SUICIDE IN HONG KONG*

By

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I.—INTRODUCTION

Comparative Studies on Suicide

ENQUIRY into the occurrence and the pattern of S.† in different cultures promises to reveal information of importance, but there is as yet inadequate material from which definite conclusions can be drawn. Cavan (1928) and Dublin and Bunzel (1933) devoted chapters of their works on S. to this aspect of the subject. These, however, were but poorly assorted collections of descriptive items from various ethnologists, orientalists, and historians, and from them few significant relationships between S. and culture could have been deduced. Zilboorg (1936, 1937) tried to build a concept of S. as a preformed, archaic behavioural reaction on ethnological data, but it must be admitted that valuable though this formulation is he has made somewhat tendentious use of his material in weaving them into the fabric of psycho-analytic theory. His arguments have been subjected to criticism by Wile (1937). Ellenberger (1953) cited examples of S. from various cultures that could be classified under the three components of the S. impulse described by Menninger (1938), viz., the wish to die, the wish to be killed, and the wish to kill. Such a classification, however, cannot cover all the facts. The social sanctioning of S. for different motives in different cultures would seem to argue against the notion that S. everywhere involves the same "components". The view that S. is rare in elementary and compactly organized societies has long been held, and has recently been confirmed as far as the Yorubas of West Africa are concerned by Lambo (1956).

Studies of S. in the region of South-east Asia have been published by Anzures (1927) in the Philippines, by Gunasekara (1951) and Strauss and Strauss (1953) in Ceylon and by Murphy (1954) in Singapore.‡ These studies revealed that the S. rate varied among different races even though they lived within the confines of one country, but also that many of the social factors that have been shown to influence the rate in western countries operated in the same way in these cultures. Murphy's paper dealing as it does with a predominantly Chinese population provides important material for comparison with our findings. The report on mortality from S. published by the World Health Organization (1956) gives expression to the significant trend of interest in S. studies towards comparative statistics, but most of its data were drawn from western countries, and Ceylon and Japan were the only two countries representative of Asian cultures for which statistics were given.

Published information from China proper is meagre, at least as regards

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† The abbreviation S. will be used for Suicide, A.S. for Attempted (unconsummated) Suicide, and S.A. for Suicidal Acts, i.e. S. plus A.S.

‡ A study of the subject in Japanese by Dr. G. de Vos of Ann Arbor, Michigan, is in the press.

literature in English. A systematic social survey of Peking by Gamble and Burgess (1921) gave certain S. data for that city to which we shall later refer, but a rate for the whole of China is not available. Crude data reported by different hospitals have been published, and they are of limited value in the absence of basic population figures (see, e.g. *China Medical Journal*, 1918, **32**, 371; 1923, **37**, 420). The subject of S. in Chinese women, which as we shall see is of special interest because of their traditional cultural background, was briefly annotated in the same journal (1924, **38**, 503). Raw data on S. classified according to age, sex and ethnic group are also to be found in the reports of the past Shanghai Municipal Council. I am not aware of any other material in English on this subject in China, although it may be pointed out that Chen Ta (1946, pp. 100, 101) in carrying out his census studies in South-west China obtained rates for "suicide and poisoning" for the Kunming district. The present study is the first full-scale investigation of S. in a Chinese population, albeit one that is politically and economically (but not geographically and socially) distinct from that of China.

The comparative study of S. is of value because it brings into relief the question of the "normality" of this behavioural reaction. It helps to rescue discussion of this subject from the dangers of over-simplification, and enables us to define clearly the basic problem that it presents for psychiatry. For this purpose it is necessary to obtain and analyse data from cultures as distinct as possible from western civilization, and view the subject from a broad "anthropological" standpoint, as Strauss (1956) has usefully attempted to do in spite of the limited information at present available. Only from studies of this kind can we hope to understand the S. reaction as a unique aspect of human behaviour irrespective of cultural conditioning, e.g. its fundamental relation to maleness and old age.

The present work attempts firstly to analyse certain statistical aspects of S. in Hong Kong and relate them to social conditions and the cultural background. Secondly, it examines in greater detail the findings concerning A.S. in order to come to some understanding of the latter from the psychopathological as well as the clinical point of view. The period chosen for study was determined by the existence of base demographic and socio-economic data derived from the Hambro Sample Survey of 1954.

II.—Sources and Method of Investigation

The data for this study were obtained from the following sources:

(*a*) The Registry of Births and Deaths had records of all deaths from S. in the Colony of Hong Kong (comprising Hong Kong Island, Kowloon and the New Territories) for the post-war years. Earlier records had unfortunately been destroyed. In comparing figures from this source with those from the Criminal Investigation Department, it was found that the latter had somewhat lower totals for the annual number of S., and this discrepancy appeared to raise some doubt as to the accuracy of the Registry data. However, the Registry figures included cases of presumed S. labelled as such by the Coroner after full enquiry, including *post mortem* examination, whereas such cases might be reported by the police only as "found dead".

To incriminate S. as the cause of death when a body is found in the sea, for example, is not entirely a matter of guess-work. Reliable indications can be obtained from the age of the deceased, evidence of his occupation (seamen and fishermen could be excluded from suspicion), examination of stomach contents, signs of serious chronic illness, the existence of S. notes, as well as

customs (albeit rarely observed) like putting on one's best clothing before facing death, or wearing red trousers and keeping on oneself a pair of scissors in the case of vengeful S. The number of deaths from S. recorded for the calendar year 1955 was 263, and included 43 "presumed" cases. The compactness of the whole Colony, which covers only 391 square miles, as well as the heavy concentration of population in urban areas, make it probable that both the registration of deaths from S. as well as the reporting of A.S. cases to the police were quite complete, except perhaps that one could never expect the A.S. figures to reflect the true incidence as accurately as the S. For the first or second year after the war, however, the figures may not be quite reliable because it took time for the administration to be fully re-established.

(*b*) The Criminal Investigation Department kept records of all S. and A.S. cases, although data gathered on the latter were frequently incomplete. The dossiers of S. cases were compiled by experienced Inspectors of Police from information obtained usually from several persons, and were forwarded to the Coroners. Their efforts were directed towards finding the cause of death and the exclusion of foul play. There was evidence that the question of insanity was regularly brought up during interviews with those who had known the deceased, as well as the possibility of other, social and economic, precipitating causes. I was able to go through 218 dossiers covering the period November, 1953 to December, 1954. These provided reasonably detailed information on the social background of the cases. From other records kept by the police it was possible to obtain data on the age and sex of 1,158 cases of S.A. (not counting repeated attempts) and the mode employed in 1,418 cases of S.A. within the period June, 1953 to December, 1954. The last figure is the total of all the cases occurring during that period, again excluding repeated attempts. As regards the latter, second attempts were made by 2 men and 4 women, but in 2 of the women the age was not known; none of these attempts were consummated.

Of the 1,418 cases of S.A., all were Chinese except for 1 S. case in a British soldier and 2 A.S. cases in a British merchant and a Portuguese woman (unemployed). The sample may therefore be regarded as one drawn from the Chinese population altogether. However, these 3 cases were excluded in analysing the effect of the factors of immigration, nativity, civil status, occupation and precipitating causes.

(*c*) In order to obtain sociological data on cases of A.S., it was necessary to turn to the records of the Almoner's Department in Queen Mary Hospital, the largest in the Colony, serving the whole of Hong Kong Island. All cases of S.A. on the island are brought by the police to this hospital in the first instance, and here they are interviewed by almoners before referral, if indicated, to the Social Welfare Department for assistance. If insanity is detected by the medical staff the case will be referred to the author as Government Psychiatric Specialist, or directly admitted to the Mental Hospital. These insane cases were included in the C.I.D. records mentioned above in (*b*), although they were of course drawn only from Hong Kong Island, but as insane cases they may be regarded as representative of all such in the Colony of Hong Kong.

Unfortunately the almoners' histories were not complete in many cases. Excluding those of persons who later died, I was able to obtain data on occupation in 127 cases, and on civil status and precipitating causes in 159 cases—all occurring between June, 1953 and December, 1954. There is no reason to suppose that, when information was wanting, this was directly related to any selective influence arising from just those sociological characteristics for which

we were seeking. The completeness of the histories depended primarily on the seriousness with which the casualty officer viewed the case, and also to a certain extent on the interest of the almoners. which varied considerably.

Control Data

(*a*) Estimates of the annual population of Hong Kong for the post-war years were obtained from Szczepanik (1955), who had subjected the overall population data of the Hambro Report (1955) to criticism. Szczepanik was able to come to a more accurate estimate of post-war population changes in Hong Kong by applying the demographic principle that the age-structure of a population tends to remain constant, despite temporary changes introduced by immigration waves.

(*b*) The Sample Survey of Hong Kong's population carried out in May–June, 1954 by Hambro (1955) contained information on 17,682 persons derived from 4,600 questionnaires, and involved a sampling fraction of 7·86 persons per 1,000. In the absence of a recent census (the one planned for 1951 had to be given up because of the outbreak of the Korean War), this Survey provides the most accurate analysis of the social and economic structure of Hong Kong's population, but as regards age and sex structure it unfortunately fails to give sufficiently detailed information for our purpose. It should be noted that 99 per cent. of Hong Kong's population are Chinese.

(*c*) In order to obtain a more detailed analysis of the age and sex structure of the population, the data from the Hambro Sample Survey were supplemented by those from the Medical Department Survey based on identity cards in 1950.

(*d*) A small survey to ascertain the distribution of civil status in the population was carried out. This covered 1,136 persons aged 15 and over.

III.—Discussion of the Findings

A. The Suicide Rate per Annum

From Table I it can be seen that the crude rate per 100,000 of the total population *per annum* was quite low in the immediate post-war years, but rose gradually, took an abrupt step upwards in 1952, and remained at a high level

Table I

Annual Suicide Rates in Hong Kong Per 100,000 Total Population

Year	No. of Cases			Mid-year Population	Rate		
	M.	F.	Total		M.	F.	Total
1946 ..	16	19	35	1,168,000	—	—	3·0
1947 ..	35	26	61	1,214,000	—	—	5·0
1948 ..	31	34	65	1,310,000	—	—	5·0
1949 ..	60	51	111	1,415,000	—	—	7·8
1950 ..	88	56	144	1,670,000	—	—	8·6
1951 ..	90	75	165	1,846,000	—	—	8·9
1952 ..	149	107	256	1,967,000	—	—	13·0
1953 ..	167	99	266	2,050,000	14·8	10·0	12·9
1954 ..	183	119	302	2,120,000	16·3	12·0	14·2
1955 ..	167	96	263	2,185,000	14·4	9·3	12·0

Source: Registrar of Births and Deaths. Population figures from Szczepanik. Male:Female Population Ratio from Hambro Sample Survey.

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after that. The crude rate of 12·0 for 1955 may be compared with those found for other countries from periodical data given in the *Demographic Year-book* published by the Statistical Office of the United Nations, and also from the special survey of the World Health Organization on mortality from S. (1956, pp. 250 ff.). It is a little higher than that for England and Wales (11·4 in 1954), the United States (10·1 in 1953) and Australia (10·9 in 1953). It is lower than that for France (15·8 in 1954) and Sweden (18·6 in 1953). In general the rate in recent years might be regarded as neither very high, like that for Germany (19·3 in 1954), Switzerland (22·6 in 1954) and Japan (23·4 in 1954), or very low, like that for Eire (2·0 in 1954) and Spain (5·9 in 1954).

Gamble and Burgess (1921) found that the crude rate for the total population of Peking City in 1917 was 15·5, but the rate for China as a whole may be expected to be lower. In Singapore, Murphy (1954) found a crude rate *per annum* of 12·9 for the total Chinese population for the years 1946–52. This compares well with the Hong Kong rate, so that our figure may perhaps be regarded as typical for Chinese living in urban communities in South-east Asia. The crude rate for Hawaiian Chinese was 9·0 *per annum*, taking the annual average for the years 1941–50, but the rate for the previous decade was more than double this figure, according to Taff (1951). Cavan (1928, p. 36) stated that the rate for Chinese in Hawaii between 1918 and 1922 was 34·0, for all ages,* and also that it was as high as 65·0 for Chinese in Chicago, taking the average of the years 1919–21 (*op. cit.*, p. 80). While the reliability of the rates for a comparatively small population like the Chicago Chinese may be questioned, this could not be the case with the Hawaiian Chinese figures, which have been showing a gradual decrease. Nevertheless, taking all Chinese in the United States, the crude rate for them is still very high, being 30·4 *per annum* for 1949–51 (see footnote below). If the trend in the Hawaii figures may be taken as an indication, the U.S. Chinese rate may fall with further assimilation into the country.

