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A NEW METHOD IN CRIME STATISTICS APPLIED TO THE POPULATION OF SWEDEN

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We can know the degree of honesty or criminality of a whole population merely by observing how its different members act; how many live out their lives without committing a crime, and how many commit crimes. The next step is to find the degree of criminality in the criminal section of the population, i.e. how frequently persons in this section commit more than one crime.

These two queries stand out in medical statistics most clearly in the case of venereal diseases. These diseases are contracted almost without exception through sexual intercourse only, and since two individuals are always involved, venereal disease invariably implies that two persons have acted in a manner which a medical man would call unhygienic. The situation, however, is this: among females a small group act in this way repeatedly and expose themselves or others to risks, whereas among males a larger group act in the same way less frequently. If venereal disease is taken as a criterion of loose behavior it is not enough to point out that the latter is obviously equally widespread among men and women. It is truer to say that an intensive but less extensive looseness among females corresponds to a less intensive but more extensive looseness among males. With regard to the mathematical and statistical treatment of this problem I refer the reader to one of my previous papers.[1]

In dealing with criminality one must first try to measure the risk that any individual may commit at least one criminal act. It is not until clarity has been obtained on this point that one can go further and investigate the risks of a second, third and fourth crime. In the field of criminal statistics no methodically correct investigations of these problems exist. In the present article I shall confine myself to the first problem, viz., the risk of committing a first crime. My purpose is partly to indicate suitable statistical methods, and partly to survey the situation in Sweden in a recent year.

1 Venereal Diseases in Sweden 1913 to 1937.—*The American Journal of Hygiene*, Vol. 33, No. 2, Sec. A, 51-63, March 1941.

For practical reasons the investigation has been based on the crimes recorded in the Central Registry of Criminals for 1937. I have chosen 1937 because it can be regarded as a normal year in so far as special emergency conditions hardly obtained then. I considered it unsuitable to select a year in which wartime difficulties made themselves felt. In 1937 the total number of crimes committed in Sweden corresponded to the average figure for the twenty-year period 1921-40. In the Registry of Criminals for 1937 persons were registered who had been sentenced to penal servitude or to prison or to fines for petty larceny, or had been placed on probation as a result of the latter, or had been proved guilty but judged irresponsible because of their mental condition, and finally persons sentenced to compulsory labour.

As for the statistical method to be used, it is understood that the risk of committing a crime is obviously greater at some ages than at others. Further, the risk varies in greatness as between men and women, married and unmarried people, the well-to-do and the poor, etc. It is possible to use different degrees of subdivision, but if one differentiates very much the groupings that result will naturally be very small. Theoretically there is nothing to prevent continuing differentiation to the point where one arrives at individual cases, when one can no longer speak of statistics. A reasonable principle is to start by analysing the risks at different ages for the whole population and then to proceed to subdivide with as much thoroughness as the available recorded facts allow.

In order to obtain a clear and unified picture from the risk figures one should take into consideration the fact that age is not a characteristic peculiar to any particular group of the population. If we go on living we shall all pass through the different ages successively. If one enquires into the risk that something may happen to someone, either it is a question of his falling ill or committing a crime, one does not assume that the person concerned will die tomorrow. One supposes that we will continue living for an indefinite but not necessarily very short period. In making a statistical investigation of these risks it is reasonable to assume that the person concerned will enjoy his full span of life. What is meant by a full span of life is not of course quite clear. Where one draws the line, however, does not really matter very much, for in old age the risk of committing a first crime is very small.

This can be expressed in another way. Strictly speaking there is no reason why one should not enquire into the risk during one

year only, or during a month, a week or a single day. One can enquire into the risk during several years, and there is no good reason why one should not take the risk during a whole lifetime. If, for instance, you are worried about certain tendencies you have noticed in your child and would like to know how great the risk is that he may become a criminal if he were of the average type, it is reasonable for you to assume that the child will attain to a ripe age; accordingly you want to know the risk during the whole period of his life. The right method, therefore, is first to calculate the risk for the separate years and then to add up the figures to obtain the total risk for persons living up to old age.

From a statistical point of view it should lastly be pointed out that correct risk figures are obtained by relating the number of persons sentenced annually to the number of persons in the population in the corresponding age groups, who have not been sentenced before. It has not been possible to obtain any information as to this latter number.

If the number of persons sentenced for a first crime in one year are put in relation to the whole number of persons in the same age group in the population, the risk figures obviously will be too low.

