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STUDENT SUICIDES

BY

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"On 22nd March 1676 John Abramhall, commoner and undergraduate hanged himself in his chamber. The next day his doore was broke open, he was found hanging on his beame. He was the son of the parson of Foy in Herefordshire. No reason or supposition be given why he hung himself. A temperate, sober, ingenious, man."—*Life and Times of Anthony à Wood.*

The suicide of a student, who in order to have gained his place at a university must have shown intellectual superiority, is regarded by everyone as a tragedy. It is not the number of lives that are lost, which are relatively few, but the considerable upset that the event causes in the university, the grief of the parents, the sorrow often felt by some friend who believed he might have prevented it, and lastly, and by no means least, the fact, as has been rightly remarked, that one suicide in a university is one too many.

Suicide in this country is an occurrence in which social and economic factors are known to play a considerable part; it has been shown to be more likely to affect those of higher occupational status (Sainsbury, 1955), and there are indications that intellectuals as a class are more prone than are members of comparable groups in other walks of life (Rook, 1954). Both these factors are at work in universities, and, since suicide is not a new phenomenon, it is surprising how little information is available about it as a cause of student deaths.

The period since the war has seen the development of student health services at almost every British university, and in this time much has been learnt about the physical and mental troubles of students. One of the most striking findings has been the comparatively high incidence of mental illness; though much of it has been of a trivial nature, it has sometimes interfered with study, sometimes wrecked a university career, and even, on occasion, has resulted in suicide. A student population must contain a number of unstable and insecure individuals, and in addition there seems no doubt that universities tend to attract such people. Whether the high incidence of mental illness is of recent origin, or whether this has always been so, it is impossible to say, for there is little information about student illness before the war to use as a standard of comparison.

For various reasons the importance of mental ill-health in undergraduate life is apt to be hidden at the older English universities. One of the reasons is undoubtedly the college system, which breaks the university into a number of self-contained, somewhat isolated communities. When cases of mental ill-health do occur in a college they are naturally regarded as matters not for discussion, perhaps even something of which to be ashamed, so that the facts are confined strictly within bounds. In other instances the patient himself tries to

keep his troubles secret, lest his university career should be affected, and so seeks help in London or elsewhere away from the university town. In consequence, though there have been indications that this is the most serious cause of undergraduate ill-health in Cambridge, it has not been possible to obtain accurate figures showing the incidence of mental trouble in the University as a whole.

The first real light to be shed on the subject came in 1951 when Parnell, working at the Institute of Social Medicine at Oxford, obtained information from some of the Oxford colleges about prolonged illness and mortality occurring among their undergraduates. When the figures were analysed two significant facts emerged: the considerable amount of serious mental illness, and the high incidence of suicide among Oxford undergraduates, which he estimated to be eleven times that of a similar group in the general population. These facts came as a surprise to university authorities, and that many responsible people were startled and shocked was obvious from the wide interest taken and the correspondence evoked in the national press.

The chief source of concern related to the problem of suicide. The questions which were raised were varied and the answers given often contradictory: What was the reason for the high incidence?; Were certain classes of undergraduates specially liable?; and, What steps should be taken in prevention? Some people apparently doubted the validity of the figures; others, while accepting that the suicide rate was high, put forward differing suggestions on the cause. Frustration over work and the fear of examinations were the most common suppositions, but this was emphatically denied by others. Some suggested that love affairs or financial worries were of greater moment, while one correspondent regarded the materialistic attitudes of the modern undergraduate to be the basic cause. Again, members of certain faculties were said to be specially liable, as were those men coming from poorer homes, who were often supposed to have difficulties in adjusting themselves to university life.

From the welter of conflicting opinions it was obvious that at the time little was known about the incidence of mental disturbance or about suicide rates in British universities. Many people, it seemed, held strong opinions on the subject, although the foundations on which such opinions could be based were acknowledged to be insecure.

