

proportion of the inmates of the sick-rooms, infirmaries, and hospitals of asylums, but has obviously effected a considerable saving as regards the original cost of construction, fittings, and furnishings, and also the future cost of upkeep and staff expenses. In confirmation of this latter point it may be mentioned that during the eight months the hospital has been in occupation, and notwithstanding a reduction of sixpence per week in the rate of board for the asylum patients during the last six months of that period, the credit balance under the maintenance account of the institution was increased by £600. The opening of a large addition to an asylum, as a rule, tells heavily at first on the maintenance account.

Other factors which have contributed to the moderate cost per bed of the hospital have been the care bestowed by the architect on the details of his schedules and the supervision of the works during erection, the introduction of the system of heating adopted, the use of the asylum branch railway for the conveyance of the heavy materials of construction, and, lastly, keen competition owing to depression of trade at the time of the placing of the contracts.

(<sup>1</sup>) Visited by the Scottish Division of the Medico-Psychological Association, on the 22nd March, 1907.

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*Recidivism regarded from the Environmental and Psychobathological Standpoints.* By J. F. SUTHERLAND, M.D., F.R.S.E., Deputy Commissioner in Lunacy for Scotland.

## PART II.

It does not require a Sherlock Holmes to distinguish the *bond fide* tramp with tatterdemalion, unkempt locks, gaping boots and grimed skin, from the *bond fide* labourer in search of work.

*Interchange of Crimes, and of Crimes and Offences, and of Criminals and Offenders.*

WITH the view of testing to what extent an interchange took place between the perpetrators of the four major crimes I have prepared a return of 370 convicts and long-term prisoners in Scotland, convicted of (1) homicides, assaults, etc.; (2) crimes

against property *with* violence ; and (3) *without* violence ; and (4) crimes against chastity. The result, an interesting one, finds expression in the following figures :

	1. No previous conviction.	2. Convicted of homicides, assaults, etc.	3. Convicted of burglary, housebreaking, etc.	4. Convicted of larceny, thefts, fraud, etc.	5. Convicted of sexual crimes.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
1. Homicides, assaults, etc.	49	35	6	9	<i>Nil.</i>
2. Housebreaking, burglary, etc.	1·8	1·2	68·5	28·5	<i>Nil.</i>
3. Thefts, fraud, reset, etc.	4·5	1·5	30·6	63·4	<i>Nil.</i>
4. Sexual crimes	53·3	33	<i>Nil.</i>	<i>Nil.</i>	13

It is strikingly noticeable how the three dominant mental factors in human composition, *viz.*, malice, acquisitiveness, and lust govern so largely the criminal problem, and the irrepresible assertiveness of acquisitiveness and avarice, as shown in columns 3 and 4, and the fact of few or none having "no previous convictions." With homicides it is the reverse ; nearly one half have had no previous convictions of any kind, and very few manifest that degree of acquisitiveness of which the criminal law takes cognizance. With crimes against chastity (sexual) more than one half had no previous convictions of any kind, 13 *per cent.* repeat, and none have shown any inclination for burglary and theft. The fact of there being such a small proportion of repeaters suggests that many may have passed into asylums. A minority of physically and mentally weak ones in short, degenerates, vary their larcenous propensities with over-indulgence in alcohol, and not infrequently do their pilfering in a confused mental state, with the result that the conception of *meum* and *tuum*, never clear, disappears, and they are taken by the sufferers or by the police *flagrante delicto*. How far they are "free agents" at any time may be a moot question. Not so, however, with the perpetrators of house-breaking, robbery, etc. After a big haul yielding plunder such as a whole year of honest labour could not give, they, like the apostles of *haute finance* who manage by stratagem to keep

outside the meshes of the criminal law, indulge the palate to excess, although in the execution of their aggressive work they are sober, cunning, and in the possession of all their faculties, more often than not very considerable. This is the type of recidivism at once most vital, noxious, and costly to the commonwealth.

These observations are called for in order, firstly, to understand and appreciate how far crimes themselves, and how far crimes and petty offences are interchangeable, and secondly, to correct a wrong impression given by those penologists who consider that alcoholic excess is closely identified with all crimes and offences, indeed, in the opinion of some of them, falling little short of direct cause and effect. This idea is not shared by the writer for the reasons already stated, and neither is it by Mr. C. E. Troup, C.B., of the Home Office. He says: "No clear connection could be traced between indictable crimes as a whole and prosecutions for drunkenness."<sup>(1)</sup>

*Prevalence and Significance of Insanity among the Authors of the different Crimes.*

Perhaps in the investigation made and now set forth the *pièce de resistance* is the conclusion now submitted that for a proper and effective study of recidivism in any of its forms the psychological and psycho-pathological method of inquiry, aided and supported by the great environmental one, is that most likely to combat the evil, and to prepare the way for more rational and remedial measures. The following table is both

Indictable crimes in England for 1903.	Apprehensions.	Percentage of each.	Number of insane before and after trial.	Percentage of insane.	Ratio of insanity to apprehensions.
A. Homicides, assaults, etc. . . . .	1656	27	54	39	1 in 30
B. Sexual crimes . . . . .	1391	23	16	11.5	1 in 87
{ Arson . . . . .	213	35	6	4.3	1 in 35
{ Malicious injury to property . . . . .	216	35	5	3.5	1 in 43
D. Housebreaking, robbery, etc., with violence . . . . .	3734	65.8	16	11.5	1 in 233
E. Theft, reset, fraud, etc., without violence . . . . .	54,745	88.3	42		
	61,955	100	58	41.7	1 in 1300
			139	100	1 in 445

highly instructive and suggestive on this point as showing the liability to certifiable insanity, and, by implication, mental states more or less allied to the certifiable one.