When using correct risk figures for calculating the total risk up to different age limits it must be remembered that a person cannot be sentenced for a first crime more than once. Consequently the number of persons already sentenced must be successively subtracted from the total number. If, however, we use the risk figures obtained in the manner mentioned above, figures which are too low, we can simply add the risk figures. The total risk will be a little too high and this error will exactly cancel the error in the risk figures. In this paper this method is used throughout and the calculated total or cumulative risk at different age limits is therefore correct, although the annual risk figures are a little too low.

We further assume that the mortality of the criminals is the same as that of the non-criminals which probably is not quite the case. The difference probably should not be of any appreciable importance. We also assume that the frequency of criminals is constant which is not quite true either. However, in this case the difference does not matter. The computed figures may be said to apply to what would happen, if the risk was constant, and in any case the figures are a correct expression of the criminality at the moment.

The Risk of Crime for Men and Women.

It would be a mistake to class men and women together in calculating the risk figures for the different ages. Women are certainly much less criminal than men. From the very beginning, therefore, we shall consider men and women separately.

In Table I the figures are given for men and women through-

TABLE I.

ANNUAL RISK OF BEING CONVICTED OF OFFENSES RECORDED IN THE REGISTER OF CRIMINALS AND CALCULATED TOTAL OR CUMULATIVE RISK FOR MEN AND WOMEN UP TO DIFFERENT AGE-LIMITS. THE WHOLE OF SWEDEN (1937).

	MEN				WOMEN			
Age	Average population	Number of first offenders	First offenders per 10,000	Total risk, per ct.	Average population	Number of first offenders	First offenders per 10,000	Total risk, per ct.
15-18	174825	838	47.9	1.4	168525	94	5.6	0.17
18-21	159634	594	37.2	2.6	153856	75	4.9	0.32
21-25	220601	571	25.9	3.6	213492	90	4.2	0.48
25-30	281146	559	19.9	4.6	273727	57	2.1	0.58
30-35	255704	371	14.5	5.3	257481	32	1.2	0.95
35-40	233431	329	14.1	6.0	239047	22	0.9	0.69
40-45	208035	200	9.6	6.5	217565	8	0.4	0.71
45-50	185078	162	8.8	6.9	199021	14	0.7	0.75
50-55	169153	97	5.7	7.2	180404	4	0.2	0.76
55-60	147316	40	2.7	7.4	157768	5	0.3	0.77
60-65	124978	21	1.7	7.4	134283	1	0.1	0.78
65-70	92764	8	0.9	7.5	105370	1	0.1	0.78

out the kingdom. In order to show how the calculations are made the figures are more detailed in this than in the following tables. The first column shows the average population at the different ages, the next the numbers who have committed their first crime at these ages. The third column shows the risk of committing a crime at the different ages, i.e., the number of first crimes per 1,000 individuals in each age group. The figures so obtained are, however, minimums. It is seen from them that the risk is greatest in the 15-18 age group,[2] after which it decreases continuously. After the age of 50-55 the risk is negligible. This means that the longer a person lives without being sentenced the greater are his chances of not being sentenced in the future either. If, for instance, one has escaped being sentenced before age 55, the risk later on is small.

It will be seen from the table that the risk for a man who survives into his seventies is 7.5 per cent. Because of the low risk in old age the total risk figures remain fairly stable after age

2 We should point out here that no account has been taken of persons who have been sentenced to confinement in juvenile reformatories or taken into protective homes. If these persons had been prosecuted for their crimes, the figures for this age group should have been higher still.

50-55. The corresponding figures for women will be found also in this table. We find the same fundamental age-risk relation: the greatest risk in youth, and afterwards a diminishing risk. The total risk is 0.8 per cent, i.e. for a woman the risk is one-tenth of that for a man that, on condition she does not die, she will be sentenced at least once for a more serious crime.

Town and Country Compared.

In actual fact the figures for the whole kingdom are not of very great interest, because the risk of conviction is very different in the towns as compared with the country. The material has been divided up according to the home parish at the time of the crime, so that the figures can be studied for the towns and the country separately. In Table II the figures are given for men. We find that the risk figures are considerably higher for the urban than

TABLE II.

ANNUAL RISK OF BEING CONVICTED OF OFFENSES RECORDED IN THE REGISTER OF CRIMINALS AND CALCULATED TOTAL OR CUMULATIVE RISK IN THE TOWNS AND IN THE COUNTRY FOR MEN UP TO DIFFERENT AGE-LIMITS.