If the population aged 15 and over only is considered, the Hong Kong rate for 1954 was 23·5. This rate can again be compared with that found by Murphy for Singapore, which was 21·0 *per annum* for the Chinese population aged 15 and above, for a number of years between 1930 and 1952.

The upward trend of the crude S. rate in Hong Kong over the years and the abrupt rise in 1952 demand explanation. There were no basic administrative changes in the Registry of Births and Deaths, nor changes in the procedure for recording S. cases, in 1952 or any of the other years, so that the increase in the rate cannot be merely an apparent one. On the other hand, if we inquired into the post-war population changes and especially the inflow of refugees caused by the Communist revolution, with its adverse psychological repercussions, we should be surprised if the S. rate did not show the changes it did. The post-war growth of population of Hong Kong came about mainly from two waves of immigration: between 1945 and 1948 about 700,000 ex-Hong Kong citizens came back and then between 1949 and 1951 some 500,000 others, mostly refugees from the revolution who had not been previously in Hong Kong, came in (Hambro, 1955, pp. 17, 18; Szczepanik, 1955). These immigrant movements, balanced by the smaller amount of emigration going on during these years, resulted in the increase as shown in Szczepanik's figures (see Table I), and it may be noted that the increase was greatest between 1948 and 1952, reaching a peak in 1950/1951. The contribution from natural increase

* Cavan mentions that this rate was "double the Pekin rate for 1927" but gives no bibliographical reference for the latter figure.

was of course far less important a factor, compared with the balance of immigration, in bringing about the post-war increase of population.

The sudden rise in the S. rate in 1952 and the high rates in the following years were most probably due, not only to the simple fact of increase in the number of immigrants, but also to other factors like their age distribution as a group, difficulties in adapting themselves to Hong Kong, and political events in the neighbouring province of Kwangtung, from which most of the immigrants came. This problem will be further discussed under the section on nativity and immigration.

It has long been known that in war-time and during periods of political crisis the S. rate drops (cf. Halbwachs, 1930), and that this effect extends to adjacent non-belligerent countries (Faris, 1948, p. 213). The end of World War II in China brought about increasing tension between the Communists and the Kuomintang, but it was not until 1949 that the tide of revolution reached right down to the borders of Hong Kong. This, combined with the fact that the ex-Hong Kong persons pouring back into the Colony during the immediate post-war years might be expected to have been buoyed up by hope and optimism and therefore to be relatively free from S. risk, could account for the very low rates during those early years. The subsequent rise might be related, apart from the factors of immigration and political disturbance, to increasing post-war industrialization and perhaps to the decline of the entrepôt trade and consequent economic depression, following upon the application of embargoes against China. It has long been known that industrialization and economic depression increase the S. rate (cf. Dublin and Bunzel, 1933, p. 101; Faris, 1948, p. 207). The importance of these factors, however, cannot be adequately discussed without a knowledge of economics.

B. Urban and Rural Rates

Table II sets out the S. and A.S. rates for two urban areas—Hong Kong Island, where almost the whole population is concentrated in the city of Victoria, and Kowloon, the twin city of Victoria on the mainland: and for one rural area

TABLE II

Suicide and Attempted Suicide by Locality: Cases Reported to Police, June, 1953 to December, 1954, Excluding Marine Cases

Locality	Suicides			Attempted Suicides		
	Total No.	M:F	Rate*	Total No.	M:F	Rate*
H.K. Island (Urban) ..	133	1·7	14·8	397	0·7	44·1
Kowloon†	171	1·4	*16·3*	463	0·6	*44·1*
(Urban)			*15·6*±0·88			*44·1*±1·48
N.T. (Rural)	26	1·4	8·7±1·60	79	0·7	26·3±0·39

* Per 100,000 total population.
† Includes the part of the city in the area of New Kowloon.
Source: C.I.D. records. Population data from Hambro Sample Survey.

—the New Territories, lying beyond Kowloon and extending to the border. The cases were assigned to the different areas according to the police stations investigating them. Each station was responsible for cases occurring within its own defined district, and the latter could be classed either as urban or rural. It was necessary to exclude 149 cases investigated by the marine police from

the total, because of uncertainty over their origin, although from their appearance most of the bodies found dead on the sea were those of city-dwellers, and also most of the unconsummated marine cases were persons picked up in the harbour itself between Victoria and Kowloon. The base population distribution between Hong Kong Island (900,000) Kowloon (1,050,000) and the New Territories (300,000) as given by Hambro in his Table XI included all those living on boats; and these in 1954 made up 7·8 per cent. of the total population (Hambro, Table III). But only 0·3 per cent. of total population were true fisherfolk going out to sea (Hambro, Table XXXI), and the difference between these two figures of 7·5 per cent. is made up of boat-dwellers who are in fact closely attached to the land, either rural or urban as the case may be. The percentage of true fisherfolk in the population is very small and therefore need not be considered in studying urban-rural differences, especially as they are distributed between Hong Kong, Kowloon and the New Territories.

Table II shows that in Hong Kong as elsewhere (cf. Cavan, 1928, p. 77 ff., and Dublin and Bunzel, 1933, p. 78) the urban S. rate is significantly higher than the rural, and that this also holds for A.S. Regarding S., the difference between the two rates is $6 \cdot 9 \pm 1 \cdot 83$. For A.S., the difference between the rates is $17 \cdot 8 \pm 1 \cdot 87$. An exception to the general rule that S. preponderates in cities was found by Schroeder and Beegle (1953) in Michigan, but their data showed that many in their apparently rural population were urban-orientated, possessing city values and ideas which in effect lessened the contrast between town and country. In our case it must be admitted that the New Territories population is not entirely homogeneous, there being, for example, in the semi-rural townlet of Tsun Wan many factory workers. But Tsun Wan's population of 51,000 (data for 1955 from the Medical Department) does not amount to more than one-sixth of the total New Territories population, which may therefore be regarded as rural on the whole.

The low rural rate is reflected in the low rates to be found for occupations like farming and fishing (see Table II). In fact only one farmer in our material committed S., while not a single fisherman did so. There are grounds for believing that it is not merely occupational distribution that brings about the urban-rural difference, but more fundamental factors like the impersonality and social disorganization of urban areas, where there are few meaningful relationships between individuals and much social isolation. This has been established for western countries by a number of workers (Cavan, 1928, pp. 77–105; Schmid, 1928, 1933, 1937, pp. 370–380; Mowrer, 1942, pp. 347–350; Faris, 1948, pp. 207, 8; and Sainsbury, 1955, pp. 75–8). Social conditions in Hong Kong, however, have been rather abnormal and it would be imprudent to ignore the great influx of refugees, and their concentration in the city to struggle for a new social and economic adjustment, as important factors directly influencing the S. rate. This may all be part of social disorganization, but it is necessary to note the existence of serious poverty as a causal factor, much more widespread as it is than in established cities of the industrial western countries.

Another point to note is that the sex ratios for S. as well as A.S. show no urban-rural difference. This suggests that urbanization has no differential effect ultimately on the S. risk for each sex.

C. Age and Sex Specific Rates

The age and sex specific rates for S. and A.S. are set out in Table III and also graphically represented in Figures 1 and 2. The factors of age and sex

TABLE III

*Suicide and Attempted Suicide in Hong Kong by Age and Sex, June, 1953 to December, 1954**

Age	Suicides				Attempted Suicides			
	No.		Rate/100,000		No.		Rate/100,000	
	M.	F.	M.	F.	M.	F.	M.	F.
11–15†	—	1	—	1·4	2	3	2·4	4·2
16–20	2	8	1·8	8·7	15	48	13·2	52·2
21–25	21	13	19·6	14·9	88	149	82·2	170·9
26–30	24	19	23·6	21·9	76	144	74·6	166·5
31–35	23	19	27·2	26·3	91	69	107·5	95·5
36–40	19	14	22·1	17·7	39	43	45·3	54·4
41–45	16	12	28·5	22·3	33	23	58·7	42·7
46–50	5	8	10·8	16·5	15	10	32·2	20·7
51–55	15	8	55·6	23·9	8	7	29·7	20·9
56–60	4	2	21·3	8·2	12	3	64·1	12·2
61–65	6	5	53·4	44·8	4	2	35·6	17·9
66–70	5	4	74·2	41·9	2	4	29·7	41·9
71–75	3	2	100·1	73·4	1	2	33·3	73·4
76–	2	3	133·5	220·3	—	1	—	73·4
Total	145	118			386	508		

* One case of successful suicide in a girl of 6 and 260 cases of unknown age excluded.

† The number of persons in the population on which rates were based in this age group was actually estimated between the ages of 12 and 15 in our reference data. All the cases of suicide and attempted suicide in this group were between 12 and 15.

Source: C.I.D. records. Population data derived from the Medical Department Survey of 1950 and the Hambro Sample Survey.

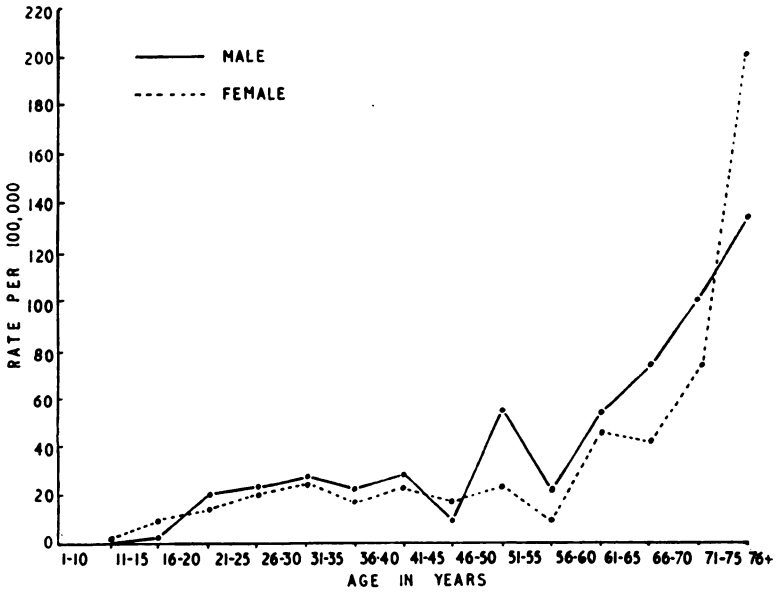

FIG. 1.—Suicide in Hong Kong, by age and sex.
(263 cases, June, 1953–December, 1954.)

Source: C.I.D. Records.

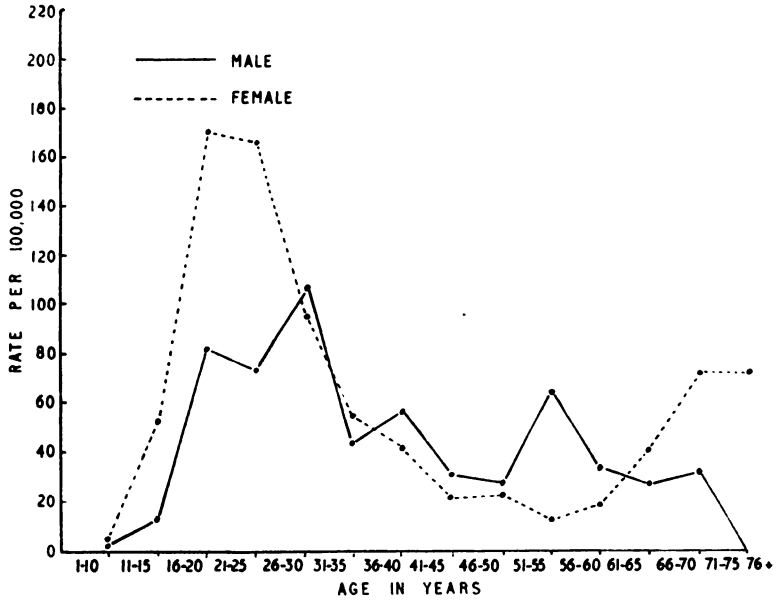

FIG. 2.—Attempted suicide in Hong Kong, by age and sex.
(894 cases, June, 1953–December, 1954.)
Source: Almoners' Histories.

furnish the most conspicuous bases for variation in the rates for S.A. and it will be seen that the curves for the two sexes are quite different. The trends revealed by these curves are definite, although it must be admitted that in old age the data may not be quite reliable, because old folk often cannot know their correct age and because the base population for these ages is small.