It amounts to this, that of the apprehensions during the year for homicides and assaults, 1 in 30 become insane before or after trial; for sexual crimes 1 in 87; arson (fire-raising) 1 in 35; robbery, burglary, house-breaking, *with* violence, 1 in 233; and for larcenies, fraud, reset, etc., *without* violence, 1 in 1300. Calculating for crimes A, B, and C, on the number and percentage of insanity found respectively in D and E, *viz.*, 58 persons and 41.7 *per cent.*, that for homicides and assaults should be 1.5 persons and not 54, and the percentage 1.2 and not 39. Or reversing it if the insanity ratio in the former applied to the latter, the latter would not merely produce, as it does, 58 insane, but 1780, or thirty times as many! Similarly, if crimes against chastity produced insanity in the same ratio as crimes against property, it would amount to 1 *per cent.* and not 11.5 *per cent.*, and arson 1.5 *per cent.* and not 4.3 *per cent.*, or thirty times less. Thus it appears that certifiable insanity is much more frequently met with amongst those who commit crimes in which the elements of malice, passion, revenge, and lust predominate, than among those in which acquisitiveness and avarice are the governing mental factors. Among the authors of crimes of blood and violence against the person are to be found a small number of homicidal maniacs, paranoiacs, etc., both with declared and carefully concealed delusions of persecution, a larger number of a coarse, brutal type who act from motives of malice, revenge, and jealousy, and a still larger number of drunkards and intoxicated persons who do violence while in that state of exaltation and recklessness which is induced by the toxic agent. The point to be observed is that there is relatively little insanity occurring among the plundering and thieving class which presents the ugliest and most persistent phase of recidivism in any country, and yet so much of it among the perpetrators of other crimes with little recidivism resulting. It has again to be stated that among the petty thieving class there are a number of degenerate and weak-minded persons.

For Scotland the relative prevalence of insanity is indicated *infra* :

	Prisoners received.	Became insane.	Ratio of insane to commitments.	Percentage of commitments.	Percentage of insane.
A. Crimes of violence . . . . .	1445	20	1 in 72	14	30
B. Sexual crimes . . . . .	432	13	1 in 33	4	20
C. Malicious mischief . . . . .	652	6	1 in 108	6.4	9
D. Housebreaking, robbery, theft, etc. . . . .	7670	28	1 in 274	7.5	41
	10199	67	1 in 152	100	100

Although in the foregoing figures prison receptions take the place of the apprehensions in the preceding English table, the percentage of insane is much the same, and the conclusions reached are almost identical; that is to say, insanity is much more rife among the authors of crimes of violence, sexual crimes, and malicious mischief than among plundering criminals.

If in Scotland insanity was only as prevalent among the authors of crimes of violence as it is among the plundering and thieving classes, then among the former, instead of 20, the number certified would be 5; and similarly among the authors of crimes against chastity it would be 1.5, and not 13.

The following table has reference to the different types of insanity, and their relative frequency among prisoners committed in Scotland in 1903 for the different crimes and offences

	Imbecility or feeble-mindedness.	Dementia.	Mania.	Delusional.	General paralysis.	Epilepsy and epileptic dementia.	Alcoholic insanity and D.T.'s.	Other forms.	Total.
(1) Crimes of blood and violence . . . . .	1	5	5	1	—	1	—	5	18
(2) Crimes and offences against chastity . . . . .	4	5	1	3	2	—	—	—	15
(3) Crimes indicative of avarice and acquisitiveness . . . . .	2	8	8	2	4	2	—	1	27
(4) Malicious mischief . . . . .	2	—	—	1	1	—	1	—	5
(5) Breach of peace, drunk and incapable and disorderly . . . . .	7	6	7	5	3	2	5	4	39
(6) Vagrancy and begging . . . . .	4	5	2	1	—	—	—	—	12
(7) Other offences . . . . .	—	1	1	1	—	—	2	—	5
Total . . . . .	20	30	24	14	10	5	8	10	121

specified in column 1. The insanities were established in bar of trial, within eight days of reception, after being eight days in prison, and on the expiry of sentences, as a rule, of brief duration. The figures convey the same meaning as those already given. The frequency of general paralysis is noticeable, being 8 *per cent.* of the whole; imbecility, 16.5 *per cent.*; mania, 20 *per cent.*; dementia, 25 *per cent.*; delusional insanity, 11 *per cent.*; and alcoholic insanity and delirium tremens, 7 *per cent.*