	THE TOWNS			THE COUNTRY		
Age	Number of convicted persons	Per 10.000 of the average population	Total risk, per ct.	Number of convicted persons	Per 10.000 of the average population	Total risk, per ct.
15-18	469	92.0	2.8	369	29.8	0.9
18-21	292	58.4	4.5	302	27.6	1.7
21-25	284	38.6	6.1	287	19.5	2.5
25-30	290	28.8	7.5	269	14.9	3.2
30-35	205	22.3	8.6	166	10.1	3.8
35-40	151	18.0	9.5	178	11.9	4.3
40-45	97	12.8	10.2	103	7.8	4.7
45-50	77	11.4	10.7	85	7.2	5.1
50-55	53	8.7	11.2	44	4.1	5.3
55-60	18	3.7	11.3	22	2.2	5.4
60-65	8	2.1	11.4	13	1.5	5.5
65-70	3	1.2	11.5	5	0.7	5.5

for the rural population. This fact finds expression also in the big difference in the total risks. For men in the towns the total risk amounts to 11.5 per cent; for men in the country to 5.5 per cent. In other words the risk is twice as great for men in the towns as for men in the country. To provide a clearer orientation curves are given in Figures 1 and 2 for both the annual risks at the different ages and the total risks at the various age boundaries. The first point emphasized by the figures obtained is that the risk is far greater than one would have been inclined to guess. That the risks at the different ages are so great, and that rather more than one-tenth of the men in the towns who

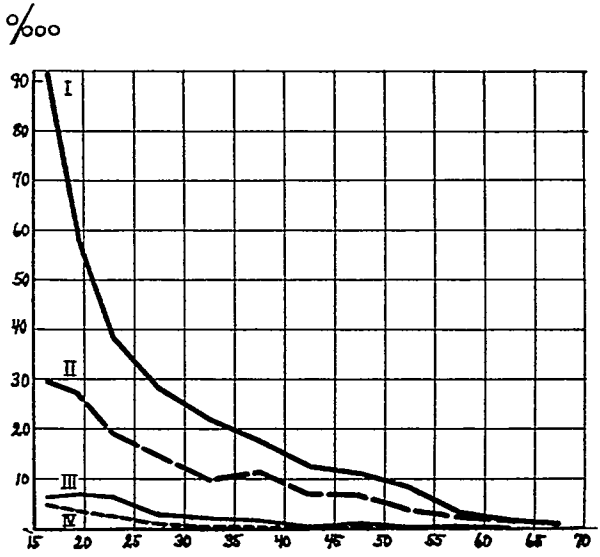

Figure 1

Risk of Being Convicted of Offenses Recorded in the Register of Criminals at Different Years of Age.

I—Men in towns
II—Men in the country
III—Women in towns
IV—Women in the country

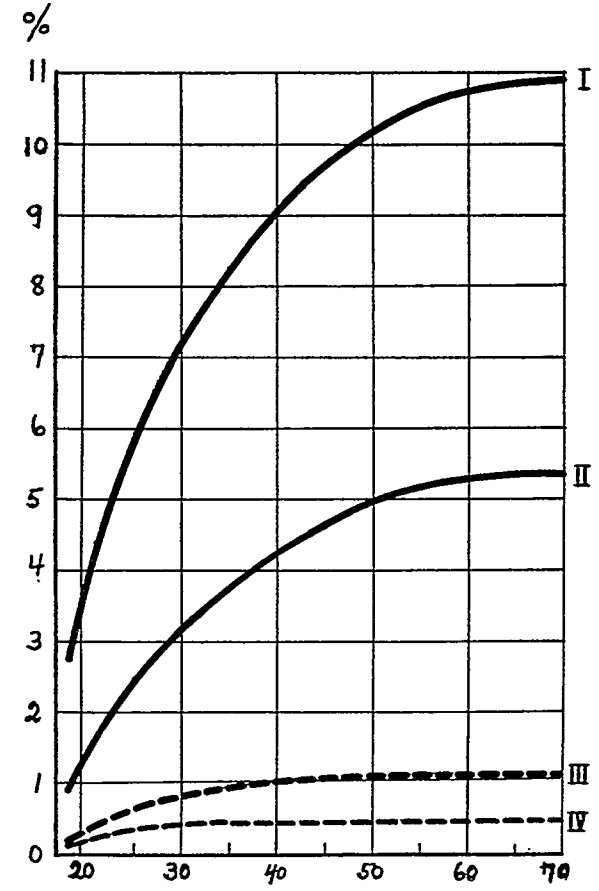

Figure 2

Total or Cumulative Risk up to Different Ages of Being Convicted of Offenses Recorded in the Register of Criminals.