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As regards S., the male rate is rather lower than the female before the early twenties and the youngest male case is 5 years older than the youngest female. Then the male curve rises rapidly until the early thirties, when a plateau is reached, all the while keeping slightly above the female; and finally it takes a rapid climb from the early fifties, reaching well above the female, which latter also rises in the late fifties. These curves are similar to those found for most western countries, except that the plateaux between 30 and 50 are unusual and that the female curve rises sharply after the menopause, in Hong Kong, instead of reaching a peak at this period and then falling or remaining more or less stationary. From data given in the W.H.O. survey of mortality from S. (1956, pp. 275 ff.) it can be seen that with the definite exception only of Germany, France, the Netherlands and Portugal, every western country in recent times showed a stationary or falling rate in old age for women; this, however, was not true for the Asian countries Ceylon and Japan. Comparison may also be made with the data given by Cavan (1928, p. 314), Bond (1931), Dublin and Bunzel (1933, p. 382), Mowrer (1942, p. 339), Schroeder and Beegle (1953), and Schmid and van Arsdol (1955).

Our data show certain differences from those for Chinese in the U.S.* In the latter the male curve rises gradually to reach a peak in the sixties (and then apparently falls), but the female curve falls after reaching a peak at the menopause. This kind of pattern is much like that to be found in western populations.

If we turn however to the figures for Peking City in 1917,† calculated from the data given by Gamble and Burgess (1921), we find a remarkable difference. The male curve is highest for the age period of 31–40; after that it actually falls, and the tendency to rise in old age is not marked. The female curve is highest for the age period of 21–30 (it can be assumed that the rate could not be so high for the ages 11–20), and then it rapidly falls with increasing age. These facts can be well understood in the light of the traditional, conservative and patriarchal culture, with its great emphasis on filial piety and respect for the aged; with such an *ethos*, suicide-producing stresses must fall with especial severity on younger people, particularly young women constrained by the rigid family organization.

Thus it appears that with the breakdown of the traditional cultural pattern and the "modernization" of Chinese society S. has increased in old age for both sexes, and has decreased in young women. The curves then may be expected to approximate to Hong Kong's, or to those found for Singapore (whose population is 80 per cent. Chinese) by Murphy (1954). The Singapore S. curves for males and females are similar to Hong Kong's, although the rise in females with increasing age is not marked. Since, however, the curve for females does not rise in old age for American Chinese, it may be possible that high female S. rates in old age are peculiar to an Asian society in the transitional stages of "modernization", and that when the rapid social, economic and cultural changes become stabilized the rates will fall. We have seen that in Ceylon and Japan too S. rates are high in older women. It may be objected that the rates for the older age groups are not reliable because of the small number of persons

* With the help of Mr. I. M. Moriyama (National Office of Vital Statistics, Washington), I have been able to calculate the following rates:

Age	Population (1950)		Mean Annual No. of S. 1949–51 inclusive		Rate/100,000	
	(M)	(F)	(M)	(F)	(M)	(F)
15–24	11,331	9,408	0·3	0·7	2·6	7·4
25–34	13,653	8,268	2·7	1·3	19·8	15·3
35–44	12,687	4,893	5·3	1·3	42·6	27·2
45–54	12,248	2,968	6·3	1·3	51·7	45·2
55–64	7,517	1,490	8·3	0·3	110·9	22·4
65–74	3,441	611	5·7	—	164·7	—
75–	1,145	181	1·7	—	116·4	—
All ages	76,725	40,415	30·7	5·0	40·1	12·4
					(M+F 30·4)	

(Source: U.S. Census of Population: 1950. Vol. IV, Special Reports, Part 3, Chap. B. Washington, 1953.)

† The data are as follows:

Age	Population (1917)		No. of S. (1917)		Rate/100,000	
	(M)	(F)	(M)	(F)	(M)	(F)
21–30	119,535	55,317	19	29	15·9	52·4
31–40	112,190	60,495	52	19	46·4	31·4
41–50	81,064	42,153	20	6	24·7	14·2
51–60	43,064	27,118	12	4	27·8	14·8
61–	30,572	23,774	12	3	39·2	12·6
21 and over ..	386,425	208,857	115	61	29·8	29·2

(Source: Gamble and Burgess, 1921, p. 416.)

involved, but the trend of the curves appears definite, and they show a sex difference.

Taking all ages into account, our male S. rate is higher than the female, but the latter is more than half that of the former. This is shown in Table I for the years 1953–55, the base male and female populations employed for the calculation being derived from the sex ratio of 113·7 M to 100 F found by Hambro in his 1954 sample survey (Hambro, 1955, Table XXV). This proportionately high female rate in relation to the male is not found in western countries, but is the rule in Asian countries like Japan (1·5:1 in 1954) and Ceylon (2:1 in 1954); in the west the ratio is usually 3:1 rather than 1·5:1 as in our case (cf. Dublin and Bunzel, 1933, p. 45; Mowrer, 1942, p. 339; Dahlgren, 1945, p. 43; Schroeder and Beegle, 1953; Strauss and Strauss, 1953; Schmid and van Arsdol, 1955, and the W.H.O. survey, 1956, p. 251). The Peking figures for 1917 were even more striking inasmuch as the female rate approximated to the male. Murphy found a ratio of 14·8 M to 10·8 F for the total Singapore Chinese population, which confirms our finding for Hong Kong. We have, however, seen that the male rate is higher rather than the female in American Chinese (40·1 M to 12·4 F.)

It appears therefore that there is in the present day no special "Chinese" pattern of S. as far as age and sex are concerned. Chinese living in a western environment show a pattern like that of the west as regards the sex ratio and also, as we have seen above, the declining female rate in old age, but not Chinese living in a "marginal" environment like that of Hong Kong and Singapore. In traditional China, however, there were as many females as males committing S., mainly because of the high rate in young women; the male rate, unlike that for Hong Kong or the west, decreased with age, relatively speaking, and the female rate, unlike that for Hong Kong but like that for the west, also decreased with advancing years. The influence of the cultural background on S. in Hong Kong will be more fully discussed later.

Attempted Suicide

We may now turn from S. to a consideration of A.S. The female A.S. rate is rather higher than the male (the rates per 100,000 total population being respectively 86·1 and 54·5). All workers agree that more females attempt suicide unsuccessfully than males and if we compare this ratio with those to be obtained from the data given by Lendrum for Detroit (Lendrum, 1933) and by Dahlgren for Malmoe (*op. cit.*, 1945) we find that it is higher than the former (1·3:1) and lower than the latter (2·0:1). However it is always difficult to be certain of the validity of data on A.S. because the adequacy of registration must vary at different times and in different places. The question of sex difference in S.A. will be further pursued below.

Returning to Figure 2, we see that for A.S. both the male and female curves rise steeply from the age period of 11–15, and after reaching their peaks, the female around 25 and the male 5 years later, they fall sharply until they cross each other in the early forties. Between 45 and 65 the male curve is higher than the female, but in old age the female curve alone rises to exceed the male again. On the whole these curves are similar to those found for western countries. Most studies in A.S. give only the absolute figures, but Lendrum (1933), Piker (1938), Dahlgren (1945, p. 51), and Schmid and van Arsdol (1955) give the rates for different ages. Lendrum's data are plotted out by Mowrer (1942, p. 343). In general the A.S. rate does not rise in old age for either sex, although

Piker found a rather high rate for men over 60; but his material of 1,383 cases included 224 known to have died later. In our findings the rise in the female curve after 65 is unusual. The rate for the older ages are based only on a small number of cases, and to this extent we must be cautious in assessing their significance; but the rise parallels that for S. and the trend is definite. It is perhaps possible to find an explanation for this in the restricted position accorded to women in the traditional culture.

Further Analysis of Age and Sex Distribution in Suicidal Acts

The data on S.A. can be made to yield further information if submitted to statistical analysis. Table IV shows that for S. the observed distribution

TABLE IV

Observed and Expected Distribution of Different Age Groups of Each Sex in Suicide and Attempted Suicide

Age	Suicide				Attempted Suicide			
	M.		F.		M.		F.	
	Obs.	Exp.	Obs.	Exp.	Obs.	Exp.	Obs.	Exp.
11–35 ..	70	95·27	60	71·03	272	250·60	413	305·81
36–55 ..	55	41·76	42	37·17	95	111·16	83	160·02
56– ..	20	7·97	16	9·79	19	21·23	12	42·16
Total	145	145·00	118	118·00	386	386·00	508	508·00
χ^2=	29·04		6·26		3·90		96·21	
P=	<0·001		0·02<P<0·05		0·1<P<0·2		<0·001	
			Df=2					

differs significantly from the expected in different age groups; both for males and females the number of S. cases is lower between 11 and 35, and higher after 35 (and especially after 55) than would be expected from the size of the age groups in the population if the S. tendency was constant for all ages. As for A.S., the difference in the distribution between observed and expected numbers for different age groups is significant only in the case of females; cases are more numerous than would be expected between 11 and 35, and less numerous after 35 and especially after 55.

We may next consider the question of sex distribution in S. as compared with A.S. First of all, the difference between the sex distribution of S. and that of A.S. is statistically significant: 145, or $55{\cdot}2\pm3{\cdot}07$ per cent. of 263 S. cases were men, and 386, or $43{\cdot}3\pm1{\cdot}66$ per cent. of the 894 A.S. cases were men. The difference between the two is $11{\cdot}9\pm3{\cdot}49$ per cent., and is highly significant. The preponderance of men in cases of suicide which succeed implies that S.A. of men are more likely to be fatal, and this is found by all workers to be so. Why women should be less successful in S.A. will be taken up later.

Although there is a significant difference in sex distribution between S. and A.S., we need also to know if the sex ratios in S. as well as in A.S. are themselves significantly different from the sex ratio of the general population. For this purpose it is not sufficient simply to compare the total numbers of men and women in the population, because, as we have seen, the S. tendency in both sexes (and the A.S. tendency in females) differ for various age groups, and the younger age groups are larger than the older in each sex.

If correction for differing strength of the S. tendency in different ages is made, the expected total numbers for S. in males and females, on the assumption that there is no sex difference in the S. tendency, are 140·4 and 122·6

respectively. Table V shows that in fact the proportion of sexes among the S. cases does not differ significantly from the proportion of the sexes in the general population.

TABLE V

Observed and Expected Distribution of the Sexes in Suicide

Age	Observed			Expected		
	M.	F.	Total	M.	F.	Total
11–35 ..	70	60	130	73·55	56·45	130·00
36–55 ..	55	42	97	50·85	46·15	97·00
56–	20	16	36	16·03	19·97	36·00
Total ..	145	118	263	140·43	122·57	263·00
		$\chi^2=0·32$	Df=1	0·5<P+0·7		

In the case of A.S., Table VI shows that the total expected numbers, on the assumption that there is no sex difference in the tendency to A.S., are 494·9 for males and 399·2 for females, when correction is made for the age difference in the liability to A.S. Thus the proportion of the sexes among the A.S. cases differs significantly from the proportion of sexes in the population; fewer males and more females attempt S. unsuccessfully than would be expected from their respective numbers in the population.

TABLE VI

Observed and Expected Distribution of the Sexes in Attempted Suicide

Age	Observed			Expected		
	M.	F.	Total	M.	F.	Total
11–35 ..	272	413	685	387·70	290·30	685·00
36–55 ..	95	83	178	93·35	84·65	178·00
56–	19	12	31	13·80	17·20	31·00
Total ..	386	508	894	494·85	399·15	894·00
		$\chi^2=53·69$	Df=1	P<0·001		

Ratio of Suicide to Attempted Suicide

An important aspect of the study of S. that is often neglected is the total incidence of S. in relation to that of A.S. within a given population. The difficulty here is that the registration of A.S. cannot attain as a rule the degree of completeness that is possible with S., and that usually A.S. statistics are derived from hospital admissions, whereas S. statistics come from the Police or other Governmental sources. As far as Hong Kong is concerned, however, there is no serious stigma attached to S. among the Chinese, so that concealment of S.A. cannot be an important factor determining the reliability of our data. Moreover, A.S. is more easily concealed than S., so that if it is the case that the A.S.: S. ratio is high, then this fact may be of some significance.

A glance at Figure 3 will show that in both sexes the Hong Kong ratio of A.S.: S. is rather high in ages between 20 and 35, especially among females. This means that the mortality for S.A. in these groups is low. The question arises whether this finding is peculiar to Hong Kong, inasmuch as it must have some bearing on the psychology of the S. act, and may possibly be influenced by the cultural background.