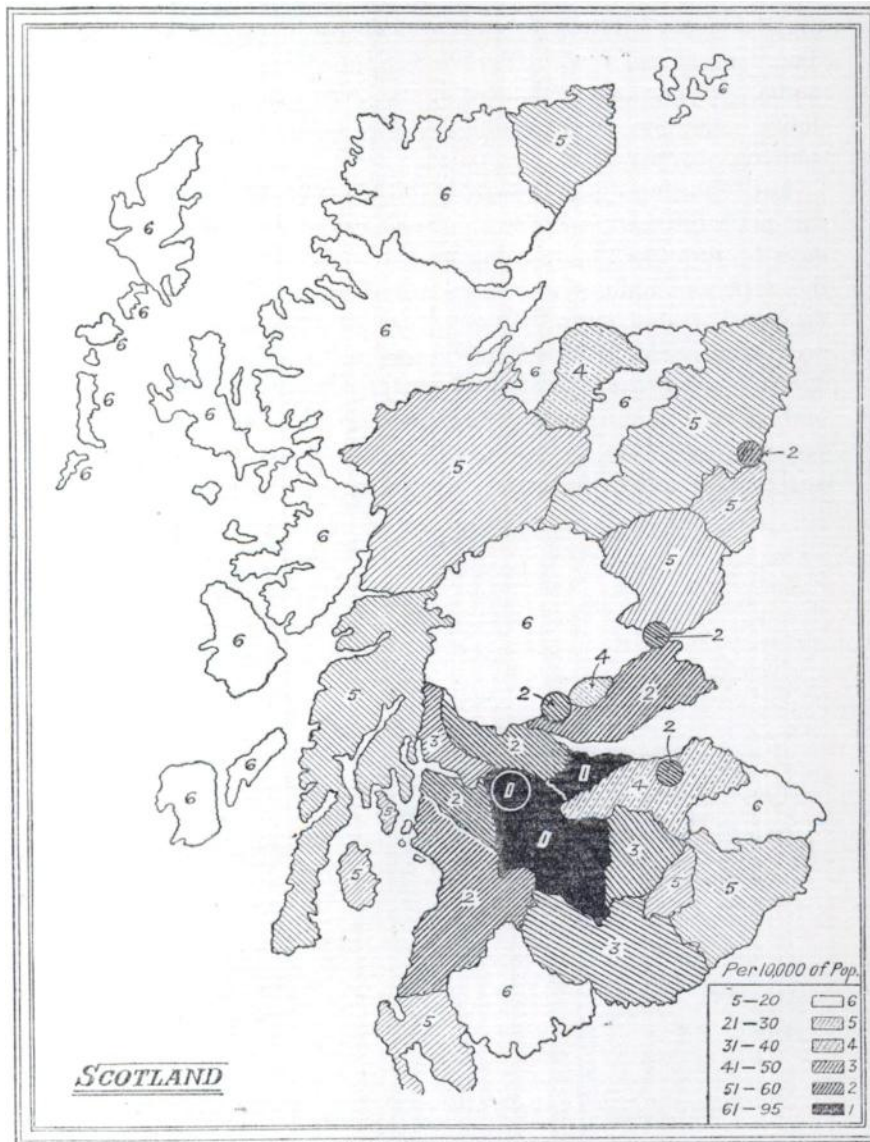
The following figures referable to the occupations of criminals and petty offenders who were known to be insane within eight days of reception, after being in prison for eight days, and on the expiry of sentences as a rule short, bear out what has been previously stated, more than one half being labourers. And this proportion is maintained, not merely for the whole, but for every one of the crimes and petty offences tabulated. The "labourer," in proportion to his numerical strength in the general population, contributes, it is safe to say, treble as many of those becoming insane as his class would justify.

	Labourers.	Handicrafts.	Miners.	Vagrants.	Housewives.	In business.	Engineers, etc.	Hawkers.	Others.	Total.
(1) Crimes of blood and violence . . . . .	6	1	1	—	1	—	—	—	1	10
(2) Crimes and offences against chastity . . . . .	6	—	1	—	—	1	1	—	1	10
(3) Crimes indicative of avarice and acquisitiveness . . . . .	14	4	1	1	1	1	—	—	3	25
(4) Malicious mischief . . . . .	2	—	—	—	—	1	—	2	—	5
(5) Breach of peace and drunkenness . . . . .	19	4	3	2	4	1	1	5	3	42
(6) Vagrancy and begging . . . . .	9	—	—	1	—	—	—	—	—	10
(7) Other offences . . . . .	3	—	1	—	1	—	—	1	1	7
<b>Total . . . . .</b>	<b>59</b>	<b>9</b>	<b>7</b>	<b>4</b>	<b>7</b>	<b>4</b>	<b>2</b>	<b>8</b>	<b>9</b>	<b>109</b>

#### *Geographical Distribution and Loci of Recidivism.*

Without exception recidivism of every description is in the main in every country a product of urban life. It is rarely met

*Geographical Distribution of "Crime" in Scotland.*





with in rural districts. The felon who robs a country mansion is a city dweller, and the *loci* in towns and cities of the recidivist are the slum, insanitary, overcrowded, wretched abodes in which the decencies of life are known to be impossible. And under present economic conditions it is bound to increase as it is doing, in consequence of the trend of modern life which is bringing about, in every country, a depopulation of rural districts and a corresponding increase in the poorest and most squalid districts of cities and towns. Apart from the changing economic conditions and the ways of industry, there can be no question that intemperance in alcohol in any country has much to do with slum areas and the submerged tenth who are content to dwell in them and inhale their noxious moral and material atmosphere. It is safe to say that it would scarcely be possible for a saint to live in them and not be contaminated. The contagion is virulent and paralysing.

The distribution per 10,000 of population in Scotland (33 counties and 4 cities) of crimes of violence, crimes against property, malicious mischief, and sexual crimes by persons proceeded against in the Justiciary Courts and in Summary Courts is shown by the accompanying table, illustrated by the shaded map. I am not aware that the geographical distribution in Scotland of crimes has been attempted before: it has, I am aware, been done in regard to certain petty offences, such as inebriety and disorder.

It is convenient, having regard to the wide range from 4 to 95 per 10,000 which prevails, to have six shadings, the two darkest representing the chief haunts of the criminal recidivist.

I. 61 to 95 per 10,000 :	III. 41 to 50 :
Glasgow City . . . 95	Haddington . . . 44
Lanarkshire . . . 70	Dumfries . . . 44
Linlithgowshire . . . 78	Dumbarton . . . 49
II. 51 to 60 :	Peebles . . . 41
Edinburgh City . . . 60	IV. 31 to 40 :
Aberdeen City . . . 60	Midlothian . . . 40
Dundee City . . . 59	Elgin . . . 35
Ayr . . . 60	Kinross . . . 34
Stirling . . . 58	V. 21 to 30 :
Renfrew . . . 58	Aberdeenshire . . . 26
Fife . . . 55	Forfar . . . 21
Clackmannan . . . 53	Argyll . . . 24