I—Men in towns
II—Men in the country
III—Women in towns
IV—Women in the country

live to old age are convicted of at least one serious crime, are astonishing facts.

The figures do not agree with the idea widespread in Sweden as in other countries that the population is especially honest. For this reason it may be desirable to undertake approximate calculation in order to prove that our figures are not hallucinations created by statistical black magic. Our calculations deal with crime in 1937. The majority of those who were convicted for the first time in that year were born 25 years earlier. (Their average age was 26.9.) In this year not quite 32,000 children were born in the towns, of which half, i.e., 16,000, were boys. Of these, 16 per cent died before they reached age 20. Thus about 13,500 adult men remained. If 11 per cent of each yearly age group were convicted, about 1,500 convictions should have been made each year. The actual figure for first convictions among men in 1937 was 1,947. That this figure is greater than the calculated one is due of course to the fact that in the class, "men registered in the towns", are included not only those who were born in towns, but also those who have moved in, whereas on the other hand persons who have moved out of the towns are counted as belonging to the rural districts. The towns have an immigration surplus and it is this of course which causes the discrepancy. One is not convicted only after reaching a particular age; the risk is spread over the period from 15 to 60 years of age. Consequently a precise calculation must be carried out in the somewhat more complicated manner indicated above. But the rough calculation which I have just made should nevertheless show that the result I have obtained is not unreasonable.

The distinction between urban and rural districts can be explained in several ways. First, one must allow for the fact that the records from the rural districts may be incomplete. The police are more effective in the towns and this may have some influence on the figures. Offenses are perhaps more easily brought to light and their perpetrators punished in the towns than in the country. One must remember, however, that the distinction does not refer to the place where the crime was committed but the area in which the criminal is registered. If a person is registered in a rural parish but commits a crime in a town he is counted as belonging to the rural parish. On the whole, however, a distinction should be recognized in so far as persons registered in rural districts commit crimes in rural districts to a greater extent than do persons registered in towns. The magnitude of these differences, however, cannot be determined from the figures at our disposal. Further, it is reasonable

to assume that, although the police are less effective in the country, the chances of escaping conviction are in some respects smaller there, since people know one another better. In the country it is easier than in the towns to single out suspected persons, whether strangers or local inhabitants. The protection given by anonymity in the towns is perhaps not without significance. In this connection it is relevant to enquire whether there is any difference between towns of different sizes. In Table III

TABLE III.
TOTAL RISK AT 55 YEARS OF AGE OF BEING CONVICTED OF OFFENSES RECORDED IN THE REGISTER OF CRIMINALS FOR MEN IN STOCKHOLM, GÖTEBORG, MALMÖ AND THE OTHER TOWNS IN SWEDEN.

Town	Total risk % at 55 years of age
Stockholm	10.6
Göteborg	11.8
Malmö	10.5
Norrköping	8.1
The other towns	11.5

figures of total risk at 55 years of age are given for Stockholm, Gothenburg, Malmo, Norrkoping and other towns. The table shows that the differences are not marked. The total risk of conviction for crime seems to be no greater for persons registered in the larger towns than for those registered in the smaller towns. This hardly indicates that it is easier to escape conviction in the larger towns.

The figures for women are given in Table IV. These figures are lower but the town to country ratio is the same as for men. The risk of conviction for a woman registered in the country is half what it should be were she registered in a town. Since the

TABLE IV.
RISK OF BEING CONVICTED OF OFFENSES RECORDED IN THE REGISTER OF CRIMINALS AND CALCULATED TOTAL OR CUMULATIVE RISK FOR WOMEN IN STOCKHOLM, IN OTHER TOWNS AND IN THE COUNTRY.