Comparison of the A.S.: S. ratios (i.e., total number of A.S.: total number of S.) from different countries is of limited value, quite apart from the difficulties above-mentioned, because the age and sex structure of different populations varies and it is known that age and sex are factors influencing the mortality from S.A. However, comparison may usefully be made if it is between the same age groups and the same sex. Figure 3 shows further that there are

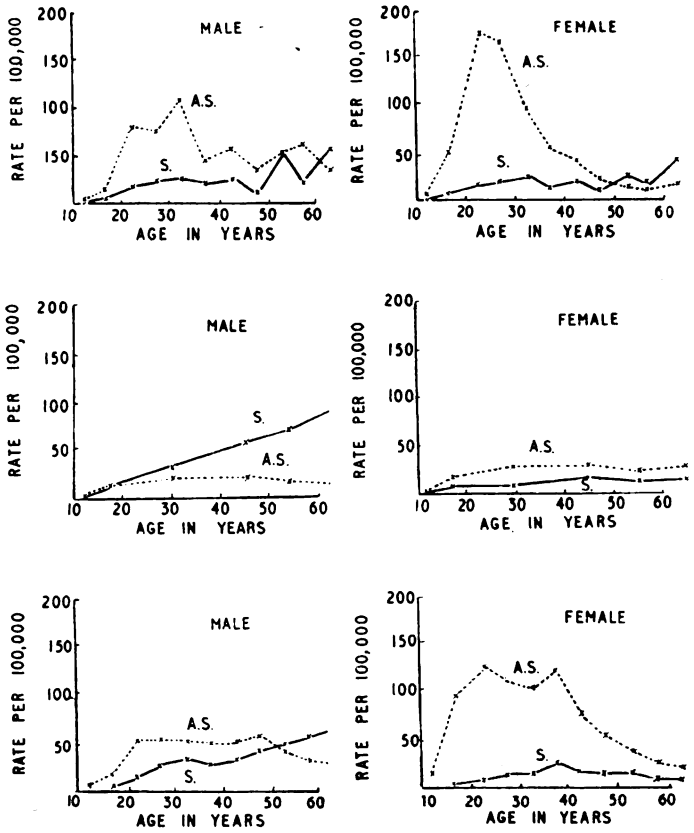

FIG. 3.—Suicides and attempted suicides in Hong Kong, Malmoe and Seattle, by age and sex. Sources: Almoners' histories and C.I.D. records; Dahlgren (1945); and Schmid and van Arsdol (1955).

definite differences between the A.S. and S. curves for the two sexes in Hong Kong, Malmoe and Seattle, when plotted out for various ages. Malmoe and Seattle are modern cities not uncomparable with Hong Kong, which is very much of a city-state in itself; and they are two of the very few cities for which adequate A.S. and S. data covering fairly recent years are available (Dahlgren, 1945; Schmid and van Arsdol, 1955). It is clear that in Hong Kong male and especially female S.A. have a lower mortality than in Seattle, and the mortality is even lower still when compared with that for Malmoe. We cannot conclude that this low mortality is peculiar to Hong Kong, but at least it can be argued that Hong Kong is one of the countries where S.A. in the young are quite frequently unsuccessful or unconsummated.* The relation of this to the social and cultural background is further discussed below.

* In Hawaiian Chinese the crude A.S.: S. ratio is smaller than it is for Hawaiian Caucasians, according to data for 1936–50 (Hsu, 1953, p. 63). It is difficult to draw any definite conclusions from this.

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D. Nativity and Immigration

In discussing the S. rate *per annum* for the post-war years I mentioned the importance of the factor of immigration in bringing about the rise in the rate after 1952. Before we deal fully with this problem we may first study the incidence of S. in relation to the "native places" of the subjects. The "native place" is the ancestral village of the subject's family, and in the great majority coincides with his normal place of residence, i.e., in the case of immigrants, the place from which he comes. It was possible to obtain data on the "native place" for 137 cases, taken consecutively in going through the dossiers. Table VII shows that those whose "native places" were in Hong Kong itself, or in

Table VII

Distribution of Suicide by Nativity

Native Place	Percentage Distribution in Population*	Suicide	
		Observed	Expected
Hong Kong	9·2	6	12·60
Kwantung	74·9	120	102·62
Rest of China and overseas	15·9	11†	21·78
Total	100·0	137	137·00

$\chi^2 = 11 \cdot 74$ Df = 2 $0 \cdot 001 < P < 0 \cdot 01$

* Chinese population only.

† 7 cases from Shanghai, 3 from Peking and 1 from overseas.

Source: C.I.D. records. Base population data from Hambro Sample Survey.

the rest of China apart from the Province of Kwangtung adjoining Hong Kong, had a significantly lower incidence of S., while those with "native places" in Kwangtung had a significantly higher incidence than would be expected from their numbers in the total Hong Kong population of all ages, assuming that place of origin had no differential effect on the S. tendency.

Persons actually born in Hong Kong naturally had the greatest economic security, with long-established roots, and were psychologically well adapted. These formed only 3 per cent. of the post-war immigrants (Hambro, Table X). Kwangtung people, however (although normally constituting even before the war the greater part of Hong Kong's population), had always been basically attached to their own "native places", remaining in Hong Kong only long enough to make their fortunes in what had long been the main economic centre of the geographical area. These formed as much as 64 per cent. of the post-war immigrants, and among them were many involuntary emigrants from their "native places". Their high S. rate is therefore understandable from the inevitable stresses they had to encounter, and their large numbers among the post-war immigrants was chiefly responsible for the high S. rate of the latter. Persons from other parts of China had a low S. rate, and this may be due to the fact that most of them came from a higher social and economic stratum, i.e., the middle class of northern cities rather than the peasantry of adjoining Kwangtung. As such they were not so much subjected to economic stress, which as we shall later see, was an important precipitating factor in S. This group made up 33 per cent. of the post-war immigrants.

The Factor of Immigration

Relevant data on the origins of 59 S. cases, including the date of their immigration into Hong Kong, were recorded in the dossiers, and these were

taken consecutively as I worked through the latter. There were no special factors related to immigration status that could be regarded as determining in any way the recording or omission of such data in the dossiers, so that the sample could not have been unrepresentative in spite of its smallness.

The bearing of immigration on the incidence of S. is clearly brought out in Table VIII. While the Hong Kong-born and the pre-war immigrants had a

TABLE VIII

Distribution of Suicide by Hong Kong-born, Pre-war Immigrant and Post-war Immigrant Persons

Immigrant Status	Percentage Distribution in Population*	Suicide	
		Observed	Expected
Hong Kong born	27·0	6	15·93
Pre-war immigrants ..	33·1	7	19·53
Post-war immigrants ..	39·9	46	23·54
Total	100·0	59	59·00

$\chi^2 = 35{\cdot}66$ Df = 2 $P < 0{\cdot}001$

* A number of 30,000 non-Chinese excluded from the total population.

Source: C.I.D. records. Base population data from Hambro Sample Survey.

similar incidence for S., both rather lower than might be expected from their numbers in the total population (assuming that length of residence in Hong Kong had no effects on the tendency to S.), the incidence for post-war immigrants, most of whom were refugees from the Communist revolution, was much higher than might be expected. The difference is highly significant statistically.

It is necessary, however, to be cautious in assessing the meaning of this finding. The post-war immigrants were on the whole older than the pre-war immigrants and the Hong Kong-born. While persons under 15 amounted to only 35·4 per cent. of the post-war immigrants, they came to 41·6 per cent. of all the others (see Hambro, Table XXV); and persons under 15 are practically immune to S. Furthermore, the M:F ratio (taking all ages) in the former group was 131:100 while in the latter it was only 105:100 (Hambro, *loc. cit.*). The post-war immigrant sex ratio was in fact bigger if those over 14 only were considered. This excess of males must be taken into account since, as we have shown, males are more prone to S. than females.

Nevertheless, it is doubtful if the above facts can explain fully the marked increase in the S. rate for the post-war immigrants. The rates for this group as well as those for the pre-war immigrants and the Hong Kong-born can be calculated from the total number of S. cases recorded for 1954 (302), the distribution of the three groups among these 302 cases according to the data in Table VIII, the proportion of each of the three groups in the population, and the total population for 1954 (2,120,000). The rates per 100,000 total population are then: Hong Kong-born, 5·3; Pre-war Immigrants, 5·1; and Post-war Immigrants, 27·8. It will be noted that the rates for the first two groups are similar to the overall rates for the years before 1949 (see Table I), when the Chinese revolution reached the borders of Hong Kong and the mass influx of political refugees began.

It was possible to obtain a limited amount of further information on the high incidence of S. in post-war immigrants from examination of the C.I.D. records. Among these there were 46 consecutive cases that had data on their actual length of residence in Hong Kong since the end of the war. According

to number of years in Hong Kong, from 1 to 8, these 46 cases of S. fell into the following distribution: 4, 4, 11, 7, 4, 7, 6, 3. This suggests that S. is most likely in immigrants after 3 or 4 years in Hong Kong; and since our cases committed S. between June, 1953 and December, 1954, these persons would have immigrated between 1949 and 1951. It may be that these immigrants passed through a phase of hopelessness and despair after 3 or 4 years, although our data cannot give proof of this. But it is improbable that the actual year of immigration and the events of the period during which these cases committed S. bore no relation to these findings. According to Hambro, as many as 60 per cent. of the immigrants between 1949 and 1951 were political refugees, as compared with only 4 per cent. of those between 1945 and 1947. These political refugees were bound to have been emotionally affected to a great extent by continuing events in their homeland just across the border.

If this was true, then it would be reflected in a rise of the Hong Kong S. rate following closely upon the course of the revolution in China. We can see from Table I that this did in fact happen. There was an increase in the rate in 1949, the year that actual fighting reached Hong Kong's borders. This rise was maintained until 1952, when another marked increase occurred. Following the end of the fighting in 1949, the force of the revolution turned against the landowners and rich peasants in the land reform movement, which finally reached Kwangtung Province (from which most of the refugees came) in 1952/3. The great dislocation caused by land reform could not but have been a severe stress on the political refugees, many of whom had relatives remaining behind in China who made demands upon them for monetary and other help. The sudden rise in the rate during 1952/3 can thus be understood. Moreover, the strain continued over 1953 and 1954, during which period our cases committed S., owing to the "Three-anti" and the "Five-anti" movements.

Here it might be pointed out that the general effect of war and political tension in lowering the S. rate (previously mentioned in Section A) could not be expected to operate in the case of a community which between 1949 and 1951 received as immigrants some half a million, mostly political, refugees—a number amounting to nearly one-third of the total population estimated for 1950. War and national danger are thought to lower the incidence of S. by inducing the citizen to lose himself in a patriotic cause, by providing full employment and a more definite aim in life: but this clearly cannot apply to a refugee population.

There can be no doubt that the increase in the S. rate since the war has been a real one, and the reason for this is patently related to the fact of immigration from China. That immigrants are exposed to distinct psychological hazards, quite apart from war, is well known. As far as Singapore is concerned, Murphy (1954) found that immigrants, especially the more recent arrivals, had a higher rate than the native-born; and Taff (1951) showed that in Hawaii five out of the six ethnic groups composed mainly of immigrants had much higher rates than the native Hawaiians and that the high rates gradually fell with cultural assimilation. Murphy (1955, p. 182) also showed that East European refugees in Britain had very high S. rates. The fact that immigrants have high rates for mental disorders (Odegaard, 1936; Malzberg, 1936) is similarly a reflection of the increased stress they have to encounter.

E. Civil Status and Family Integration

There are unfortunately no data available concerning the distribution of civil status in the Hong Kong population, and in order to obtain control

material for the data relating to civil status in our S. cases it was necessary to carry out a sample survey ourselves.* Although this survey has its limitations arising from sampling as well as its small size, nevertheless it appears sufficiently representative to be used for obtaining a hint, if not more, as to the relation of civil status to S. The attempt to do this may be justified inasmuch as this aspect of the study of S. has, as far as I know, not hitherto been investigated in a non-western culture.

Table IX shows the observed and expected numbers of S.A. in the married, single, widowed, divorced and in concubines, from data available for 211 cases of S. and 159 cases of A.S. In order to assess the significance of the

TABLE IX

Observed and Expected Distribution of Civil Status Groups in Suicide and Attempted Suicide

Civil Status	Suicide				Attempted Suicide			
	Observed			Expected	Observed			Expected
	M.	F.	Total	Total	M.	F.	Total	Total
Married ..	59	39	98	127·61	34	43	77	96·16
Single ..	53	23	76	61·61	30	36	66	46·43
Widowed ..	4	18	22	20·68	1	10	11	15·58
Divorced ..	4	2	6		—	2	2	
Concubines	—	9	9	1·10	—	3	3	0·83
Total ..	120	91	211	211·00	65	94	159	159·00

Excluding concubines: $\chi^2 = 12·82$ $0·001 < P < 0·01$ Df = 2 — $13·43$ $0·001 < P < 0·01$

Source: C.I.D. records and Almoners' histories. Base data from an original survey of civil status in population.

discrepancy between the observed numbers and the numbers expected on the hypothesis that marital status had no specific influence on the tendency to S.A., Chi^2 was calculated for the married, the single, and the widowed plus divorced together, but the concubines were ignored because of their small number. It was found that, for S., married persons (of both sexes) were much less numerous than expected, while single persons were more numerous, and the widowed plus divorced rather more numerous. In the case of A.S., married persons were again less numerous, and the single more numerous, but the number of the widowed plus divorced was almost as many as was to be expected.