Inverness . . . . .	27	Ross . . . . .	17
Caithness . . . . .	22	Banff . . . . .	19
Kincardine . . . . .	21	Berwick . . . . .	18
Roxburgh . . . . .	30	Kirkcudbright . . . . .	20
Selkirk . . . . .	28	Nairn . . . . .	20
Wigtown . . . . .	25	Sutherland . . . . .	5
Bute . . . . .	24	Orkney . . . . .	5
VI. 5 to 20 :		Shetland . . . . .	5
Perth . . . . .	14		

Any one in the least familiar with Scotland will be able to see at a glance that its criminality is mainly confined to the four cities and to the smallest but most populous area of the six groups, in the midlands, that embracing Lanarkshire, Linlithgowshire, Renfrew, Ayr, and Fife. There is no mistaking the position of Glasgow and Lanarkshire with its million and a quarter of population, or nearly one fourth of all Scotland. Some of the counties in Group II owe their unfortunate positions in the list to the presence of provincial towns like Greenock, Paisley, Ayr, Kilmarnock, Kirkcaldy, and Dumfermline. In Groups I and II the populations are for the most part mining and industrial. Practically north of the Forth and Clyde, save the cities of Dundee and Aberdeen, the Highlands and Islands, and North-Eastern District, comprising the fishing, crofting, and agricultural counties, the amount of crime is small, and likewise in the pastoral border counties save Dumfries, touching almost the vanishing point in the county of Sutherland, the Orkney and Shetland Isles, the Western Isles, and Outer Hebrides.

Between the "criminal" map of Scotland and the "lunacy" map<sup>(2)</sup> there is no similarity, but between it and the "inebriety"<sup>(3)</sup> one there is. It does not follow, however, for this that there is any intimate connection between the two in the areas in which both are found for reasons already adduced.

#### *International Statistics.*

The writer is not in agreement with Dr. E. Mischler, of Vienna, when he remarks that, "it may even be said that in consequence of differences of legislation, the difficulties of an international system of statistics are to a certain extent impossible"; rather he is of opinion that as the criminal laws of every country are based on Roman jurisprudence, and in the

main features alike, and as the Greek Kalends would arrive before the laws of every country could even be approximately assimilated, something should meantime be done practically by legislators and statisticians to bring about a better classification of crimes and offences and their penalties, and a better compilation and tabulation of information as to sex, age, civil condition, housing, wages, education, occupation, frequency of conviction, heredity, mental and physical condition, etc., not merely for the whole but for the various types of crime and petty delinquency. Without these details statistics are not of much use either for national or international purposes. It is surely not beyond the wit of students of psychology and criminology to devise a scheme for presentation to Ministers of Home Affairs and of Justice which would meet a felt want in the study of criminology in relation to treatment and prevention. In every country elaborate machinery for the collection of figures and enumerations exists, and may be doing its work as it understands it, and all the time it does not convey a true impression as to the real condition of affairs, because it not only proceeds on wrong lines, but for the lack of necessary collateral and qualifying information is incomplete. It goes without saying that administrators, psychologists, and statisticians having certain figures presented to them would probably interpret them in different lights and from different standpoints, although there is a common *point de vue* for the three investigators, if they know it, and could combine their knowledge. Mulhall, in his *Dictionary of Statistics*, represents some countries in a very much worse light than Great Britain as to the prevalence of the most noxious forms of recidivism. But it would be hazardous to accept and endorse this, unless the investigator, making allowance for undoubted differences in economic conditions, the laws as to land, property, liberty, education, social characteristics and habits, etc., was prepared to believe that human nature in its virtuous, as in its erring aspects, differed to the degree postulated by these figures in different countries. The factors enumerated above are not all those that have a close bearing on recidivism. The penal systems of civilised countries differ vastly, and there can be no manner of doubt that penal systems have much to do with the vitality and persistence of recidivism everywhere. If diagnosis is wrong the treatment must fail to a very large

extent because it is empirical. Could one safely judge of recidivism, which one cannot, by prison populations per 100,000 of the population, then for Great Britain and Ireland it works out at 63, France 158, Russia 155, Holland 84, Belgium 70, Italy 217, and the United States of America 132. In British prisons there is a daily population of 26,190 (\*), in France 60,800, and in Italy 68,800. In the latter country, quite the reverse of this country, crimes against the person are 36.4 *per cent.*, and against property 63 *per cent.* Murders or homicides in Italy, it is stated, reach the staggering total of 3,000 per annum, and constitute a principal feature in Italian crime. In Germany out of every 1000 convicts 378 are said to be recidivists.

Recidivism is said to be increasing in France, Germany, and Italy, but no distinction is had between noxious, aggressive, and dangerous recidivists, and the passive, parasitic kind.

#### *Criminal Anthropology.*

Few will be disposed to dispute the classification of criminals as a whole put forward some years ago by Lombroso, Benedikt, Havelock Ellis, and others :

*First : criminals by passion.*—Persons who act on the spur of the moment, and are known by their good lives and genuine remorse. There is no deliberation.

*Second : occasional criminals.*—Not naturally inclined to crime, but are weak and easily led. Bad heredity is prominent in this class.

*Third : habitual criminals—recidivists.*—Made up (1) of the weak and helpless, mentally and physically, and (2) those deliberately adopting a career of crime. The professional is the aristocrat among criminals, and is often skilled and intelligent.

*Fourth : instinctive criminal.*—He is the congenital or *criminel né* of the French, the *l'uomo delinquente* of the Italian school, and is decreed by nature to be such. He is regarded by Lombroso as morally insane. His type is clearly of the degenerate stock.

*Fifth : the insane criminal.*—He is, in the opinion of the Italian school, an exaggeration of the instinctive.