	THE TOWNS						THE COUNTRY	
	Stockholm		The other towns		All the towns			
Age	Per 10.000 of the average population	Total risk, per ct.	Per 10.000 of the average population	Total risk, per ct.	Per 10.000 of the average population	Total risk, per ct.	Per 10.000 of the average population	Total risk, per ct.
15-18	3.7	0.11	7.3	0.22	6.5	0.20	5.1	0.15
18-21	8.5	0.37	6.7	0.42	7.1	0.41	3.5	0.26
21-25	8.2	0.69	5.9	0.66	6.6	0.67	2.5	0.36
25-30	5.0	0.94	2.4	0.78	3.2	0.83	1.2	0.42
30-35	3.8	1.13	1.4	0.85	2.1	0.94	0.6	0.45
35-40	2.5	1.26	1.5	0.92	1.8	1.03	0.4	0.47
40-45	1.2	1.32	0.3	0.94	0.6	1.06	0.2	0.48
45-50	3.0	1.47	0.5	0.96	1.3	1.12	0.3	0.49
50-55	1.0	1.52	—	0.96	0.3	1.14	0.2	0.50
55-60	0.6	1.55	0.5	0.99	0.5	1.16	0.2	0.51
60-65	—	1.55	0.3	1.00	0.2	1.17	—	0.51
65-70	—	1.55	—	1.00	—	1.17	0.1	0.52

material for women is small, the only distinction made between towns is the one between Stockholm and the other towns taken together. In Stockholm there is a considerable increase in the risk. The difference between Stockholm and the other towns is about the same as that between the other towns and the rural districts. This may be linked up with the fact that men and women specialize in different types of crime.

Psychically Abnormal Criminals.

In the law being valid in 1937 criminals were distinguished who were "irresponsible," respectively only "partly irresponsible" (Chapter 5, § § 5 and 6 in the Swedish Criminal Law). These were psychically abnormal persons, being insane or mentally deficient. They are not included in the preceding tables.

The figures for the total risk of being both criminal and psychically abnormal are given in Table V for the different age-

TABLE V.
RISK OF BEING CONVICTED AND CALCULATED TOTAL OR CUMULATIVE RISK FOR IRRESPONSIBLE AND PARTIALLY IRRESPONSIBLE OFFENDERS WHO HAVE COMMITTED OFFENSES RECORDED IN THE REGISTER OF CRIMINALS. MEN.

	THE TOWNS		THE COUNTRY		THE WHOLE OF SWEDEN	
Age	Annual risk per 10,000 of the average population	Total risk, per ct.	Annual risk per 10,000 of the average population	Total risk, per ct.	Annual risk per 10,000 of the average population	Total risk, per ct.
15-18	2.7	0.08	0.7	0.02	1.3	0.04
18-21	1.8	0.14	2.3	0.09	2.1	0.10
21-25	2.2	0.22	1.3	0.14	1.6	0.17
25-30	1.7	0.31	1.1	0.20	1.3	0.23
30-35	1.4	0.38	1.0	0.25	1.1	0.29
35-40	1.1	0.43	0.7	0.28	0.9	0.33
40-45	1.1	0.49	0.6	0.31	0.8	0.37
45-50	0.4	0.51	0.4	0.33	0.4	0.39
50-55	0.3	0.52	0.6	0.36	0.5	0.42
55-60	0.8	0.56	0.8	0.40	0.8	0.46
60-65	0.5	0.59	0.2	0.41	0.3	0.47
65-70	1.5	0.66	0.4	0.43	0.8	0.51

groups and for men. The figures show that this is a relatively small group. The total risk for men up to 70 years of age amounts to 0.66 per cent in the towns and 0.43 per cent in the country. The corresponding figures for women (no table given) are 0.1 per cent and 0.06 per cent. One might perhaps be inclined to expect higher figures for the psychically abnormal. We lack figures, however, for the prevalence of psychical abnormality among non-criminal persons. It must be remembered that these psychical abnormalities are diagnosed on special examinations, and it is beyond question that many people who

have never committed a crime and who are not considered sufficiently deranged to be sent to an asylum would show symptoms of psychical abnormality if carefully examined. Moreover, not all criminals are subjected to psychiatric examination. It is true that it is obligatory in the case of certain crimes, but these are few in number: murder, attempted murder, arson and attempted arson. If psychiatric examinations were always carried out on a first arrest, the figures would undoubtedly be higher. But it must also be remembered that obviously insane persons are usually not prosecuted for their crimes. Everyone concerned realizes that such action would be pointless. Prosecutions occur when the offender does not suffer from very obvious mental abnormality or when, as a result of an isolated life, his condition has remained unnoticed. Thus we cannot even guess what kind of figures would result from a systematic investigation of criminals, and still less what figures would apply to the general public. Our figures, therefore, cannot provide the basis for a more exhaustive treatment. If the figures for psychically abnormal are added to our earlier figures we obtain rather higher figures for the total criminality. The total risk for townsmen rises from 11.5 up to 12.2 per cent; for countrymen from 5.5 up to 5.9 per cent; for townswomen to 1.3 per cent and for countrywomen to 0.6 per cent.