Adolescent Suicides

Observers who have studied the question of adolescent suicide have emphasized the complexity of the problem and the many factors in causation that must be taken into account, factors which may have a considerable influence on the rates of incidence (Bakwin, 1957).

Different races adopt differing attitudes towards suicide : in some countries it is regarded to some extent as a noble and dignified act, while in others it is regarded as selfish and defeatist. Sometimes religious beliefs have an important influence, or social and economic factors may play a part, so that the rates of incidence vary even in different districts of the same town. In nearly all countries of the world the rates for women are considerably lower than those for men.

British universities, with mixed populations of students from all over the United Kingdom from all strata of society, and with more than a sprinkling of Commonwealth and foreign members, are a particularly difficult group for which to obtain a reliable basis of comparison. The figures published by the Registrar-General, while undoubtedly the best available, are not entirely satisfactory for this purpose. The chief drawbacks are that the age grouping of 15 to 19 years and 20 to 24 years used by the Registrar-General cuts across the usual age grouping of the student, of whom some are in the first group, with a greater proportion in the second. As the rate of suicide goes up steeply during the years of adolescence it is probably best to use the 20 to 24 age group, although not a strictly valid comparison. Secondly, no account is taken of socio-economic groupings, which, in a university population, obviously differ considerably from that of the ordinary population of England and Wales.

The incidence of suicide in England and Wales, in the age groups 15 to 19 and 20 to 24 during the years 1948 to 1956 inclusive given in the Registrar-General's tables, has shown little fluctuation. The highest annual rate per 100,000 living during this period was 7.57 for males in the 20 to 24 age group, and the lowest 0.71 per 100,000 living for women in the 15 to 19 age group.

Student Suicides

The commonest cause of undergraduate deaths known to the University Health Service during the 10-year period, from October 1, 1948, until September 30, 1958, was accident, followed closely by suicide. During this period there were 14 undergraduate suicides at Cambridge, 11 of them involving white British undergraduates and 3 involving coloured undergraduates. In Parnell's (1951) report suicide was responsible for 27% of the Oxford undergraduate deaths, being exceeded only by accident. A similar occurrence was reported from Yale University (Parrish, 1957) for the years 1920-55, when suicide was the second most frequent reason for student deaths during the period, causing 12% of all deaths. These percentages may be compared to those obtained from the Registrar-General's Statistical Tables. For the male population of England and Wales in the age group 20 to 24 years, during the years 1948 to 1956 inclusive, the corresponding figure was 4.7%.

Table I gives the incidence of suicide in certain British and American universities, and for comparison the rate in the general population of England and Wales for the age groups 15 to 19 years and 20 to 24 years. The period of observation varies somewhat, but in each instance it is a post-war period. The smallness of the number of suicides in all the universities must be stressed, for with so few cases it is only too easy to draw erroneous conclusions from statistical tables.

Table I brings out the low rate of women suicides in the social group who become university students. In the student population studied of just on 40,000, of

TABLE I.—Incidence of Student Suicides

Group	Approximate Population (Yearly Average)		No. of Suicides	Period of Observation In Years	Annual Rate per 100,000 Living
	Men	Women			
England and Wales, Age 15-19	Men	1,302,000	331	9	2.8
	Women	1,389,000	134		1.1
	Total	2,691,000	465		1.9
England and Wales, Age 20-24	Men	1,394,000	767	9	6.1
	Women	1,462,000	282		2.1
	Total	2,856,000	1,049		4.1
Cambridge University	Men	5,950	13	10	21.8
	White men	5,600	10		17.8
	Women	630	1		—
	Total	6,580	14		21.3
Oxford University (Skottowe, 1957)	Men	5,250	16	10	30.5
	Women	800	—		—
	Total	6,050	16		26.4
Seven British universities	Men	15,000	10	8.5	7.9
	Women	5,000	—		—
	Total	20,000	10		5.9
University College, London (Malleeson, 1957)	Men	2,500	3	7	17.1
	Women	1,000	1		—
	Total	3,500	4		16.3
Yale University (Parrish, 1957)	Men	3,290	15	35	13.0

which about 20% were women, there were only two woman suicides. It is apparent that when making comparisons of suicide rates, if total rates are used, universities with a high proportion of women are at an advantage compared with those where the proportion of women is low. Hence it is best to confine comparison to male students only.

