculosis		All deaths	Deaths from tuberculosis		All deaths	Deaths from tuberculosis	
		No.[b]	%		No.[b]	%		No.[b]	%
Bogotá	285	2.0	0.7	502	15.7	3.1	796	58.2	7.3
Bristol	167	–	–	477	7.3	1.5	1,795	12.5	0.7
Cali	112	2.0	1.8	236	8.3	3.5	1,016	97.1	9.6
Caracas	187	1.0	0.5	359	8.0	2.2	794	16.3	2.1
Guatemala City	201	1.3	0.6	305	7.7	2.5	1,120	84.8	7.6
La Plata	274	2.8	1.0	474	7.7	1.6	1,472	23.0	1.6
Lima	269	27.3	10.1	440	50.2	11.4	1,174	199.1	17.0
Mexico City	367	7.7	2.1	437	14.3	3.3	1,051	55.0	5.2
Ribeirão Prêto	54	–	–	75	2.0	2.7	439	20.7	4.7
San Francisco	290	4.0	1.4	413	3.8	0.9	1,643	29.8	1.8
Santiago	250	8.3	3.3	324	20.5	6.3	1,654	181.2	11.0
São Paulo	348	11.0	3.2	283	11.3	4.0	1,732	89.9	5.2

[a]The 12 cities included in the Inter-American Investigation of Mortality.
[b]Owing to the weighting system used in the mortality study, the weighted numbers of deaths from tuberculosis are not necessarily integers.

FIGURE 1–Percentages of deaths due to tuberculosis (all forms) in males, 15-74 years of age, in 12 cities,[a] by social classes. 1962-1964.



[a]The 12 cities included in the Inter-American Investigation of Mortality.

death rates from arteriosclerotic heart disease; actually in San Francisco 30 per cent and in Bristol 28 per cent of deaths from all causes of males 15-74 years of age were due to this cause. As will be observed in Table 4 and Figure 2, the percentages of total deaths attributable to arteriosclerotic heart disease were very high for both age groups in the two cities. In Bristol the percentages varied from 25 to 34 and (as the sole exception in 12 cities) displayed no consistent selectivity in terms of social class. In San Francisco the percentages of the deaths due to this cause revealed sharper class differences in the younger age group (36 per cent in Class A, as compared to 20 per cent in B and 18 per cent in C) than in the older group, where the trend was similar but less pronounced (39 per cent in Class A compared to 30 per cent in C). This would indicate that in San Francisco, Class A, which includes professional workers, is subject to a higher proportion of deaths from arteriosclerotic heart disease.

Conversely, in the Latin American cities–where the rates and the proportions of deaths are lower–the percentages of deaths due to arteriosclerotic heart disease were, with a single exception, higher for Class A than Class B and in every instance higher for Class B than for C. These findings are opposite to those found for tuberculosis. There appears to be consistent evidence, therefore, that the three social classes (A, B, and C), as constituted by occupation for the purposes of this study, offer a suitable methodological tool for a useful study in Latin America of mortality by causes in relation to social classes. This finding, if confirmed for other causes and especially on the basis of rates as well as proportions of deaths, could have far-reaching implications in the field of epidemiology as well as in administration.