This, for most purposes, is a reasonable and scientific classi-

fication. The fierce disputations of past years have gathered round the "instinctive" criminal, of whose existence no psychologist or penologist is in doubt. The majority of observers contend that he is so rare as to be *une quantité négligeable*, and that is my own view, but, on the other hand, a minority of brilliant, tenacious workers hold that he is in evidence everywhere, and therefore what, in the view of the majority, applies to a very few is made by the minority to apply to the many, a fact which, if it were true, and could be substantiated, would make the costly task of regeneration and reformation a hopeless one, and would mean for the criminal himself elimination, and perpetual sequestration. It is alleged by them that more frequent abnormal conformation and asymmetry of the head estimated by irregularities, and by the cephalic and facial indices, by the weight and size of the lower jaw, prominent cheek bones, prominent and large, outstanding ears (for which the nurse is much to blame in many instances), palate, genital organs, the presence of the lemurian appendix, shortness of stature, etc., are met with.

Physical stigmata of all kinds are also found among non-criminals in all grades of society, and it has yet to be proved that in proportion these are more prevalent among habitual criminals than among the population as a whole, and especially among the classes from which criminals come. It is important to remember that physical degeneration does not necessarily entail mental degradation, and that criminality may exist without demonstrable stigmata. And further, it must not be forgotten that many people presenting several of the stigmata of physical degeneration are to be found among the honest, industrious, ethical, and religious members of society. The contention that a skilled criminal anthropologist can spot an "instinctive" after short observation was put to the test before the *savants* in a convict prison in Paris, during the year of the International Prison Congress there, and in one instance created much merriment, as well as showing the absurdity of it all. A mental specialist of great eminence, and a *citoyen* of irreproachable character donned the prison garb and fell in line with the convicts under review in the Mazas prison. He was asked to step back two paces as one of the "instinctives"? The tests proved correct in some of the cases. But this case, as well as other considerations, show, apart from the umbra it

casts over the regenerative problem engaging the attention of penologists, legislators, and social reformers, the need for a more chastened mood on the part of "cock-sure" criminal anthropologists than has hitherto been manifested. The remedy for recidivism is assuredly not here.

*Criminal Anthropometry.*

Its application to criminality is intelligible in two aspects, as a means of identification and of revealing accurately the degree of physical degeneration to be met with among recidivists, just as the psycho-meter of the specialist, to which frequent allusion has been made in these pages, will, when called into requisition as it ought to be, reveal psychical defects, moral insensibility, perversity, and obsessions, with the accessory moral anomalies, imprudence and lack of forethought, defective intelligence congenital or supervening before adolescence. The results of an anthropometrical investigation made in the case of 370 male convicts and long-term prisoners this year is submitted along with *cartes graphiques* (<sup>6</sup>). These are conclusive as to the physical degeneracy which stature reveals when compared with the general population. On the other hand, is it so far astray from the mean of those in their own station of life and engaging in the same kind of work when at liberty? As yet this has not been determined even approximately.

The following tables, prepared by Mr. J. F. Tocher from the data supplied, give the results of the analysis of 370 criminals, 75 per cent. of whom were recidivists :

TABLE I.—*Stature (inches).*

	Mean.	P.E.	Standard deviation.	P.E.
No. 1	64.64	.1121	2.3683	.0795
" 2	64.98	.1822	2.6745	.1289
" 3	65.29	.2038	2.2816	.1441
" 4	65.15	.4186	2.5568	.2958
" 5	64.84	.0860	2.4703	.0610

TABLE II.—*Head Length (mm.).*

Mean.			Standard deviation.		
		P.E.			P.E.
No. 1	. 195'32	. '302	6'3650	.	'2114
„ 2	. 197'16	. '419	6'0565	.	'2918
„ 3	. 198'42	. '631	7'0576	.	'4457
„ 4	. 195'33	. '700	4'0173	.	'4648
„ 5	. 196'27	. '226	6'4356	.	'1590

TABLE III.—*Head Breadth (mm.).*

Mean.			Standard deviation.		
		P.E.			P.E.
No. 1	. 152'90	. '223	4'6988	.	'1577
„ 2	. 153'93	. '289	4'2358	.	'2041
„ 3	. 153'51	. '432	4'8296	.	'3050
„ 4	. 152'06	. 1'064	6'4967	.	'7516
„ 5	. 153'51	. '159	4'5647	.	'1127

No. 1, burglary, robbery, and assault; No. 2, theft, fraud, reset, etc.; No. 3, murder and assaults; No. 4, offences against chastity; No. 5, total number of habitual criminals.

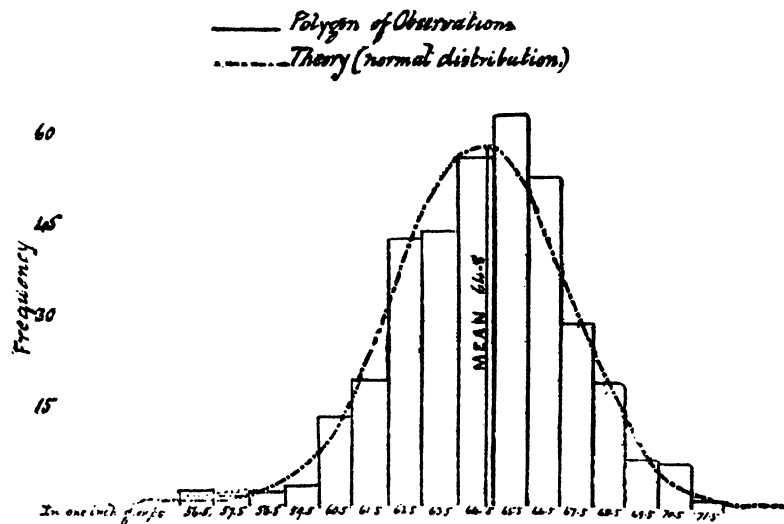
P.E. means "probable error"; mm. millimetres.