A striking finding at Cambridge has been the high incidence of suicide in coloured undergraduates. In the average year there are about 350 dark-skinned students in residence, and the suicide of three of these men in the 10-year period gives a very high rate of incidence—85.7 per annum per 100,000 living, a figure which, in view of the smallness of the numbers involved, must be regarded with suspicion. It may be that the Asiatic regards suicide as less of a disaster than his British counterpart. Unfortunately few figures of suicide rates are available for Asiatic countries (Table II). Japan, because of the well-known attitude of the Japanese to suicide, must be treated apart, but Ceylon returns a rate which is high compared with other Commonwealth countries though not so high as in some parts of Europe.

TABLE II.—Mortality From Suicide in Selected Countries. Yearly Average Rates per 100,000 Population of Males of Age Groups 15-19 and 20-24

Country	Years of Observation	Age Group	
		15-19	20-24
Europe:			
Denmark	1952-4	8.3	25.4
France	1952-4	4.4	7.4
Norway	1952-4	2.0	7.2
Sweden	1951-3	6.0	15.5
U.K.:			
England and Wales ..	1952-4	2.9	6.0
Scotland	1952-4	1.9	3.4
N. Ireland	1952-4	1.3	3.3
America:			
Canada	1952-4	3.8	7.3
U.S.A. { Whites ..	1951-3	4.2	9.7
{ Non-Whites ..	1951-3	1.7	7.8
Asia:			
Ceylon	1952-4	5.9	16.1
Japan	1952-4	26.1	60.0

Compiled from *Epidemiological and Vital Statistics Report*, vol. 9, No. 4, 1956. World Health Organization.

It is easy to think of a number of reasons why coloured students should be under nervous stress. Besides the difficulties of study common to all students they have to contend with difficulties of homesickness, of language, of food, of climate, of other ways of life, and sometimes with considerable loneliness. The argument that these circumstances are a cause of a high rate of suicide would be more convincing if it were shown to apply to other universities. Actually in the seven universities, with a coloured population at least one-third greater than that of Cambridge, there were no suicides among these students. There is some evidence, however, that coloured students are more liable to mental illness than are white students, and it would seem fairest to keep the comparison to white male students only.

If this is done it will be seen that for the period in question the seven British universities had a suicide rate which is slightly higher than that of England and Wales: the rate at Cambridge is nearly three times, and that at Oxford is nearly five times, the rate for England and Wales.

Analysis of Cambridge Undergraduate Suicides

Eleven of the undergraduates committing suicide came from the United Kingdom, two were from India, and one was a Siamese; there were 13 males and one female; one was aged 19 years, five were 20, six 21, and one 22; in one instance the age is unknown.

It is difficult to assess the social group to which an undergraduate belongs without knowing a good deal about the home background, for the patterns of income have changed so much since the war that classifications used previously may be quite wrong. A rough classification of social groups may be made from the schools which undergraduates have attended, dividing them into the more expensive and the less expensive schools. With this method it appears that roughly half the undergraduates go to the more expensive schools, probably coming from better-off homes, and half go to less expensive schools. B. W. Davy (1958, personal communication), using more accurate methods for the five colleges covered by his research, came to very similar conclusions. As six of the suicides occurred in undergraduates who went to the higher-income-group schools and five occurred among those who had been to the lower-income-group schools, there is little suggestion that social class was a factor.

National Service had been completed in three instances, had been deferred in five, and in two the men had been rejected. Three men were not liable.

There were two suicides in two colleges at intervals of over two years, while the remaining ten were in different colleges. Two of the suicides were reading Law, two Natural Sciences, and the remaining ten were in separate faculties. In the examinations prior to suicide, one had been placed in Class I, three had been placed in Class II, Division I, four in Class II, two in Class III, two had failed, and two had not taken an examination. These results could be described as average or possibly rather below average.