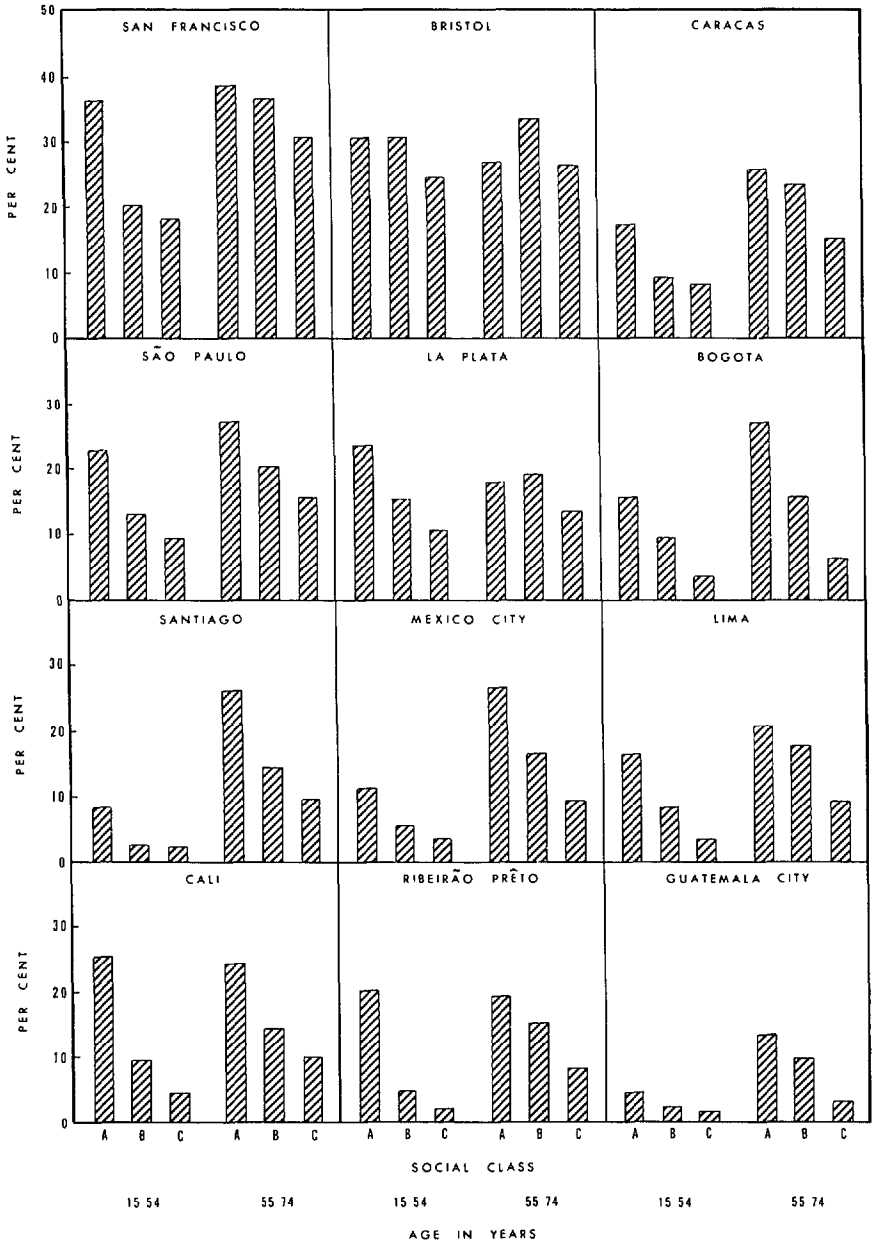
In some Latin American cities the workers in Class C had a relatively small number of deaths from arteriosclerotic heart disease. Also, in seven of those cities the proportions were lower in the age group 15-54 years than in that of 55-74 years. While this difference may be mainly due to higher mortality from other causes in the younger group, it is also possible that the conditions favoring the development of coronary disease in the Latin American cities are different from those prevailing in Bristol or San Francisco. In fact Epstein (*8*) has pointed out that "it is likely that the major geographic differences in coronary heart disease frequency are mostly due to differences in the consumption of saturated fats but that a high intake of sucrose, coupled with a high saturated fat intake, excess of calories and lack of exercise, have an added detrimental effect." Therefore, each of these contributing factors requires investigation. It may well be that in the Latin American cities there is a larger intake of

TABLE 4–Percentages of the total number of deaths due to arteriosclerotic heart disease in males of three social classes in the age groups 15-54 and 55-74 years in each city,[a] 1962-1964.