For the purpose of comparison, S. and A.S. rates for the different civil status groups may be calculated from the numbers of S. and of A.S. in these groups as given in Table IX, and the distribution of these groups in the population over 14 years of age as found in our sample survey. These rates are set out in Figure 4, and they show that for both sexes together the married appear

* After this work had been done, it was discovered that Mr. E. F. Szczepanik, in conducting the sample survey for the Hambro mission, had actually obtained data on the distribution of civil status. These, however, were omitted from the Hambro Report. The data correspond surprisingly well with ours.

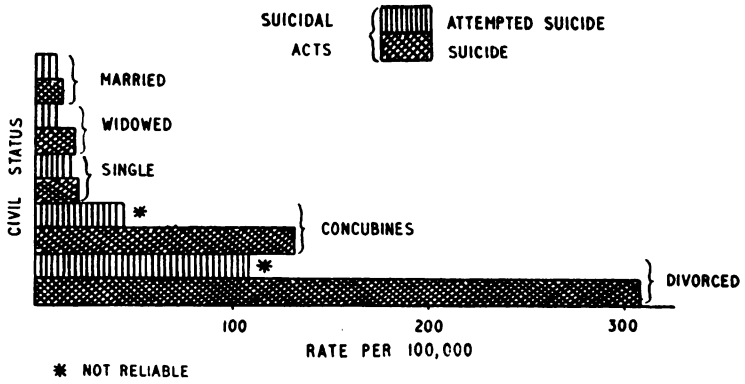

FIG. 4.—Rates for suicidal acts, by civil status (both sexes).
Sources: Almoners' histories and C.I.D. records.

to have the lowest S. rate ($12 \cdot 5 \pm 1 \cdot 30$), and then in ascending order the widowed (i.e., including widowers) ($17 \cdot 5 \pm 3 \cdot 73$), the single ($20 \cdot 0 \pm 2 \cdot 29$), concubines ($133 \cdot 1 \pm 44 \cdot 34$) and the divorced ($307 \cdot 7 \pm 125 \cdot 4$). Many years ago Durkheim had shown in his classical analysis of this topic that marriage had a protective effect against S. for those over 20 years old (English edition, 1951, pp. 171 ff.). Wicksell (1934) and Dahlberg (1944) have also found this to be true for Sweden, taking all ages into account (quoted by Dahlgren, 1945, p. 53). But in the United States it has generally been found that, when not corrected for age, the single have a lower rate than the married and also the widowed and divorced. (An exception was in Seattle, 1948–52, where the married had the lowest rate, cf. Schmid and van Arsdol, 1955.) However, if age is held constant, the married have the lowest rate (Cavan, 1928, p. 317; Schmid, 1928, p. 373). In London, Sainsbury (1955, p. 65) found that the married as a whole had a higher rate than the single. The low rate we have found for the widowed is unusual, and if valid may perhaps be explained by the existence of the tradition of mutual support associated with the extended family. It is also possible that in Hong Kong there are many young widowed persons, since the span of life here is relatively shorter than in western countries, and it is known that the young are less prone to S.

In the case of A.S., our data suggest that again the married have a low rate ($9 \cdot 8 \pm 1 \cdot 11$), but not as low as the widowed ($8 \cdot 8 \pm 2 \cdot 65$). The single have a higher rate than the married ($17 \cdot 4 \pm 2 \cdot 14$), but the apparently very high rates for concubines and the divorced are not reliable ($44 \cdot 4 \pm 25 \cdot 62$ and $102 \cdot 6 \pm 72 \cdot 49$ respectively). The data supplied by Lendrum (1933), showed that the A.S. rate for Detroit, taking all ages and both sexes together, increased from the single to the married and then the divorced, with the widowed having a low rate comparable to the single. Piker (1938) found that widowed women had the lowest A.S. rate too, and widowers a rate only slightly higher than for single or married men; his married persons, if both sexes were combined, had only a slightly higher rate than the single. Dahlgren's figures (1945, p. 53) show that the single had a lower A.S. rate than the married when not corrected for sex or age, and also that widowed persons had the lowest rate. In Seattle, 1948–52, Schmid and van Arsdol (1955) found that the widowed had the lowest A.S. rate and the divorced the highest.

On the whole the findings for Hong Kong do not appear to show any remarkable features either in the case of S. or of A.S., except perhaps for the relatively low S. rate for widowed persons of both sexes. Comparisons however are not very meaningful unless they are made within definite age and sex categories, and our data are not detailed or accurate enough to warrant such analysis. As for the concubines, this group presents certain features of interest, and the reason for their high S. rate will be taken up later when we come to discuss the precipitating causes of S.

Social Isolation

In Table X I have tried to test whether or not there was a significant difference between the incidence of S. in those who were all alone in Hong Kong, without any relatives within the simple conjugal family (i.e., consisting

TABLE X

Observed and Expected Distribution of Cases With and Without Relatives, in Suicide and Attempted Suicide

	Suicide		Attempted Suicide	
	Observed	Expected	Observed	Expected
With relatives	164	170·10	128	128·18
Without relatives ..	47	40·90	31	30·82
Total	211	211·00	159	159·00

$\chi^2 = 1 \cdot 12$ 0·00
$0 \cdot 20 < P < 0 \cdot 30$ Df=1

only of parents and unmarried children), and those who did have such relatives with them. The base data were also obtained in the course of our sample survey of civil status. Although the reliability of this survey may again be questioned, still the results may be of suggestive value at least. Information on the presence or absence of relatives in relation to our S. and A.S. cases came from the usual sources. It must be noted that when the police discover a S. case apparently all alone they put up a public notice asking for relatives, or friends if any, to come forward, so that when later they state in their dossiers that the deceased had or had not relatives, this fact must be taken as reliable. If there were relatives, the relationship was invariably stated. In regard to A.S. the existence or absence of relatives was even less in doubt, since these cases were investigated both by the police and the almoners, whose usual practice was to trace relatives in order to discharge the patients in their care.

It appears from Table X that no significant difference in S.A. exists between the two groups. This may be due to the fact that in Hong Kong social (and economic) support for the individual comes not only from his own immediate family but also from more distant relatives, in keeping with the existence still of the extended family, or at least of customs of mutual aid associated with the latter. The fact that high S. rates occur in socially disorganized areas of cities, where there are much movement, anonymity and especially social isolation of individuals, has been demonstrated by American sociologists (Cavan, 1928, p. 77 ff.; Schmid, 1928, 1937, p. 370 ff.; Mowrer, 1942, p. 347 ff.; Faris, 1948, p. 208 and Schmid and van Arsdol, 1955). The same fact has been demonstrated for London by Sainsbury (1955, p. 78). All these have been ecological studies based on spatially distributed data, and it will be of interest to see if such a method as ours, apparently a more direct one for the problem, can give positive

results in other cities. Doubtless, the concept of social isolation involves a diversity of social and psychological phenomena and means more than merely the idea of individuals living alone without immediate relatives. Perhaps the method here used examines not so much social isolation as family integration alone.

F. Occupation

In 190 cases of S. and 127 cases of A.S. there were available data relating to the occupation (or lack of employment) of the subjects. The rates for various occupational groups are set out in Table XI and presented diagrammatically in Figure 5.

Table XI

Suicide and Attempted Suicide by Occupation

Occupation	Percentage in Population*	Suicide		Attempted Suicide	
		No.	Rate†	No.	Rate†
Farmers ..	1·5	1	5·8±0·71	—	—
Fishermen ..	0·5	—	—	—	—
Coolies‡ ..	9·5	24	22·1±1·39	8	7·4±0·81
Craftsmen, Cottage ..	7·4	4	4·7±0·64	1	1·2±0·31
Craftsmen, Indep. ..	3·5	3	7·5±0·81	5	12·5±1·04
Labourers, Indust. ..	12·5	15	10·5±0·96	7	4·9±0·66
Hawkers ..	6·5	9	12·1±1·03	5	6·8±0·77
Clerks§ ..	5·8	15	22·7±1·41	6	9·0±0·89
Businessmen ..	2·4	3	11·0±0·98	10	36·5±1·79
Professionals ..	3·6	6	14·6±1·13	3	7·3±0·80
Police‖ ..	1·1	—	—	1	7·9±0·83
Others¶ ..	5·6	19	29·8±1·62	10	15·6±1·17
Unemployed ..	13·2	56	37·2±1·55	36	23·9±1·42
Housewives ..	26·9	35	11·4±1·00	35	11·4±1·00
Total ..	100·0	190		127	

* Both sexes, excluding those under 15.
† Rate per 100,000 of population aged 15 and over.
‡ Includes amahs.
§ Includes shop assistants.
‖ Includes Army.
¶ Includes entertainers and unemployed persons over 60.

Source: C.I.D. records and Almoners' histories. Occupational distribution in the population from Hambro Sample Survey.

It is always misleading to compare crude occupational rates because they are influenced by many factors that are not related to occupation, e.g., age, sex, civil status, and urban or rural environment. Apart from the fact that some of the rates are based on very few cases, their interpretation must be cautious and should take into consideration the nature of the precipitating causes in each group. How important this is may be seen from the fact that among businessmen, for instance, only 1 out of the 3 cases of S. was precipitated by business failure and consequent poverty, and similarly only 3 out of the 10 cases of A.S. One other case of S. and 2 of A.S. were precipitated by causes that could be indirectly related to their occupation, viz., failure to obtain the return of a loan, discovery by the police of a business fraud and the loss by

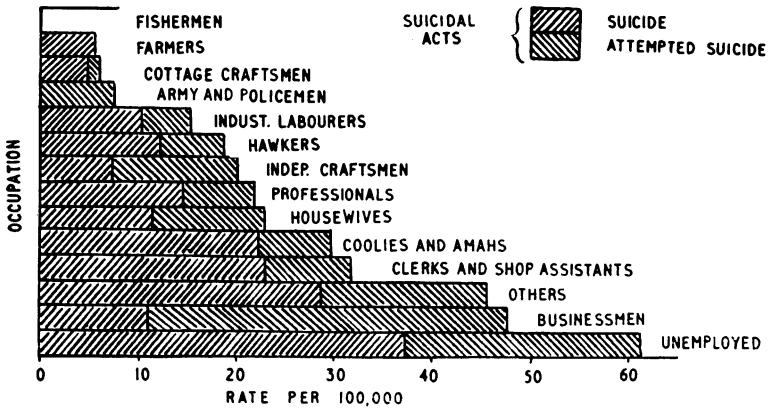

FIG. 5.—Rates for suicidal acts, by occupation (both sexes).
Sources: Almoners' histories and C.I.D. records.

theft of misappropriated money to be used for speculation. But the remaining case of S. was brought on by mental illness, and the remaining 5 cases of A.S. were precipitated by mental and bodily illness, desertion of the wife, and worry over the fate of relatives left behind in China; and all these latter causes were by no means specific to businessmen. We would be wrong therefore to attempt too broad a generalization regarding the S. risk peculiar to a given occupation. However, if we compared only those with the highest and the lowest rates, we could probably identify differences that are truly occupational.

If we take both S. and A.S. together, we find that the highest rates were found for the unemployed, businessmen and "others", and the lowest were found for army men and police, farmers and cottage craftsmen, while fisherfolk did not have a single case. That the rural occupational groups should have low rates is to be expected, for these persons lead lives more secure and less affected by the stresses of culture change; and also they have a certain degree of independence arising from their occupational pursuits, which are broadly based upon the "extended" family, and which satisfy many of their primary needs. The strongly integrated family structure of the fishing community is especially noteworthy. Persons classified under "Army and Police" were almost all policemen, the rest being locally enlisted personnel in the British Army. It is obvious that policemen have much security in their service, like other government servants.