Three men were in their first year of residence, eight in their second year, and one in the third year; the woman was in her third year. One man, who owing to mental ill-health had missed the usual third-year examination, was in his fourth year. Two periods of time seem to be of importance—near examination time and at the beginning of the academic year: there were

five deaths in May, two in June, four in October, and one each in January, March, and April.

The precipitating factors were said in five instances to be worry over work. In two instances the men had been noted as restless and depressed, one man had a recurrence of symptoms of pulmonary tuberculosis which caused his mental upset, one man was in difficulty because of homosexuality, and in the case of the woman it was a love affair; in four instances apparently no one had noted that anything was amiss. Three of the cases were under psychiatric care at the time of the suicide, one had been seen a short time previously by a psychiatrist but had refused to attend again, and one was under the care of a general practitioner. In four cases there were indications of home difficulties. The cause of death in nine cases was carbon monoxide poisoning, two men shot themselves, two hanged themselves, and one died from drugs. Six deaths occurred in college rooms, one in a college hostel, three in lodgings, one in hospital, one in some woods just outside the town, one at home during vacation, and one in a foreign country.

The preponderance of carbon monoxide poisoning as a means of committing suicide suggests that methods of heating other than gas are to be preferred in colleges and hostels. It must, however, be noted that only two out of ten suicides in the seven universities made use of gas. If an individual is determined to kill himself there are always a number of methods available.

Undergraduate Suicides in Former Years

Through the kindness of Dr. C. G. Eastwood, medical officer of health for the City of Cambridge, it has been possible to obtain information about undergraduate deaths occurring during term in the 20 years prior to the setting up of the University Health Service. There are gaps of three years in the records, which have been filled to some extent from other sources, and the register is not as complete as for the last 10 years, when watch has been kept for undergraduate deaths not only in term time, but during vacation. In Table III is given the

TABLE III.—Incidence of Male Undergraduate Suicides at Cambridge University Since October, 1928, Given in Decades

Years	Estimated Male Undergraduate Population	No. of Suicides	Annual Rate per 100,000 Living
October, 1928, to September, 1938	4,814	10	Total 20.8
October, 1938, to September, 1948	3,693	12	„ 32.5
October, 1948, to September, 1958	5,950	13	„ 21.8 White-skinned 17.8

incidence of male undergraduate suicides for three 10-year periods; these rates represent a minimum, especially in the earlier years, when cases may easily have been missed, especially if death had occurred elsewhere than at Cambridge.

The incidence of suicide of white undergraduates was highest in the decade which included the war. The war years brought many changes to the University, some of which may have influenced the suicide rate; the undergraduate population decreased, the more physically efficient and to some extent the more mentally stable men were absorbed by the armed Forces, so that the type of entrant differed from that of peacetime. In addition there were the trials of bombing and the anxieties which are inseparable from international strife.

The previous decade, from the late 'twenties until a year before the outbreak of war, is more comparable to the last 10 years, but there are still important differences. Since the war there has been an increase in the number of undergraduates, and in the earlier post-war years a high proportion was made up of men who had returned from war service. Whether these, or other differences, have had an influence on the suicide rate it is impossible to say, but actually the rates during these two decades are very similar. During a period of 35 years 103 undergraduate deaths, excluding war deaths, are known to have occurred, most of them in term time; of these, 41 were due to accident, 27 to disease, and 35 to suicide.

Discussion

The considerable differences in the rates of suicide found in the older English universities compared with those found in most other universities, and in the country as a whole, are not easily explained. The foregoing analysis of suicides occurring at Cambridge in the last 10 years has shown a rather remarkable spread in the various socio-economic factors which affect the undergraduates' existence. It is apparent that no one factor is involved, but that a number of factors, while not directly causal, may aggravate an underlying tendency to mental disturbance.