We must now relate the risk for the psychically abnormal to the total crime risk. The total risk among the psychically abnormal is for townsmen about 5 per cent, for countrymen 7.7 per cent, for townswomen 8 per cent and for countrywomen 10 per cent of the total crime risk. The proportion of the total criminality attributable to psychically abnormal countrywomen is more than twice as large as that attributable to townsmen. The simplest explanation of these figures is that crime in the towns due to factors of environment is greater than in the country. Clearly, then, the psychically abnormal must constitute a smaller proportion of all criminals in the urban than in the rural population. Of course it is also possible to interpret the difference between men and women, in connection with the relative number of psychically abnormal persons among criminals, in the same manner. The greater criminality of men may be in part conditioned by factors of environment. The difference between the sexes with respect to the total criminality, however, is far bigger than one would have expected judging from the figures for the psychically abnormal. This in its turn indicates that the difference between the criminality of the sexes cannot be entirely accounted for in terms of environment.

Finally, we must try to form some idea of the relative numbers of psychically abnormal criminals in the various age groups. Table VI gives the figures for those who have offended against

TABLE VI.

IRRESPONSIBLE AND PARTIALLY IRRESPONSIBLE OFFENDERS IN PER CENT OF THE TOTAL NUMBER OF PERSONS CONVICTED OF OFFENSES AGAINST THE CRIMINAL CODE AND RECORDED IN THE REGISTER OF CRIMINALS. MEN AND WOMEN AT DIFFERENT YEARS OF AGE.

Age groups	THE TOWNS		THE COUNTRY		THE WHOLE OF SWEDEN	
	Men	Women	Men	Women	Men	Women
15-21	3.0	3.8	5.2	4.2	4.1	4.0
21-30	6.9	7.0	8.6	9.3	7.7	7.8
30-40	9.2	3.0	13.0	27.8	11.0	11.8
40-50	12.1	23.5	13.5	25.0	12.8	24.0
50-60	15.0	20.0	34.1	33.3	24.7	27.3
60-70	46.2	50.0	31.3	—	37.9	50.0

the criminal code. The figures show that throughout the relative number of psychically abnormal criminals rises with advancing age. For most age groups the female figures are rather higher than the male ones. On the whole the percentage is higher for the rural than for the urban population. Generally speaking the figures for the various ages also go to show that when the risk of crime is small the proportion of irresponsible or partly irresponsible offenders is relatively large. We recall that with advancing age the risk figures sink continuously and sharply. In other words, at an older age an individual is faced by a comparatively small risk of committing a first offence, but if he does commit one he is relatively often psychically abnormal. According to the figures for the whole kingdom more than one-fourth of first offenders over 50 are psychically abnormal. Our statistical material for women is insufficient to allow a division into married and unmarried groups. A division has been made in the case of men and Table VII shows the relative

TABLE VII.

IRRESPONSIBLE AND PARTIALLY IRRESPONSIBLE OFFENDERS IN PER CENT OF THE TOTAL NUMBER OF PERSONS CONVICTED OF OFFENSES RECORDED IN THE REGISTER OF CRIMINALS. MEN AT DIFFERENT YEARS OF AGE AND OF DIFFERENT CIVIL STATUS.

Age groups	THE TOWNS			THE COUNTRY			THE WHOLE OF SWEDEN		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
15-21	2.9	—	2.9	4.9	—	4.8	3.8	—	3.8
21-30	7.0	1.3	5.4	7.6	2.4	6.6	7.3	1.8	6.0
30-40	9.0	3.2	5.8	11.3	4.1	7.3	10.2	3.7	6.5
40-50	13.8	3.6	5.9	13.5	4.8	6.5	13.6	4.3	6.2
50-60	25.0	6.8	7.8	25.0	12.7	18.5	25.0	9.6	13.3
60-70	50.0	20.0	35.3	—	9.1	21.7	33.3	14.3	27.5