In the case of those occupations with high rates, we find that the common factor among them is economic insecurity, rather than level of income or social prestige. Among "others" were included a variety of occupations that could not be separately considered because the basic population data were too small or unavailable; it included a number of unemployed men and women over 60, a herbalist, a gold speculator (both over 60), barbers, dancing girls, entertainers and prostitutes. The "unemployed" included all those not gainfully occupied, except housewives, students and children (under 15), and none of them were living on unearned income. All these, along with businessmen and entrepreneurs, represent a rather mixed bag, rich or poverty-stricken, socially at contrasting levels; but they were all either economically hard-pressed or were engaged in speculative and uncertain occupations attended by economic risks. In the case of the dancing girls, entertainers and prostitutes, it is well known that many of them are driven to take up such occupations by economic

hardship, often arising from rejection by their family. And also their mode of life is prone to induce in them states of hostile tension because they are often involved in tangled human relationships, or what may be referred to as inter-personal conflict. This group contributed mostly to the impulsive, unsuccessful cases of S.A. classified under "others", in contrast to those over 60, whose attempts were mostly successful, because they were more deliberate.

Businessmen as a group were unusual in that there were among them so many cases of A.S. compared to S. This very low fatality is found in no other group except the army and police, but the latter numbered very few cases. This low fatality is all the more surprising because businessmen are usually of mature age, and therefore might be expected to have a high percentage of "successes" in their S.A. Most studies on the occupational distribution of S. in western countries have been confined to S. rates only and not A.S. The general conclusion has been that merchants, businessmen and professionals have high S. rates (see, e.g., data for England and Wales presented by Dublin and Bunzel, 1933, pp. 94, 399, and by Sainsbury, 1955, p. 19). Murphy (1954) found that in Singapore too this held good. In Hong Kong not only did businessmen have a low fatality, but their S. rate was not high; in fact it was lower than that for coolies and amahs (female domestics) and clerks and shop assistants.

The Influence of Economic Conditions

If the above findings are valid, some explanation must be sought. In themselves the rates for S. and A.S. in this group of businessmen are reliable, being many times their standard errors. It is possible that the low fatality was due to the fact that their S.A. were precipitated not in every case by irrevocable and impersonal financial disaster, but sometimes by other causes, especially those associated with inter-personal conflict, which as we shall see often leads to unconsummated S.A. because either of poor planning and execution or of lack of genuine intent to die. I have already pointed out above the danger of assuming that precipitating causes are always specific to occupation, e.g., financial disaster in businessmen. It is however clear that, generally speaking, businessmen are often involved in situations where S.A. due to morbid hostile tension, with their characteristic impulsivity and lack of deliberation, as well as S.A. with merely an "appeal character", can be expected to occur. This could have been especially true of post-war Hong Kong, with its peculiar economic circumstances in 1953/54.

At that time the embargo against Communist China had obliterated much of the pattern of economic life based on the traditional entrepôt trade, and this had forced many businessmen into highly speculative and unorthodox enterprises that depended a great deal on the human factor for their success. Economic activity was very fluid. At the same time there was a very rapid development of industrial manufacturing. Businessmen (and with them the professional) could still command an income and a means of livelihood if they were resourceful. Social and business conditions were such that the opportunity to try again and perhaps recoup one's losses was always present. These unique conditions could well have accounted for the low S. rate for businessmen as well as the low fatality.

On the other hand, for those with meagre education and only elementary skills, economic conditions were much more unfavourable. There was a superabundance of these persons—the coolies and amahs, clerks and shop assistants —competing for the jobs available, as was to be expected from the doubling of the population within a few years. Their high S. rates are therefore under-

standable. Not only were they poorly paid but their jobs were insecure, and most of the clerks and shop assistants were engaged by old-fashioned Chinese establishments which had none of the welfare provisions that many of the industrial labourers (with a low S. rate) enjoyed. The coolies included many odd-job workers, often unemployed. Actual scrutiny of the main precipitating causes of consummated S. in these two groups of coolies and amahs, and clerks and shop assistants showed that, in about half of the cases in each group, the causes were poverty and illness (including old age), often inter-related.

Rates for Students

In Table XLIII of the Hambro Report, 224, 197 is given for the number of primary, secondary and post-secondary (excluding Hong Kong University) students in Hong Kong in mid-1954. During the period from which we have gathered our S. data there were among students 3 S. and 3 A.S. cases, all of whom were female (none from Hong Kong University). This gives a rate of 1·3 per 100,000 for the group (for S. as well as for A.S.). They were all secondary or post-secondary students, so that if we exclude the 169,067 primary school students from the base population the rates become 5·5. The fact that all the cases were female is of interest, especially in regard to the nature of S. motivation.

G. Main Precipitating Causes

Much has been written in criticism of attempts to identify the precipitating causes of S. First of all it is evident that the data on which such an attempt is made cannot be first-hand data, but are derived from the reports of police investigators and hospital almoners, who must all have had certain pre-conceptions about the causation of S. However, these persons are not untrained in the practice of interrogation and in powers of observation, and our almoners all held social science certificates. Moreover, there could have been little that was abstruse in the majority of cases, with their background of poverty, ill health and unemployment, although those cases with a setting of inter-personal conflict, either acute or chronic, might have been more difficult adequately to investigate. Secondly, there is the difficulty that the "causation" of S. (as of mental disease) is a whole process, from which it might be quite misleading to isolate one or two factors. Perhaps it is truer to say that there are causal situations like being poor and disabled by illness, or being poor and unhappily married, leading to the development of the S. impulse.

But even if isolated causal factors, or isolated causes, are not to be regarded as sufficient by themselves, they are necessary causes, and are of more direct significance for the aetiology of S. than all the other sociological factors that we have so far discussed. There are, of course, intimate psychological factors related to the early life of the subject that should also be taken into account, but a complete examination of the aetiology is not practicable and the main immediate or precipitating causes themselves provide useful information and do repay study.

Admitting then a degree of subjectiveness in the data gathered and bearing in mind the need to understand them as inter-dependent rather than isolated, mechanistic factors, we may discuss the main precipitating causes in our series of cases. Tables XII and XIII set out the data in question for both sexes in S.

TABLE XII

Suicide in the Sexes by Main Precipitating Causes

Main Precipitating Cause	Number			Percentage		
	M	F.	Total	M	F.	Total
Insanity	12	5	17	8·8±2·43	6·1±2·64	7·8±1·81
Somatic illness:						
Tuberculosis	15	4	19	33·0±4·32	19·5±4·38	27·9±3·04
Other illnesses	30	12	42			
Economic:						
Poverty	39	13	52	35·3±4·10	17·1±4·16	28·5±3·06
Business failure	2	—	2			
Unemployment	7	1	8			
Interpersonal conflict:						
Recent quarrel	3	12	15	3·7±1·62	40·2±5·41	17·4±2·57
Parental scolding	2	14	16			
Chronic family strife	—	4	4			
Desertion	—	1	1			
Unrequited love	—	2	2			
Other causes:						
Death of kin	—	3	3	8·9±2·74	9·8±3·29	9·2±1·96
Police action	2	1	3			
Other known	10	4	14			
Unknown causes	14	6	20	10·3±2·61	7·3±2·87	9·2±1·96
Total	136	82	218	100·0	100·0	100·0

Source: C.I.D. records.

TABLE XIII

Attempted Suicide in the Sexes by Main Precipitating Causes

Main Precipitating Cause	Number			Percentage		
	M.	F.	Total	M.	F.	Total
Insanity	3	1	4	4·3±2·42	1·1±1·10	2·5±1·24
Somatic illness:						
Tuberculosis	5	4	9	10·0±3·58	12·4±3·49	11·3±2·51
Other illnesses	2	7	9			
Economic:						
Poverty	18	14	32	47·1±5·97	21·3±4·34	32·7±3·72
Business failure	7	1	8			
Unemployment	8	4	12			
Interpersonal conflict:						
Recent quarrel	3	16	19	22·9±5·02	50·6±5·30	38·4±3·86
Parental scolding	2	9	11			
Chronic family strife	6	13	19			
Desertion	2	2	4			
Unrequited love	3	5	8			
Other causes:						
Death of kin	—	—	—	11·4±3·80	7·9±2·86	9·5±2·32
Police action	—	—	—			
Other known	8	7	15	4·3±2·42	6·7±2·65	5·6±1·82
Unknown causes	3	6	9			
Total	70	89	159	100·0	100·0	100·0

Source: Almoners' histories.

and A.S. respectively. There were 218 cases of S. and 159 cases of A.S. for whom data were given in the dossiers, or for whom it was stated that the causes were obscure. These latter cases are classed under "unknown". In the S. cases lack of information concerning causation was due to inability to contact persons sufficiently acquainted with the deceased, but in A.S. it was usually due to lack of co-operation from the subjects or their friends or relatives. It is possible that among the 20 "unknown" cases of S. there were a number who were destitute and all alone, and among the 9 "unknown" A.S. cases were several who had, from indirect information, probably undergone stress from acute inter-personal conflict associated with a certain amount of shame.

Insanity

In classifying cases under the heading of "insanity" I have excluded all those whose mental abnormality has been adjudged to be clearly "reactive" to economic, social or psychological stress, or the result of toxic-infective-

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exhaustive illness from organic causes. Thus most of the cases regarded here as insane were probably suffering from brain damage, schizophrenic and paranoid psychoses or severe depressive psychoses. These contributed to only 7·8 per cent. of the S. and 2·5 per cent. of the A.S. cases. "Reactive" mental illness has been excluded because of the importance, from a sociological point of view, of coming to an understanding of precipitating causes. While it is true that differentiation between reactive and endogenous illnesses is often impossible this does not mean that many cases of mental illness are not brought about by traumatic experiences. Since this is so, it is pointless to ignore precipitating causes in the knowledge that, theoretically, there must be also constitutional predisposition.

If, however, we include under "insanity" cases that have been considered to be reactive depression, a total of 44 S. cases could be found in our material, making 20 per cent. of all S. cases; and similarly 9 A.S. cases could be so classified, giving a figure of 6 per cent. of the total. There is in the literature much variation in the findings concerning the incidence of insanity in S.A., doubtless because of different criteria involved and dissimilar circumstances under which the samples chosen for study were obtained. Moreover, the information on which the diagnosis of mental disorder could be made was often inadequate. Our figure for S. is somewhat lower than those found by other workers, but the percentage is comparable to that found by the Metropolitan Life Insurance Company for 1927, and by Cavan in her Chicago studies (*op. cit.*, 1928, p. 112) based on coroners' records, both of which were also 20 per cent. For A.S. the percentage we found is much lower than that given by most authors, but is on the other hand similar to those found by Moore (1937) and Piker (1938) in the United States, both of which were just below 7 per cent. A number of the more important studies on this topic have been summarized by Sainsbury (1955, p. 85).

Economic Stress, Somatic Illness and Inter-personal Conflict

From our point of view, the most interesting findings were that in S. economic stress and somatic illness precipitated slightly more than half ($56 \cdot 4 \pm 3 \cdot 36$ per cent.) of all the cases, while inter-personal conflict precipitated somewhat less than a fifth ($17 \cdot 4 \pm 2 \cdot 57$ per cent.). On the other hand, in A.S., economic stress and somatic illness were involved in somewhat less than half of the cases ($44 \cdot 0 \pm 4 \cdot 27$ per cent.), while inter-personal conflict was involved in well over a third ($38 \cdot 4 \pm 3 \cdot 86$ per cent.). The difference between S. and A.S. as regards the frequency of involvement of economic stress and somatic illness is significant ($12 \cdot 4 \pm 5 \cdot 44$ per cent.); and similarly the difference between the two as regards the frequency of inter-personal conflict ($21 \cdot 0 \pm 9 \cdot 00$ per cent.). There were about twice as many men compared to women who committed S. because of bodily illness, but their numbers in A.S. were similar. Economic pressure precipitated roughly twice as many men as women towards both S. and A.S. But as regards inter-personal conflict, in S. women outnumbered men by more than ten times, and in A.S. by more than twice. All these facts point clearly to one conclusion; that women are impelled to S.A. mainly by psychological difficulties arising from the human environment and not by impersonal stresses due to illness or poverty, whereas in men it is the other way round. This difference is more clearly reflected in S. than in A.S. This finding is important for our understanding of the nature of A.S. It may be pointed out here that the study of Gamble and Burgess (1921) in Peking also revealed findings similar to ours.

It is also clear that inter-personal conflict is less frequently a cause of S. than it is of A.S., again in contrast to economic stress and somatic illness, for men as well as women. Such conflict generally arouses a varying degree of hostile tension in the subject, and produces a state of morbid tension due to suppressed aggression, a condition well-named by Lindemann (1950, pp. 140, 153) as "hypereridism". An attempt at S. in such a state is likely to fail, because of impulsiveness and poor planning as well as inefficient execution.*

Diseases Encountered

In regard to physical diseases, the great importance of tuberculosis (phthisis in all but one case of Pott's Disease) as a precipitating cause is to be noted. This would not be expected in a developed western country. The "other illnesses" involved in S. were: chronic nephritis (3 cases), blindness (3), leprosy (2), cancer of stomach (2), syphilis (2), asthma (2), pleurisy (1), *clonorchis sinensis* infestation (1), chronic malaria (1), painful labour (1), ruptured uterus from labour (1), crippled feet (1), maimed hand (1), chronic skin disease (1), tabes (1) and dysentery (1); in addition to these also enforced withdrawal from narcotic addiction because of poverty (8) and obscure physical illnesses (10). As with tuberculosis, it was found that many of these cases were also associated with poverty, and a number with old age and loneliness. One case of leprosy was in fear of removal to a leper colony, and one case of syphilis had expressed guilt over the infection of his wife.