*Stature.*—There is no material difference in stature among the four classes into which the criminals have been divided. The greatest difference (.64 in.) exists between Nos. 1 and 3, but this has no special significance. The average stature of the criminals as a whole (64'84 in.) is, however, significantly less than that of the lunacy population of Scotland, and is less by about .75 in. than the mean stature of English criminals. (Macdonell, *Biometrika*, vol. i, p. 192.) When compared with the general population the difference is much greater than one would expect from random sampling, and one concludes, therefore, that in stature the criminals form a special class of the population, although among themselves the differences in stature are merely random differences.

*Head-length.*—The analysis of the data for head-length shows that there is a considerable difference in this character between Class 3 (convicted of murder and assault) and the other classes. On comparing the difference between the mean of Classes 1 and 3 with its probable error, it is found to be much

greater than one would expect if it was due merely to sampling (the difference is more than four times its probable error), and one concludes that on the average the head-length of this class of 57 members is greater than Class 1 with 202 members. Class 1 (forming as it does the bulk of the criminal population) has a mean head less than that of the criminal population as a whole, while Class 2 (thieves) with a head-length of 197.16 mm. approaches Class 3 and differs from Class 1 by more than three times the probable error of the difference. One concludes that Classes 2 and 3 resemble one another in head-length and

*Stature of Criminals. (in inches)*



differ markedly from the other two classes (1 and 4). On an average Classes 2 and 3 have longer heads than the bulk of the lunacy population, or of the general population of the country.

*Head-breadth.*—Just as in stature, there is no striking or material difference in head-breadth among the four classes. The differences are such as we might reasonably expect from random sampling of the criminal population. The Scottish criminal has, however, a broader head than the English criminal. The mean head-breadth of the latter is 150.3 mm. (Macdonell, *Biometrika*, vol. i, p. 185) while that of the former is 153.5 mm.



(1) Conclusions. Judging from the data supplied (measurements of about 370 habitual criminals), the Scottish criminal is a much shorter man on the average than the general population. There is, however, very little difference in stature among the various classes of criminals.

(2) Those habitual criminals who have been convicted of murder and assault, and, in a lesser degree, those convicted of theft, differ considerably in head-length from those convicted of robbery and other crimes. They have, on an average, longer heads.

(3) Criminals in Scotland have broader heads than English criminals. They differ considerably in head-breadth from the general population, but among themselves there is no material difference when class is compared with class.

From invaluable data<sup>(6)</sup> provided by J. F. Tocher regarding the insane in Scotland it would appear that while the criminal's head is on the average longer and broader than the inmates of Scottish asylums, he is, as stated, somewhat shorter in stature. It is impossible, for lack of data, to compare either as to stature, head-lengths and breadths, the cephalic index, pigmentation, etc., with the general population, but it can be done with selected classes of the population thus:

	Stature (inches).	Head-length (mm.).	Breadth (mm.).	$100 \frac{B}{L}$
Cambridge graduates . . . . .	68.86	193.5	154.0	79.6
British Association members . . . . .	67.16	198.1	155.5	78.2
Aberdeenshire rural . . . . .	67.72	—	—	—
General hospital . . . . .	67.16	190.4	149.3	78.5
Scottish lunatic population . . . . .	65.86	195.5	151.5	77.6
English criminals . . . . .	65.54	191.7	150.4	77.2
Scottish „ . . . . .	64.84	196.3	153.1	78.0

The criminal from this comparison is from three to four inches shorter in stature than the selected classes. From the anthropometrical survey made by the writer<sup>(7)</sup>, among the fringes of the Scottish population in the Hebrides—Orkney, Caithness and Shetland (including the islands of Foula, Fair Isle, Unst, Whalsay and Stroma)—there can be no doubt, speaking from general observation, that the completed analysis of the returns will show that both the insane and the criminal are much shorter than those people residing along the northern and

western littoral and in those remote islands in which the callipers and stature meter has not hitherto been applied. These islanders of Norse extraction will also reveal a stature as high as Ayrshire, the Stewartry<sup>(8)</sup>, and the West-ends of our cities, and much higher than the average for Scotland.

#### *Criminal Physiognomy.*

Whatever is claimed for the existence of mental and physical shortcomings among a large number of recidivists—and there is much—the existence of a criminal physiognomy cannot be gainsaid. There is no name for that elusive yet unmistakable physiognomy which recidivists present to the observer. It is as real as the facial types met with in asylums. Coarseness, scars, expression, and look tell their own tale. They are the hall-marks of alcoholism, debauchery, ruffianism, dishonesty, lying, and unchastity, each criminal and delinquent, according to the vocation he has chosen and followed, presenting appearances which do not make it a matter of great difficulty to determine fairly correctly into which class he is to be relegated. This physiognomy being the result, and by no means an indication of the causation, of the life and conduct producing recidivism, its bearing on the subject under consideration is somewhat remote, and need not be pursued further.

A few typical cases of many illustrative of the insane, degenerate, and weak-minded prisoner are submitted in brief, but before citing them it is proper to touch here, however lightly, on the question of heredity which arises in this connection.

#### *Heredity.*

There is no gainsaying the fact that, in spite of the fluctuating statistics of different asylums on the point, heredity is still the most potent causal factor in the production of insanity. The percentage set down to this cause varies little when compared with that set down to alcohol and syphilis, which, in a short space of time, varies so immensely in the returns of the same institution as at once to suggest that it all depends on the *point-de-vue*, and if there is a sudden and striking accession, say, to the number of general paralytics, there is very likely an equal diminution in the types of insanity which simulate general

paralysis. It is certain that a union of two persons, one or both of whom are neurotic, will eventuate in an insane or neurotic offspring, and that certain forms, some more than others, of insanity, in one or both parents, from which they have recovered, are very apt to recur in their offspring, or, if not, a neurosis of some kind may be looked for. How does this reasoning apply to the great bulk of professional criminals? In no way. Criminality of the most noxious kind, as a rule carried on by persons in no sense mentally unstable, feeble-minded, or obsessed, is neither a latent nor an acquired nervous lesion, and as such it cannot be reproduced by one or both parents addicted to criminal ways. The female, idle and debauched, as often as not, is the willing tool of the bold, scheming male. It is the case that a succession to criminal ways, which has been ascribed to heredity, will be found with more reason to be traceable to environment in its many contaminating and debasing aspects. It is the climax of absurdity to suppose that such criminals breed their kind, as dwarfs and giants physically breed their kind, or mentally as neurotics, epileptics, deaf-mutes, and persons suffering from certain types of insanity breed theirs. The professional criminal does not transmit acquired criminal traits. On this head it is well to hear what two so eminent authorities as Dr. George Savage and Dr. Mott have to say :