number of irresponsible and partly irresponsible men for all types of crime. (In this table, therefore, we are not only concerned with offences against the criminal code.) The table shows that throughout the relative number of psychically abnormal men is considerably greater among the unmarried in both the urban and the rural population. This is probably because the psychically abnormal have less chance of getting married than persons who are considered psychically normal. The present writer has previously shown that insane women are less fertile before their breakdown than average women of the same age and this partly because fewer of them marry.[3] The result has since been confirmed by an investigation by *Erik Essen-Moller*[4] on German material. In these circumstances it is natural that in the case of criminals also one should find a greater percentage of psychically abnormal individuals among the unmarried. Table VII, in agreement with Table VI, shows a tendency towards a greater relative number of psychically abnormal persons of the same ages in the rural as compared with the urban population, but the difference is less than one might expect in consideration of the big difference in criminality. It is natural that the social groupings which show a low level of criminality should have a comparatively large relative number of psychically abnormal persons among the criminals, for the simple reason that to some extent the psychically abnormal suffer from aberrations due to heredity, and in so far as their actions are the result of their abnormality it is independent of factors of environment and makes itself felt even when, because of a favorable environment, there is little criminality.

The Crime Risk in Relation to Matrimony.

With regard to the risk of crime as between married and unmarried persons the a priori assumption would probably be that the figure for the former is lower. Those who enter the married state might be considered as persons who desire an ordered way of life. It is also possible, however, that persons with poor resistance to temptation contract matrimonial alliances to a greater extent than persons with better judgment and greater self-control. One imagines that marriage and a home have an ameliorative influence. A married man is responsible for a wife and possibly children and is perhaps less tempted to go

3 Die Fruchtbarkeit der Geisteskranken.—*Zeitschrift fur die gesamte Neurologie und Psychiatrie,* 144. Band, 3, und 4. Heft, p. 427-54, 1933.

4 Untersuchungen uber die Fruchtbarkeit gewisser Gruppen von Geisteskranken (Schizophrenen, Manischdepressiven und Epileptikern).—*Acta Psychiatrica et Neurologica, Supplementum* VIII, 1935.

out to amuse himself. But the raising of a family may also bring economic worries and lead in certain cases to a surrender to the temptation to obtain money by criminal means. Above all, however, it is to be expected that even though "assortative matings" occur to some extent and even though persons with more or less criminal tendencies marry one another more often than one would expect, yet it must nevertheless happen that persons with criminal tendencies sometimes marry individuals free from such tendencies in a pronounced form. Thus it is reasonable to expect that marriage will have an ameliorative effect and particularly that women will have a "refining" influence, since their criminality is so much lower than that of the men. It is not possible to know a priori which factors predominate and it is thus of interest to attempt a numerical orientation. The situation, however, may differ according to the type of crime. First we shall investigate the relation between matrimony and the crime risk with reference to the total criminality.

In table VIII we give the risk figures for married and unmarried men in the towns and in the country and in the whole kingdom together. The figures for the calculated total risk are also given. We find throughout the same relationship between youth and age, namely, that the risk is greatest in youth and sinks with advancing age. In the youngest age groups there are no married persons and the risk for widowed and divorced persons arises only at an older age. In order therefore to compare married with unmarried people we must confine ourselves to the age groups which correspond. For the comparison between the married and unmarried the limit has been put at age 25.

Looking first at conditions in the towns we find that the total risk for unmarried men and women from fifteen up to sixty years of age amounts to 11.3 per cent. If we compare the risk figures after age 25, we find that the figures for the married in some age groups are higher and in others lower than the figures for the unmarried, a circumstance which is probably to some extent (though perhaps not entirely) an expression of random variation. The figures for the total risk after 21 up to 60 years of age agree closely: 6.8 per cent for the unmarried and 7.1 per cent for the married. The risk figures for divorced persons are considerably higher and the total risk figure from 25 up to 60 years of age amounts to 19.1 per cent. This in itself is hardly surprising, since the husband's criminal tendency can be the decisive reason for divorce. If we look closer at the risk figures for the married and unmarried we find a certain support for this assumption in the fact that the risk

figures for the married in the first age groups tend to be higher than those for the unmarried, whereas in the later age groups

TABLE VIII

RISK OF BEING CONVICTED OF OFFENSES RECORDED IN THE REGISTER OF CRIMINALS AND CALCULATED TOTAL OR CUMULATIVE RISK FOR UNMARRIED MEN, MARRIED MEN, WIDOWERS, AND DIVORCED MEN IN THE TOWNS AND IN THE COUNTRY.