In regard to A.S., the illnesses involved were as follows: puerperal sub-delirious (toxic-infective) state (2 cases, 1 following a Caesarean operation and 1 with failure to establish lactation), trachoma (1 case, and similarly with each of the following), post-operative adhesions, diabetes, menorrhagia with sterility, peptic ulcer, "headache" and heroin addiction with enforced withdrawal due to poverty. The case of heroin addiction had been trying to obtain admission to hospital in order to wean himself from the drug. Again in the majority of cases the element of poverty entered into the picture, and directly associated with this was the difficulty encountered in obtaining adequate treatment.

Poverty and Unemployment

The factor of poverty, without definite unemployment or recent business failure, was so pervading that it bears further analysis. As regards S., 13 out of the 19 cases of tuberculosis and 22 out of the 42 cases with "other illnesses" were poverty-stricken; and of the 52 cases classed simply under "poverty" 34 were in serious debt, 7 were addicted to narcotics, 6 were inveterate gamblers, and 5 were in positions of dependency on relatives or friends. In regard to A.S., 2 out of the 9 cases of tuberculosis and 3 out of the 9 cases with "other illnesses" were considered to have poverty as a secondary precipitating factor; and of the 32 cases classified simply under "poverty" 26 were recorded as being seriously indebted, 4 were dependent, 1 was an opium addict and 1 a confirmed gambler. Poverty is thus not infrequently associated with illness, drug addiction and gambling (and it is of course closely related to loss of, or inability to obtain, employment). This is more clearly seen in S. than A.S. It may be pointed out in parenthesis that not a single case of chronic alcoholism was found. In Hong Kong narcotic addiction takes the place of alcoholism, though not as regards the immediate precipitation of S.A. (cf. Batchelor's findings in Britain, 1954).

* This topic will be fully discussed in a paper elsewhere.

A number of cases under "insanity" and "somatic illness" were in fact also unemployed, but they were not classified as such because their unemployment was clearly a consequence of their disease. In some of the other categories too the subjects were unemployed, but unemployment was not considered to be the main precipitating cause of their S.A. It is necessary to repeat that our tabulation of "causes" is based on psychological interpretation and insight, and is not a mechanical listing of superficial aetiological factors that may be only doubtfully relevant.

Old Age and Youth

In view of the unusual finding that the Hong Kong female S. rate apparently rises in old age, and that this rate, taking all ages, is relatively so high as to approach the male one (see Fig. 1 and Table I), it is of interest to examine in detail the precipitating causes of S. in persons aged 60 and over. There were in the police dossiers scrutinized 7 male and 7 female cases in this category. All of them were unemployed. The males were all married (although in 2 cases this was not quite certain), and they were all living with their immediate family. Of the females, 4 were widows, 1 married and 1 single, and in the remaining case the information was not available. All these had their immediate family with them, although in 2 this meant only an adopted daughter. Comparison of the main precipitating causes in the two sexes suggests that they were of the same kind, except for the fact that acute quarrels leading to hypereridic states also were to be found in the females. Thus in the males, with the background of poverty in every case, 1 was blind in addition, and 3 were physically ill (2 with phthisis). In the females 2 were poverty-stricken and lonely, 1 had phthisis, and could not get into a hospital, 1 was physically ill and had seen her daughter, who was her sole support, die of phthisis, 1 had found that she had no means of repayment after she had borrowed money to bail out her son from gaol, and the remaining 2 cases followed quarrels, one with her son over being obstructed by the grandchildren and the other with her daughter-in-law over the latter's laziness in the fields.

Only 2 of these cases (one of each sex) were recorded as having been depressed, but there was nothing to suggest that the depression was not reactive to the stresses they had to face. Unfortunately no similar study of the precipitating causes of S. in this age group is known to me that deals with a western country, but there are two studies on A.S. of this kind from Britain (Batchelor, 1953) and the U.S. (O'Neal *et al.*, 1956). Both these revealed a very high incidence of depression and organic deterioration in the subjects, but direct comparison with our findings may be misleading.

It is nevertheless clear that in our series of cases aged 60 and over the factors of penury and chronic physical illness, especially tuberculosis (not normally a disease of old age), were of importance—although the series examined was not large. It is well recognized that poverty and illness fall with especial severity upon the aged. The presence of members of the immediate or conjugal family does not seem to bring with it a protective effect, but rather it may have encouraged S. from altruistic motives. The reason usually adduced for the low S. rate of aged women in the west is that they are given more consideration and succour than men. There is no reason to suppose that this is not also the cultural attitude in Hong Kong, but it is quite likely that the factor of overbearing importance is economic stress, allied perhaps to the breakdown of the "extended" family. It may be noted that the high male and female S. rates in old age are not compatible with the somewhat romantic view often

expressed that old age in Chinese culture is a period relatively free from stress. This at least does not appear to be true in Hong Kong.

Turning now to the younger age groups, we can see from Table XIV that inter-personal conflicts (i.e., from recent quarrel, parental scolding, chronic family strife, desertion of spouse and unrequited love) are far more numerous

TABLE XIV

*Suicide and Attempted Suicide Precipitated by Inter-Personal Conflict and by Economic Stress Plus Somatic Illness, by Age and Sex**

Age	Inter-personal Conflict				Economic Stress and Somatic Illness			
	Suicide		Attempted Suicide		Suicide		Attempted Suicide	
	M.	F.	M.	F.	M.	F.	M.	F.
11–15 ..	–	–	–	1	–	–	–	–
16–20 ..	1	6	–	11	2	1	1	3
21–25 ..	1	11	10	12	16	2	8	10
26–30 ..	2	3	5	8	12	9	8	7
	4	20	15	32	30	12	17	20
31–35 ..	1	5	1	6	16	4	6	3
36–40 ..	–	4	–	5	14	4	9	2
41–45 ..	–	1	–	1	11	2	4	1
46–50 ..	–	–	–	1	5	4	2	3
51–55 ..	–	–	–	–	9	3	2	1
56– ..	–	3	–	–	8	1	–	–
	1	13	1	13	63	18	23	10
Total ..	5	33	16	45	93	30	40	30
Total M+F	38		61		123		70	
Total S.A. (M+F):								
Below 31	71				79			
Above 30	28				114			

* Cf. Tables XII, XIII and XVIII.

Source: C.I.D. records and Almoners' histories.

as precipitating causes in those under 31 than in those above this age, in contrast to economic stress plus somatic illness, which unlike the former do not produce hypereridism as a rule. The only exception is in female A.S. due to economic stress plus somatic illness, taken by itself, where the usual preponderance of youths in A.S. still holds.

Concubines

Finally, the main precipitating causes in concubines, a youthful group peculiar to Hong Kong and subjected to special psychological stress, may be analysed. It was found that in the 9 cases of S., 4 were childless, so that they had thus lost their *raison d'être* as concubines; and as for precipitating causes in these 4 cases, 2 had been beaten by the principal wife, one refused money by the husband for the Chinese New Year and one had become depressed over her own sterility and therefore her insecure position in the household. Of the remaining 5 cases, 3 had had frequent altercations with the principal wife, one had been denied formal status in the household by the husband who refused to introduce her to the first wife, and one was depressed by the poverty of the family. Of the 3 cases of A.S. in this group, 2 were in long-drawn-out strife with the jealous first wife, and one was trying to eke out a living as a dancer to support 3 children, having been abandoned by the husband. The great importance of inter-personal conflict with strife and quarrelling in this group is clear. In the case of housewives who were not concubines inter-personal conflict of this kind against a background of chronic strife only accounted for a little less than half of the A.S. cases and less than a third of the S. cases. Traditionally, concubines have always been a group with low social prestige (except in ruling families) and we can see in the causes leading to their S. some of the reasons for this.

H. Mode of Suicide and Mortality

Tables XV and XVI show the frequency with which different methods were employed in S.A., S. and A.S., and the mortality of each method according to the sexes. The data are based on the methods employed and their outcome in 1,418 cases between June, 1953 and December, 1954, and were taken from the police records.

Table XV

Total Suicidal Acts, Suicide and Attempted Suicide in the Sexes, by Methods Employed

Method	Total Suicidal Acts M. No.	Total Suicidal Acts M. Per cent.	Total Suicidal Acts F. No.	Total Suicidal Acts F. Per cent.	Suicide M+F No.	Suicide M+F Per cent.	Attempted Suicide M+F No.	Attempted Suicide M+F Per cent.
Jumping from height	100	14·8±1·37	52	7·0±0·93	100	28·3±2·40	52	4·9±0·66
Drowning	138	20·5±1·55	128	17·2±1·38	36	10·3±1·62	230	21·6±1·26
Hanging	75	11·2±1·21	62	8·3±1·01	106	30·0±2·44	31	2·9±0·51
Wounding	39	5·8±0·90	23	3·1±0·63	8	2·3±0·79	54	5·0±0·66
Hypnotics	34	27·9±1·73	41	35·6±1·76	55	15·6±1·92	398	37·4±1·48
Lye	154		224					
Other and unknown poisons	95	14·2±1·34	130	17·5±1·39	41	11·6±1·70	184	17·3±1·16
Other methods	24	3·4±0·70	46	6·2±0·88	3	0·8±0·48	67	6·3±0·74
Unknown methods	15	2·2±0·56	38	5·1±0·81	4	1·1±0·56	49	4·6±0·64
Total	674	100·0	744	100·0	353	100·0	1,065	100·0

Source: C.I.D. records.

Table XVI

Methods of Suicide and Outcome by Sex

Method	Suicidal Acts M.	Suicidal Acts F.	Suicidal Acts Total	Mortality Percentage M.	Mortality Percentage F.	Mortality Percentage Total
Jumping from height	100	52	152	70·0±4·58	57·7±6·85	65·8±3·85
Drowning	138	128	266	15·2±3·06	11·7±2·84	13·5±2·10
Hanging	75	62	137	85·2±4·10	67·7±5·94	77·4±3·58
Wounding	39	23	62	7·7±4·27	21·7±8·59	12·9±4·26
Hypnotics	34	41	75	17·6±6·53	9·8±4·53	13·3±3·92
Lye	154	224	378	13·6±2·76	10·7±2·06	11·9±1·66
Other poisons	60	92	152	13·3±4·38	13·0±3·51	13·2±2·74
Unknown poisons	35	38	73	28·5±7·63	28·9±7·35	28·8±5·30
Swallowing objects	4	19	23	0·0	0·0	0·0
Jumping before train	1	—	1	100·0	—	100·0
Electrocution	1	—	1	100·0	—	100·0
Battering head	5	—	5	0·0	—	0·0
Gun-shot	1	—	1	100·0	—	100·0
Other methods	12	27	39	0·0	0·0	0·0
Unknown methods	15	38	53	13·3±8·76	5·3±3·63	7·6±3·64
Total	674	744	1,418			

Source: C I.D. records.

It can be seen that "active" methods with a high mortality, viz., hanging and jumping from a height, were common, and were used in S.A. by more men than women. Jumping into the sea was another common method and was used in S.A. by more men than women, but the difference was not great, and the method had a low mortality. The other common method was poisoning with hypnotics and lye (caustic soda), but this had a low mortality and had a preponderance of women employing it. The remaining methods—wounding, use of other and unknown poisons, and those subsumed under "other"—were not common, had comparatively low mortality rates, and were more often employed by women. This being so, with women commonly using methods of low mortality, we would expect that in S.A. as a whole females should have a lower mortality rate than men.

Sex Differences in Mortality

Analysis shows that the sex difference in mortality was actually what might have been expected. Of the men, 208 out of 674, or $30 \cdot 9 \pm 1 \cdot 78$ per cent. died; and of the women, 145 out of 744, or $19 \cdot 5 \pm 1 \cdot 46$ per cent. succumbed. The difference between the two percentages was $11 \cdot 4 \pm 0 \cdot 83$ per cent., which is highly significant. For the sake of completeness it may be added that the mortality for both sexes taken together was $24 \cdot 9 \pm 1 \cdot 15$ per cent. This rate is lower than that found by Dahlgren for his series (55·0 per cent.) and also that obtained by Schmid and van Arsdol (30·7 per cent.) for Malmoe and Seattle respectively (Dahlgren, 1945, p. 71; Schmid and van Arsdol, 1955). It is however always of dubious value to make these comparisons for we can never be quite sure that all A.S. cases have been reported and therefore included in the figures from which the mortality rate is derived. Nevertheless, in regard to the lower mortality rate of women, this finding appears to be universal and has been observed also in Asian populations (cf. Anzures, 1927, for Manila; Murphy, 1954, for Singapore; the W.H.O. survey, 1956, for Ceylon, Japan, and also various western countries; Dublin and Bunzel, 1933, p. 54; Dahlgren, 1945, p. 71 and Schmid and van Arsdol, 1955).