The former, in the Lumleian lectures, 1907, says : " I accept it as a fact that no mutilation of, or late acquisition by a parent will be passed on to children, but I must insist upon it that this is a very potent passing of some tendency to neurosis." This is the furthest advance made, and accepted by observers as a fair statement of the case.

Dr. Mott significantly asks : " Can a stock which is sound mentally become unsound by its members being subjected to an unfavourable environment ? Many people deny the possibility of mutation in the germ-plasm, but as the nervous system is the latest and most complex and differentiated tissue in structure and function mutations and variations may occur in consequence of favourable or unfavourable environment. The commingling of the germ-cells of two stocks of suitable or unsuitable temperaments may, by a happy or unfortunate chance, produce sporadic genius or sporadic insanity."

The part which heredity is supposed to play in the mani-

festation of criminal tendencies has, by some writers, been overstated. The heredity of psychical characteristics of one or both parents, modified by union in relation to genius, mediocrity, dulness, certain forms of insanity, epilepsy, deaf-mutism, like the heredity of physical characteristics as to size, colour, feature, etc., is admitted by the best investigators, but the heredity of acquired is not, and is otherwise satisfactorily explained. Because among thousands of genuine criminal recidivists an investigation of criminal records brings to light a few such with three or four generations traced, it would be rash to conclude that heredity in crime is proved. In many families yielding two or three felons, criminality, for several reasons of a kind adverse to the criminal and his progeny, and in spite of unfavourable surroundings, ceases to appear.

Criminal genealogical trees, as rare as the Baobabs of West Africa or the gigantic pines of California, presented in graphic style by criminological believers in heredity, with broods of three or four generations in the branches, serve a purpose, but these do not prove that burglars breed burglars, as wolves do wolves.

Whatever value there might be in the heredity contention is obscured and swamped by the environmental factor embracing, as it does, example, education, ethical and manual training, and healthy associations, etc. The absence of these sufficiently explain the rare cases of criminal continuity in criminological collections. Where, however, the heredity of mental warp and instability may be looked for and found is in the case of the congenitally weak or the psycho-pathological specimens met with about the time of puberty or later, who drift through life without a settled purpose, without the slightest regard for the dignity of honest labour, with a striking lack of moral sense and self-control, and with a great lack of proportion in their mental outlook. Not a few specimens of such are to be found among petty thieves, vagrants, prostitutes, and sexual perverts. But among those where the argument in favour of hereditary transmission looks most formidable it is sensibly influenced by the environmental factor.

No one who has had experience of the criminal and the petty delinquent classes doubts that a considerable number of the units are weak-minded, and mentally and morally defective, and obsessed in various directions. A closer scrutiny and

investigation of them, of their upbringing and habits—and this requires time, patience, and a special training to discover the weak points in their moral and psychological armour—at once reveals the truth of this. The writer, from his own experience, could give numberless illustrations of individuals whom he either had not seen, or whose names he did not, at the moment, recollect, but on glancing over the brief laconic story of crimes, convictions, and punishments recorded on their police and prison *dossiers* the conviction is forced home that mental warp, if not actual and active insanity, was sufficient to account for their occasional or frequent breaches of the moral and criminal laws. The criminal authorities are reluctant to admit special pleas in excuse for, or in extenuation of crimes. That, for some reason or other, their training it may be, is not usually their line, and to them a string of convictions conveys only one meaning, badness and incorrigibility. They are not altogether to be blamed. They do not have the necessary training or insight. For such work a few months with Legrand du Saulle in his bureau at the Paris *correctionnelle* and his successors everywhere might change their views, as a rule very pronounced. This great medical jurist, after many years' service at the police *dépôt* of Paris, declared that with a large proportion of the cases the magistrate had less to do than the physician, that, in short, their presence at the police office, the filter of first instance, the prison being the second, was due to causes with which the mere interpreter of police laws had no real concern. Into the cabinet of the medical expert there streamed, night after night, every type of physical and moral departure, the dipsomaniac, the imbecile, the epicure voluptuary, the "tête monté," the "vipère à la tête plat," the youth of the "beau monde" to whom nature had denied power of self-control, the attractive and refined female with hysterical hallucinations, etc. Many are put provisionally *en observation*, and the honour of a family, as well as of the individual, is preserved, the mental malady manifesting itself a few weeks afterwards in the asylum to which the quasi-offender was consigned. Many are sent right away to private or public asylums, without passing the portals of the gaol at all. From what I saw there many years ago I am satisfied that similar procedure is required for this country.

It is for the public and administrative bodies and individuals directly concerned with social order and good government to

evolve a penal organisation which, without confounding the gaol with the hospital, can avail itself of the moral clinique as well as the police coercion required, and thus gradually eliminate from communities those elements which are unfit for its evolution and dangerous to society.

It may be appropriate to cite here a few cases from among many known to the writer in support of the contention that the misdeeds which to a trained mind conveys the idea of weak-mindedness, imbecility, moral insanity, epilepsy, paranoia, pyromania, dipsomania, general paralysis, obsessions, requiring special treatment, to the guardians of public order, simply means incorrigibility requiring penal treatment and seclusion.