In trying to come to some conclusions two possibilities must be considered. Firstly, have the older universities some special attraction for the mentally unstable, or is it possible that the selection methods adopted in some way favour such a choice? Secondly, what are the differences in the mode of life or methods of study at the older universities which could act as aggravating factors tending to unbalance someone with an already unstable personality?

It must be acknowledged at once that no satisfactory answer can be given to the first question. It is probable that the children of highly intellectual, and of highly ambitious, parents form a higher percentage of entrants at Oxford and Cambridge than they do elsewhere. These parents often expect much of their children or, what comes to the same thing so far as mental stress is concerned, the children believe they do and so ask much of themselves. Pressure to do well in competitive examination, whether real or fancied, can be a potent cause of anxiety and worry. If the more obsessional students would accept Jowett's advice, that the class does not matter, fewer would suffer from psychoneurotic symptoms.

Selection methods for university entrance are under such close and constant scrutiny that it seems unlikely that the methods differ greatly in the various British universities; where Oxford and Cambridge do differ is that competition for places is more acute than elsewhere. It has been suggested that this leads to higher standards being used and that the "hazard of suicide marches hand in hand with the severity of selection," the implication apparently being that higher standards of entry are more likely to lead to the selection of the mentally unstable. This idea has not, however, found universal acceptance. It does seem possible that the difficulties of entry, when they are surmounted, lead in some cases to exaggerated hopes which are doomed to disappointment, and they may even produce in some individuals a faith in his or her abilities which must sooner or later be dispelled, possibly with unpleasant effect. In order to answer this first question with any degree of certainty it would be

necessary to have a great deal more basic knowledge together with accurate figures about the amount and type of mental ill-health occurring in the University. For reasons which have already been indicated no such figures are available from which to construct a reliable estimate.

A number of points can be made bearing on the second question.

The transition from schoolboy to student is not without difficulties for which some individuals are ill prepared. This is particularly likely to occur when the change is from those schools which favour the more intensive forms of training to one of the older universities where the undergraduate is left much to his own devices as regards planning the reading for his examination. Added to this is the need for concentrating the work and the many other activities that are crowded into the undergraduate's daily life into an eight-weeks term. In other universities it is probable that a small degree of compulsion makes transition not quite so abrupt; it may even increase the sense of security and the feeling of being one of a herd. The intellectual freedom so much a feature of the older university may foster self-reliance in a majority of undergraduates, but in the weaker members it may lead to a sense of loss of direction and a feeling of inadequacy.

A fundamental distinction between life at Oxford and Cambridge and other universities, and one which may have an influence on the suicide rate, is the great difference in the number of residential students and those living in their own homes while attending their course. While there is much to be said for the college system, with its encouragement of extracurricular activities, it seems probable that living at home has a stabilizing influence even though the waking hours spent there are few. The college staircase may facilitate study, but it can also lead to loneliness and can encourage brooding.

Money worries are often suggested as a cause of psychological trouble in undergraduates, and though there must be a considerable disparity between financial means of individuals, most observers believe that financial troubles only rarely induce nervous symptoms.

It is difficult to estimate the part played by fear of examinations, to which must be added fear of loss of grant unless certain standards are reached, but in some instances this is undoubtedly a cause of serious anxiety. Despite dogmatic statements to the contrary, it is difficult to believe that examinations did not have some influence on the Cambridge suicides, for over half of them occurred around the examination period, and four out of five of those who were believed to be worrying over their work died in May. It should, however, be realized that, in the Registrar-General's returns, and in the returns from some other countries, the months of April, May, and June show an increased incidence when compared with other months. It must also be pointed out that the apparent increase of liability near examination time is not shown in the two previous decades. In any case neither financial nor examination worries are confined to Oxford and Cambridge, though it is possible that both may be sources of stress which are more acute there than they are elsewhere. It has, for instance, been suggested that the examinations at redbrick universities follow more closely to the lectures that are given and in consequence are less likely to be a cause of undue strain.