It does not appear sufficient to ascribe the lower fatality rate from S.A. in women only to the fact that they employ more often the methods with a lower mortality (or lower efficiency), since Table XVI shows that for every method men had a higher mortality than women, except for "wounding", while "other poisons" and "unknown poisons" were more or less equal. The male mortality rate for "wounding" ($7 \cdot 7 \pm 4 \cdot 27$ per cent.) is however not valid, so that a comparison with the corresponding female rate is pointless. We may reasonably conclude therefore that masculinity in itself, with its vigour and determination, is a factor tending to make S.A. successful, whatever the method used. This is often ignored in discussions of the topic, but it is also borne out by Lendrum's material (*op. cit.*, 1933). Similarly Schmid and van Arsdol (1955) found that male mortality exceeded the female in every method except "cutting". Such forcefulness and determination is of course also to be expected in the mature compared to the young. It is to be noted that this factor operates not only in "active" methods like jumping from a height, drowning and hanging, but also in poisoning by hypnotics and lye, for more lethal quantities may be ingested to make the outcome certain. In the case of "other poisons" no such factor appears involved because they included extremely poisonous substances like arsenic and cyanide, or substances that were fanciful rather than strongly poisonous, such as liquid tooth paste and hair lotions.

It may also be recalled here that the mortality is lower in the young than the old, since the S.: A.S. ratio is smaller in the former, a finding which is usually the rule (see Section C).

To say that a S.A. fails because the method employed is not lethal is of course to some extent tautological. It is necessary to explain why such a method is chosen to begin with, and here we should beware of falling into an intellectualistic interpretation of the subject's choice of a method. This might lead us erroneously to say that because the S. failed or because the method chosen was inefficient, therefore the subject was not really serious about the intention to die (cf., for example, Murphy, 1954). The choice of method depends on its availability, on whether it is within immediate physical reach, on the knowledge, experience and maturity of the subject, on suggestion and learning, and on the subject's mental state at the time. The last is of great importance, and involves essentially the question whether or not the subject was in a position coolly

and efficiently to plan and execute his desire to end his life, without being rent by hostile tension as a result of inter-personal conflict.

I. Monthly Distribution

It was possible from the records of the Registry of Births and Deaths to obtain the monthly totals of S. cases for the years 1948–1955, the figures for 1953 and 1954 having unfortunately not been entered by the month. In Table XVII I have set out the actual numbers of S. for the different months, the

Table XVII

Monthly Distribution of Suicide Cases (1948–52, 1955) *and of Mental Hospital Admissions* (1948–55)

Month	Absolute Figures		Reduced* and Expressed per 1,000		Mean of 3 Consecutive Months	
	S.	M.H. Admission	S.	M.H. Admission	S.	M.H. Admission
January	70	506	68·4	83·0	72·1	86·4
February	66	485	70·8	86·0	75·1	87·9
March	88	583	86·0	94·7	76·9	88·9
April	73	511	73·8	86·0	83·3	91·9
May	93	600	90·9	95·2	89·4	88·7
June	102	505	103·2	85·0	93·5	82·7
July	88	418	86·3	67·9	92·4	77·3
August	89	484	87·4	79·0	88·9	74·3
September	92	452	93·0	76·1	87·5	77·2
October	84	470	82·1	76·4	85·3	77·8
November	80	478	80·9	80·4	80·1	82·4
December	79	556	77·2	90·3	75·5	84·5
Total	1,004	6,048	1,000·0	1,000·0	1,000·0	1,000·0

* Reduced according to the length of the different months to a standard 30-day month.
Source: Registrar of Births and Deaths and Hong Kong Mental Hospital.

material comprising 1,004 cases for the 6 years. The figures obtained after the monthly numbers have been reduced according to the varying lengths of the months to standard 30-day months have been calculated and, for the sake of comparison, these numbers have been expressed per 1,000 cases and placed alongside similarly computed figures derived from the monthly admissions to the Hong Kong Mental Hospital for the years 1948–55 inclusive. Furthermore, in order to present the data from the two sources graphically, the means of 3 consecutive months have been calculated for each month and the curves for these figures plotted in Figure 6.

The S. curve shows a peak in June, and this is similar to what has been found for the majority of European countries in which this topic has been investigated, where the maximum incidence of S. is in spring or early summer (cf. Dublin and Bunzel, 1933, p. 86; Dahlgren, 1945, p. 58; and Sainsbury, 1955, p. 67). Hong Kong, although lying just within the Tropics, has a distinct change of seasons with a moderately cold winter. In European countries, furthermore, a smaller peak is often found in the autumn. Our curve does not reveal this, but the "unsmoothed" figures in Table XVII indicate such a rise in September. Various authors have noted that the curves for mental hospital admissions parallel that for S. (cf. Dahlgren, 1945, p. 61), but this does not appear to be true for Hong Kong.

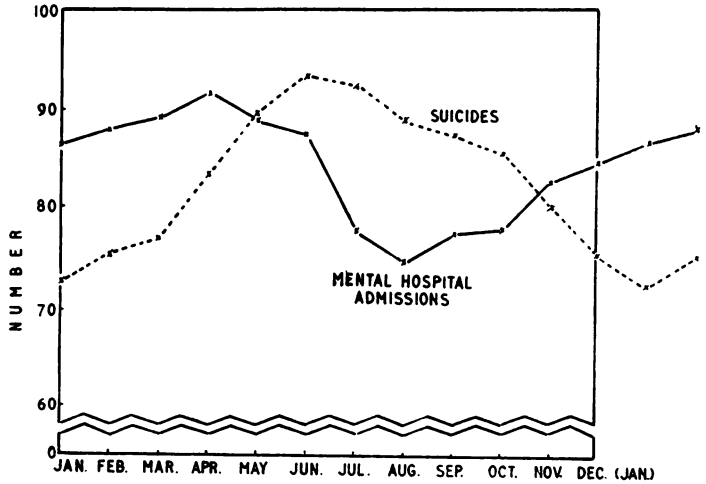

FIG. 6.—Monthly distribution of suicides (1948–52, 1955) and Mental Hospital admissions (1948–55) in Hong Kong.
(Figures are the means for 3 consecutive months: see Table XVII.)
Sources: Registry of Births and Deaths and Mental Hospital.

IV.—CONCLUSION

Most of the facts that have been demonstrated about S. in Hong Kong fit in with findings from other countries, but there are some unusual results emerging from our enquiry which are probably related to the social, economic and cultural *milieu* of the Colony.

Of socio-economic significance are the rise in the S. rate in recent years, the high rate in post-war immigrants and the fact that the highest rates were found among low-income and low-prestige groups (clerks and shop assistants, coolies and amahs) rather than among the rich and socially elevated. These facts, taken together with the finding that, as in other countries, the urban rate is higher than the rural, would seem to indicate that the processes of urbanization and industrialization, with the breakdown of primary group support and the substitution of modern values for the traditional, have led to an increase in S.

It is possible to invoke the concept of "social disorganization" to account for such findings, as has been demonstrated by several sociologists. "Social disorganization", according to the definition given by Faris, is "disruption of the functional relations among persons to a degree that interferes with the performance of the accepted tasks of the group" (*op. cit.*, 1948, p. 19). Different processes contributing to such disorganization, which has also its psychological consequences, have been studied: e.g., varying speed of social and cultural changes in different segments of a society (Bloch, 1952, pp. 16 ff.), urbanization and industrialization (Mayo, 1949, pp. 7 ff.), and disturbance in the pattern of economic life, or essentially of the production and distribution of human necessities (Faris, 1948, pp. 69 ff.). The relation of S. to various aspects of social disorganization has been convincingly demonstrated by Durkheim (1951, pp. 241 ff.), whose original concept of "anomic" S. from the failure of the individual to adjust to social change inspired so much of the later work in this field, e.g., those by Cavan (1928, pp. 77 ff.), Halbwachs (1930), Mowrer (1942, pp. 347 ff.), Faris (1948, pp. 207 ff.) and Sainsbury (1955, pp. 75 f.).

However, although the significance of social disorganization in raising the S. rate cannot be doubted, emphasis on this may lead to neglect of the very important and direct influence exercised in Hong Kong by acute political stresses and violent economic dislocation, and the enormous influx of refugees —or involuntary immigrants—fleeing from a revolution. It would be unrealistic not to scrutinize such factors for their ultimate psychological significance, and lose oneself in an abstract concept like "social disorganization" in this study.

An important complex of factors arising from unemployment, poverty and chronic physical illness (which last often leads to penury through unemployment) has been shown to be a major precipitating cause of S. Dublin and Bunzel (1933, pp. 96 ff.) noted that while high S. rates occurred among those at the upper end of the social and economic scale, among the labouring class it was those nearest the poverty line who most frequently committed S. Sainsbury (1955, pp. 72 ff.) found that although high rates were found for the richer London boroughs, among the S. cases in these boroughs were many who were actually living in poverty. The general conclusion has been that it is actually the change from affluence to poverty that precipitates S. This, however, need not be true in communities where many live at a marginal economic level and are plunged into stark destitution with unemployment or chronic illness. We have seen that in Hong Kong high rates occurred among the low income group rather than the high.

It is also possible that among the low income group the psychological effects of urbanization have been more deleterious, since they have been more recently and forcibly wrenched from their village and rural background. Psychological factors, apart from the social and economic, have been demonstrated to be of great significance in enabling us to understand the special characteristics of S. in Hong Kong, viz., the high female S. rate, which is more than half the male; the relatively numerous cases of A.S. compared to S., especially among the young of both sexes; and the apparent rise in the female S. and A.S. rates after 60. The best explanation for these features is to be found in the psychological influence on the young, especially young women, of their own cultural background. Hong Kong women are in general subordinate to men at all ages, and do not possess much freedom in organizing their own lives. Patriarchal traditions still obtain and the chances of economic independence for women are still restricted, though increasingly less so, with industrialization advancing apace.

In these circumstances, conflict arising from the human environment, or inter-personal conflict, when it involves persons in culturally defined positions which do not permit them directly to retaliate against those who aggrieve or frustrate them, will lead to hypereridic reactions. These precipitate, or rather issue in, a large number of S.A. In this connection it is of interest to note that the Penal Code of the Ching Dynasty in China (which preceded the Republic) gave explicit recognition over the course of several centuries to S. arising from shame, rage and excitement; moreover, incitement to S. was punishable like manslaughter, so that there was cultural support for the idea of S. as an indirect form of revenge against one's provocators (cf. Alabaster, 1899, pp. 303 ff.).

The whole question of the influence of the cultural background on S. is a complex one, into which we cannot fully go. The Buddhist belief in metempsychosis,* and also the belief in an after-life associated with ancestor-worship, must have a bearing on the proclivity to S. We have to draw attention to one

* This specialized topic in relation to S. has been the subject of an enquiry by J. Evola (1955).

important fact at least, and this is that standardized and culturally sanctioned S. does not exist among modern Chinese. This is in contrast to the Japanese, who have the highest female S. rate in relation to the male (cf. the W.H.O. survey, 1956). In the past, however, culturally approved S. comparable to those existing in present-day Japan occurred (cf. Maclagan, 1922, XII, pp. 26 ff.). The comparatively high rate found in Chinese females must therefore be attributed to disabilities arising from the status of women, and not to social sanction.

Summary

An analysis has been made of suicide in Hong Kong as regards trends in time, age, sex, certain sociological variables, main precipitating causes, methods employed, mortality and seasonal distribution. Many of the findings are in keeping with what has been demonstrated in western communities, but, while "social disorganization" can be invoked to explain certain results, the direct influence of social and economic disturbance arising from events in adjoining China should not be overlooked.

The unusual findings of a high female rate compared to the male, of a noticeably large number of unconsummated suicidal attempts in the young, as well as the rise in the female rate in old age, are probably due to certain psychological factors arising from the subordinate status accorded to women and to young persons. Changing age and sex trends in the Chinese suicide rate can be demonstrated, and are thought to be related to the dissolution and modernization of a traditionally patriarchal culture.

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