Age	Per 10,000 of the average population			
	Unmarried men	Married men	Widowers	Divorced men
	The towns:			
15-18	92.0	—	—	—
18-21	58.0	—	—	—
21-25	36.6	55.7	—	—
25-30	27.7	28.3	181.8	152.7
30-35	26.4	19.4	75.0	42.2
35-40	21.8	15.5	44.6	64.7
40-45	14.1	11.8	22.9	32.6
45-50	8.4	10.9	11.0	45.9
50-55	4.9	8.9	11.0	19.8
55-60	3.2	3.1	2.9	24.5
Total risk, %: 25-60 years	5.3	4.9	17.5	19.1
	The country:			
15-18	29.7	—	—	—
18-21	27.3	—	—	—
21-25	18.8	27.9	—	—
25-30	14.7	15.3	—	79.4
30-35	11.0	9.3	9.7	51.4
35-40	11.2	11.8	11.1	81.4
40-45	5.6	7.7	7.4	117.3
45-50	7.5	6.7	5.2	77.2
50-55	4.5	3.7	7.0	12.0
55-60	0.7	2.3	3.8	12.9
Total risk, %: 25-60 years	2.8	2.8	2.2	21.6
	The whole of Sweden:			
15-18	47.9	—	—	—
18-21	36.9	—	—	—
21-25	24.7	38.8	—	—
25-30	19.0	20.6	63.8	134.9
30-35	15.7	13.3	31.9	44.9
35-40	14.3	13.2	22.2	69.8
40-45	8.1	9.3	12.5	58.6
45-50	7.8	8.3	7.0	56.5
50-55	4.6	5.6	8.3	17.1
55-60	1.4	2.6	3.5	20.0
Total risk, %: 25-60 years	3.5	3.5	7.5	20.1

the opposite tendency seems to prevail. This indicates that persons with criminal tendencies marry comparatively early but are divorced after a relatively short time. A distinction of this kind can hardly apply to widowers. There can hardly be any correlation to speak of between the husband's criminality and the wife's mortality. Thus it is particularly interesting that the risk figures for the widowers, too, should be higher than for

both married and unmarried persons. The total risk for widowers amounts to 17.5 per cent. For married persons over 25 years of age the corresponding figure is 4.9 per cent, and for unmarried persons 5.3 per cent.

Turning to the figures for the country districts we find as before that there is no very considerable difference between married and unmarried persons at the same ages. Widowers are faced by about the same total risk as married and unmarried persons; divorced persons have the highest figures.

We must now examine the figures for women (Table IX). The risk is now much lower. In comparing married women with

TABLE IX

RISK OF BEING CONVICTED OF OFFENSES RECORDED IN THE REGISTER OF CRIMINALS AND CALCULATED TOTAL OR CUMULATIVE RISK FOR UNMARRIED AND MARRIED WOMEN IN THE TOWNS AND IN THE COUNTRY.

Per 10,000 of the average population

TOWNS			COUNTRY			ALL SWEDEN		
Age	Unmarried women	Married women	Age	Unmarried women	Married women	Age	Unmarried women	Married women
15-18	6.6	—	15-18	5.0	—	15-18	5.5	—
18-21	6.7	16.7	18-21	3.7	—	18-21	4.9	4.6
21-25	7.2	3.5	21-25	3.3	0.5	21-25	5.1	1.6
25-30	4.6	1.1	25-30	1.7	0.8	25-30	3.1	0.9
30-35	2.1	2.0	30-35	0.9	0.4	30-35	1.5	1.0
35-40	3.4	0.6	35-40	0.3	0.3	35-40	1.7	0.4
40-45	0.4	0.3	40-45	—	0.3	40-45	0.2	0.3
45-50	0.5	1.2	45-50	—	0.3	45-50	0.2	0.7
50-55	—	0.2	50-55	—	0.3	50-55	—	0.3
55-60	—	0.9	55-60	—	0.3	55-60	—	0.5
Total risk, %, 18-60 years:	1.0	1.0	Total risk, %, 18-60 years:	0.39	0.16	Total risk, % 18-60 years:	0.69	0.41

spinsters it has been possible to put the age limit at 18. There is no distinction to speak of between married women and spinsters in the towns. (The number of criminals among divorced women and widows is too small to allow a statistical analysis of the material.) It is worthy of note that if we look at the figures for the country areas we find a considerably higher total risk for unmarried than for married women. The figure for unmarried women is 0.39 per cent and for married women 0.16 per cent. The most natural explanation is that in the country one has better knowledge of the character of the woman one marries than one does or can in the towns, and ascribes greater importance to it. It is less likely that the reason is that the husband's influence lessens the criminality of the female partner, since no appreciable distinction could be determined between married women and spinsters in the towns. But it may be that a man who lives in the country is better able than a husband in a town to keep a watchful eye on his wife.