City	15-54 years			55-74 years		
	Class A	Class B	Class C	Class A	Class B	Class C
Bogotá	15.6	9.7	3.6	27.1	15.8	6.3
Bristol	30.4	30.5	24.7	27.0	33.5	26.6
Cali	25.5	9.7	4.2	24.3	14.5	10.0
Caracas	17.6	9.2	8.4	26.0	23.6	15.3
Guatemala City	4.6	2.3	1.7	13.7	9.9	3.1
La Plata	23.6	15.4	10.7	18.0	19.4	13.6
Lima	16.7	8.3	3.5	20.1	18.0	9.5
Mexico City	11.3	5.5	3.7	26.7	16.8	9.3
Ribeirão Prêto	20.6	4.9	2.1	19.5	15.3	8.2
San Francisco	36.4	20.1	18.5	38.9	36.5	30.4
Santiago	8.5	2.6	2.4	26.1	14.4	9.8
São Paulo	22.9	13.0	9.6	27.3	20.2	15.7

[a]The 12 cities included in the Inter-American Investigation of Mortality.

FIGURE 2–Percentages of deaths from all causes due to arteriosclerotic heart disease, among males in the age groups 15-54 and 55-74 years in 12 cities,[a] by social classes, 1962-1964.



[a]The 12 cities included in the Inter-American Investigation of Mortality.

sucrose and of highly saturated fats in Class A than in Class C. With the improvement of social and economic conditions, the nutritional patterns in all social classes may be more alike in some countries than in others where the supply of certain foods is less abundant and the less-skilled workers cannot afford to buy as large an amount of the foods that are most likely to cause arterial damage. Here too, the results of studies on the variations in different cities will probably be enlightening. Perhaps the data for groups of cities in different stages of development and with different nutritional conditions will provide new lines of investigation for enlarging the scope of research into the causes of arteriosclerotic heart disease.

Summary

Epidemiology has changed from a strictly biological concept of medical ecology to a broader one which considers the way of life of the host in addition to the interaction between the host and his natural environment. Thus, consideration must be given to other parameters besides the traditional ones of sex, age, etc., and an *ad hoc* methodology must be developed which will be applicable to the largest possible number of areas and circumstances.

To that end, a study was made to relate mortality due to tuberculosis and arteriosclerotic heart disease to social factors. Material prepared by the Inter-American Investigation of Mortality was used for the purpose. (It is based on the absolute numbers of weighted deaths distributed by cause, occupation, sex, and 10-year age groups, from 15 to 74 years.)

Ten of the 12 cities in this investigation were located in Latin America; the other two were San Francisco in the United States, and Bristol in the United Kingdom. The following social classes were established: A. leading professions and business; B. lesser professions and business, as well as skilled non-manual workers; and C. skilled manual workers, and semiskilled and unskilled workers. In all 12 cities, of the deaths of males, 13 per cent were from occupations in Class A, 20 per cent in Class B, and 67 per cent in Class C.

The study further disclosed:

1) The proportion of deaths from tuberculosis was larger in Class C than in Class A.

2) As to arteriosclerotic heart disease, 28 per cent of all deaths in Bristol were from this cause, but there was no consistent relation with social class in this study, although in each class the proportionate mortality from this cause was high (from 25 to 34 per cent in males in the 15-74 years age group). On the other hand, in all Latin American cities studied, the mortality due to this disease was lower, and the percentage which resulted from this disease in Class A was invariably higher than in Class B (with one exception), just as the percentage in Class B was higher than in Class C (with no exception).

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Appendix 1

International Standard Classification of Occupations

(Approved by the Ninth International Conference of Labour Statisticians, Geneva, 1957)

Major Group 0. Professional, technical, and related workers:

A	0-0	Architects, engineers, and surveyors
A	0-1	Chemists, physicists, geologists, and other physical scientists
A	0-2	Biologists, veterinarians, agronomists, and related scientists
A	0-3	Physicians, surgeons, and dentists
B	0-4	Nurses and midwives
B	0-5	Professional medical workers not elsewhere classified and medical technicians
B	0-6	Teachers
B	0-7	Clergy and related members of religious orders
A	0-8	Jurists
B	0-9	Artists, writers, and related workers
B	0-X	Draftsmen and science and engineering technicians not elsewhere classified
B	0-Y	Other professional, technical, and related workers

Major Group 1. Administrative, executive, and managerial workers:

A	1-0	Administrators and executive officials, government
A	1-1	Directors, managers, and working proprietors

Major Group 2. Clerical workers:

B	2-0	Bookkeepers and cashiers
B	2-1	Stenographers and typists
B	2-9	Other clerical workers

Major Group 3. Sales workers:

A	3-0	Working proprietors, wholesale and retail trade
B	3-1	Insurance and real-estate salesmen, salesmen of securities and services, and auctioneers
B	3-2	Commercial travelers and manufacturers' agents
C	3-3	Salesmen, shop assistants, and related workers

Major Group 4. Farmers, fishermen, hunters, loggers, and related workers:

B	4-0	Farmers and farm managers
C	4-1	Farm workers not elsewhere classified
C	4-2	Hunters and related workers
C	4-3	Fishermen and related workers
C	4-4	Loggers and other forestry workers

Major Group 5. Miners, quarrymen, and related workers:

C	5-0	Miners and quarrymen
C	5-1	Well drillers and related workers
C	5-2	Mineral treaters
C	5-9	Miners, quarrymen, and related workers not elsewhere classified

Major Group 6. Workers in transport and communication occupations:

B	6-0	Deck officers, engineer officers, and pilots, ship
C	6-1	Deck and engine-room ratings (ship), barge crews and boatmen
B	6-2	Aircraft pilots, navigators, and flight engineers
C	6-3	Drivers and firemen, railway engine

Note: High social class (A), middle social class (B), and low social class (C).

C 6-4 Drivers, road transport
B 6-5 Conductors and brakemen, railway
C 6-6 Inspectors, supervisors, traffic controllers, and dispatchers, transport
B 6-7 Telephone, telegraph, and related telecommunication operators
C 6-8 Postmen and messengers
C 6-9 Workers in transport and communication occupations not elsewhere classified

Major Group 7/8. Craftsmen, production-process workers, and laborers not elsewhere classified:

C 7-0 Spinners, weavers, knitters, dyers, and related workers
C 7-1 Tailors, cutters, furriers, and related workers
C 7-2 Leather cutters, lasters, and sewers (except gloves and garments) and related workers
C 7-3 Furnacemen, drawers, rollers, moulders, and related metal-making and treating workers
B 7-4 Precision-instrument makers, watchmakers, jewelers, and related workers
C 7-5 Toolmakers, machinists, plumbers, welders, platers, and related workers
C 7-6 Electricians and related electrical and electronics workers
C 7-7 Carpenters, joiners, cabinet makers, coopers, and related workers
C 7-8 Painters and paperhangers
C 7-9 Bricklayers, plasterers, and construction workers not elsewhere classified
B 8-0 Compositors, pressmen, engravers, bookbinders, and related workers
C 8-1 Potters, kilnmen, glass and clay formers, and related workers
C 8-2 Millers, bakers, brewmasters, and related food and beverage workers
C 8-3 Chemical and related process workers
C 8-4 Tobacco preparers and tobacco-product makers
C 8-5 Craftsmen and production-process workers not elsewhere classified
C 8-6 Packers, labelers, and related workers
C 8-7 Stationary-engine and excavating and lifting equipment operators and related workers
C 8-8 Longshoremen and related freight handlers
C 8-9 Laborers not elsewhere classified

Major Group 9. Service, sport, and recreation workers:

C 9-0 Fire fighters, policemen, guards, and related workers
C 9-1 Housekeepers, cooks, maids, and related workers
C 9-2 Waiters, bartenders, and related workers
C 9-3 Building caretakers, cleaners, and related workers
C 9-4 Barbers, hairdressers, beauticians, and related workers
C 9-5 Launderers, dry cleaners, and pressers
B 9-6 Athletes, sportsmen, and related workers
B 9-7 Photographers and related camera operators
B 9-8 Embalmers and undertakers
C 9-9 Service, sport, and recreation workers not elsewhere classified

Added:

C x-0 Defense services
B x-1 Students

Excluded:

x-3 Retired
x-8 No definite occupation
x-9 No information