(1) A. B—, æt. 46.—Record sheet bears that he has had many charges against him for petty theft and drunken and disorderly conduct, which he makes no effort to disprove. He wears an air of nonchalance, is unconcerned and uncomplaining, is rather well-pleased with himself, and is communicative; occasionally contradicts himself; pupils unequal and speech affected. The articles stolen, and found in his possession, consist of knives, forks, spoons, not worth many pence in value. The maximum sentence is repeatedly inflicted and accepted without protest, unless it be that in the pillory contrast columns of a society journal contrasting the more lenient attitude of the Criminal Law towards those who injure property compared with those who injure the person. The bare record sets one athinking. The uncomplaining man is examined and found to be suffering from the first stage of general paralysis, and is at once relegated to an asylum.

(2) R. F—, æt. 30, has had several convictions with the maximum penalty of sixty days' imprisonment for assaults, restricted as to time (after dusk) and places (common stairs and public parks). On examination, it is found that he has the delusion that by Divine authority he has been entrusted with the duty of putting down immorality and unchastity committed in these two situations. He also goes to the asylum.

(3) F. G—, senile libidinalist and exhibitionist, with enlarged prostate and bladder difficulties. He is proclaimed a sexual pervert, and not a criminal.

(4) S. G—, female, æt. 21, betrayed and deserted by her

paramour (is seven months' *enceinte*), steals baby-linen and bedding, and is sent to gaol for theft. Examination reveals a state of hysteria and an irresistible desire created by the pregnant state similar to the instincts of birds and animals to provide for their offspring. The moral sense for the time being is affected.

(5) W. Y—, æt. 20.—Puny in size, insignificant in appearance, and presenting the stigmata of degeneration, became a constant frequenter of the theatre, and, from a prominent place, gives unstinted applause and throws bouquets at his favourite until he is removed and placed under arrest. This proved to be a case of *dementia præcox*.

(6) R. T—, a vagrant who begs his way, and who time and again receives the full penalty for sleeping out, forsooth, beside a brick-kiln. Verily, the birds of the air have their nests, and the beasts of the field their lairs, but this man, and many like him, have no place whereon to lay his head, except an out-house, the guard-bed of a police office or prison cell, or the hot-water pipe on the floor of a night shelter.<sup>(1)</sup>

(7) S. T—, male inebriate, æt. 37. Was two years in Perth State Reformatory, and after a few weeks' freedom began his career of drunkenness and brawling in a provincial town, which made him a menace to his family and the police. The cost to the community of his conduct, apart from the nuisance, he failed to see, and began to point out the defects of the reformatory in question, especially the smallness of it, seeing there were thousands of inebriates in Glasgow and Dundee requiring such treatment. There was an inability to see the enormity of his own conduct for years in his desire that others might be benefited by internment.

(8) R. F—, æt. 18, gently reared and educated at the best secondary school, sets fire to a dormitory in order to ascertain how his fellow pupils feel being roasted. In other respects his conduct was shown to be precocious and impulsive. Being a case of impulsive insanity associated with early adolescence he very properly was sent to asylum for a time.

(<sup>1</sup>) Introduction to the *Judicial Statistics for England*, 1893.—(<sup>2</sup>) British Association, Economic Section, *Transactions*, 1902.—(<sup>3</sup>) British Medical Association, Psychological Section, 1898.—(<sup>4</sup>) England 20,760, Scotland 2880, Ireland



2550.—<sup>(5)</sup> In this connection the assistance of Dr. Sinclair, Medical Officer, H.M. Prison, Barlinnie, and Dr. McWalter, Medical Officer to H.M. Convict Prison, Peterhead, is recognised with thanks.—<sup>(6)</sup> "Anthropometry of Scottish Insane," *Biometrika*, vol. v, part 3, February, 1907.—<sup>(7)</sup> Aided by the Carnegie Research Fund.—<sup>(8)</sup> The shires of Kirkcudbright and Wigton.—<sup>(9)</sup> Within living memory in Glasgow these weary wayfarers in the night shelters, there being no shake-downs, laid their chests across a taut rope which the keeper in the morning cut in order to wake them all up, as the gong does the guests at a hotel.

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*Further Bacteriological and Experimental Investigations into the Pathology of General Paralysis and Tabes Dorsalis.* By W. FORD ROBERTSON, M.D., and DOUGLAS MCRÆ, M.B., C.M., M.R.C.P.Edin.

In previous papers (1) we have recorded observations on the ground of which we have contended that a diphtheroid bacillus, having cultural and morphological characters resembling those of the Klebs-Löffler bacillus, plays the chief part in the production of the toxæmia of general paralysis. We have at the same time insisted upon the importance of weakening of the local and general defences against bacteria, and have attributed the chief part in the production of this impairment to syphilis, chronic alcoholic intoxication and the excessive use of nitrogenous foods. A little more than a year ago we thus summarised the case in support of the diphtheroid hypothesis:

The evidence that a diphtheroid bacillus—either an attenuated form of the Klebs-Löffler bacillus or more probably an altogether distinct micro-organism—is the specific etiological factor in general paralysis and tabes dorsalis is briefly as follows: A bacillus of this nature is, according to the results of our investigations, present in large numbers, either in the alimentary or respiratory tract, or in both, and in the genito-urinary tract, in all cases of advancing general paralysis. This bacillus has a thread form, which has been found invading the walls of the respiratory or alimentary tract in five cases of general paralysis. It can be shown that this bacillus invades the pulmonary tissues in cases of general paralysis, and that it is commonly the only micro-organism present in large numbers in the catarrhal pneumonic foci that occur in most of such cases dying in congestive attacks. A growth of a diphtheroid bacillus has now been obtained in cultures made from the brain