Although there is no evidence at Cambridge that undergraduate suicides have increased in number in recent years, certain post-war developments may have had an adverse effect. One of these has been the increase in the number of students, which adds to the difficulties of supervision even though the tutorial body may have been strengthened to some extent; in the period 1948 to 1957 the numbers at Cambridge have increased by over 1,200. In a big university the detection of the earliest stages of mental ill-health must almost inevitably fall on those with whom undergraduates are in daily contact. When it is suspected that trouble is brewing the patient can be guided to where specialized help can be obtained. The increase in the number of undergraduates must mean that tutors find it more difficult to get to know each man personally so that they are in a position to detect small, but possibly significant, changes in personality or performance. Nor do present economic trends make this part of a tutor's work any easier. That cases of mental ill-health are sometimes not detected in the earliest stages is unfortunate, but under present conditions is not surprising.

The crux of the problem has recently been admirably summed up by one of Her Majesty's coroners: "The truth is that suicide is a most complex phenomenon and highly unpredictable; our knowledge of its roots is scanty indeed" (Thurston, 1958). Student suicides are an end stage of the problem of mental health in universities about which undoubtedly far too little is known even by those most directly concerned. Figures of incidence of mental ill-health have been given for certain universities (Still, 1954; Malleson, 1954), but none are available for those universities with the highest incidence of suicide. Information and statistics are the bricks and mortar of prevention, and until mental disease in university students is regarded in the same way as any other illness, as a misfortune and not something of a stigma, it is unlikely that much progress will be made in preventing its occurrence.

Summary

The incidence of undergraduate suicides at the older English universities during a 10-year post-war period is higher than it is in other comparable groups.

The factors which may have had an influence on the rate are discussed.

The need is stressed for more information about the incidence and the various ecological factors which affect the mental health of undergraduates.

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SECRETION OF BLOOD GROUP ANTIGENS AND PEPTIC ULCER

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We have shown that in the Liverpool area there is a higher frequency of blood group O in patients with duodenal ulcer than in a control group taken from the general population (Clarke *et al.*, 1955). In gastric ulcer, on the other hand, we found no evidence for an association with group O, despite the fact that Aird *et al.* (1954) and several subsequent writers, discovered it in other populations. Later we showed that there was a higher frequency of non-secretors of ABH substances among duodenal ulcer patients in Liverpool than in a control series from the general population (Clarke *et al.*, 1956). In a family study of duodenal ulcer sibships, however, where the unaffected sibs acted as controls, we found no evidence that group O individuals were significantly more likely to have an ulcer than their A, B, or AB sibs. The evidence regarding the association between non-secretion and duodenal ulcer within families was equivocal, but with the collection of further sibships the association has now almost disappeared (Clarke, 1959).

The present paper is concerned with the following aspects of the subject: (1) the ABH secretor frequencies in gastric and duodenal ulcer in Liverpool; (2) an examination of the apparent liability to duodenal ulcer of individuals with different ABO blood groups and secretor status; and (3) a review of some of the hypotheses on the nature of the association between ABH non-secretion and duodenal ulcer and the presentation of fresh evidence on the subject.

Secretor Character in Duodenal and Gastric Ulcer

Table I gives the results of our investigations, started in 1954, and Table II the statistical analysis. It will be seen that whilst there is a striking association between duodenal ulcer and ABH non-secretion, there is no evidence that in Liverpool there is any association between gastric ulcer and ABH non-secretion; moreover, there is a significant difference between duodenal and gastric ulceration with respect to the frequencies of ABH non-secretion (36.6% in duodenal and 27.5% in gastric ulcer; controls 24.3%).

The degree of association between both duodenal and gastric ulcer and group O varies from place to place (Roberts, 1957). In Liverpool, where an association of group O with duodenal ulcer but not with gastric ulcer was found, non-secretion is similarly associated with duodenal ulcer and not with gastric ulcer. It is therefore important to establish whether in other localities the degree of association between the two diseases and group O is correlated with that between the diseases and non-secretion. If a correlation be found it would suggest that both group O and non-secretion were working in the same way and that their mode of action is possibly immunological. If no