

especially where lunatics seldom if ever promenade public thoroughfares. Consequently, the idea of then residing in a town where mad people were numerous, and lived almost like ordinary inhabitants, appeared to my mind of doubtful realisation.

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*The Effects of the Present System of Prison Discipline on the Body and Mind.* By J. BRUCE THOMSON, L.C.R.S., Edin.; Resident Surgeon, General Prison for Scotland at Perth.

(Read at the Annual Meeting of the Medico-Psychological Association, held in Edinburgh, July 31st, 1866.)

MR. PRESIDENT,—My first duty on rising to address this Association is to thank you, sir, personally, for your kindness in proposing me, and the members for electing me, to the honour of being a member of the Medico-Psychological Association.

This paper is due chiefly to your own suggestion; and I do now feel that it was somewhat bold in me to accept your hint, and venture upon an inquiry so difficult, and of such paramount social and psychological interest. I hope the subject may be found not altogether aside from the proper functions of this learned body, as I certainly regard it opportune for my having the benefit of any opinions that may emerge in the minds of those I now address, many of whom are eminent for ability and experience in mental diseases so prevalent in prison life.

Can long sentences to penal servitude in prisons be carried through without serious detriment to the bodily and mental condition of prisoners? This was the proposition propounded only a few years ago, when the transportation of convicts was set aside, and the present system, called the separate system of prison discipline, was introduced. In this paper, what I propose is, to examine the results of this sanitary experiment; and how far we are enabled to judge of its success and solve the grave problem as to the effects of long imprisonment on body and mind. The study of the character and diseases of the criminal population has become a specialty confined to but a few; and I feel it all the more incumbent to tabulate my observations, which have been continuously given to the subject for nearly ten years.

Physical suffering, as you know, for the last quarter of a century has been almost wholly ignored in prison discipline. Howard and Romilly did for criminals what Conolly and Pinel have done for the

insane; and the benign influence of criminal legislation has long been and still professes to be chiefly reformatory—curative rather than punitive—on the principles long ago enunciated by Cicero: “*Omnis et animadversio et castigatio contumelia vacare debet. Prohibenda autem maxima est in puniendo.*” Legislation has been, like Penelope’s web, a system of doing and undoing; but, however much social reformers may differ as to the physical punishments of prisoners, I think that you will all agree as medical men that it is our duty to return the criminal to society as well in body and mind, if possible, as when he entered upon his sentence of imprisonment.

I have said that the study of prison life is a specialty, and it seems to me, therefore, necessary that I should offer you a few prefatory remarks on criminals as a class distinguished peculiarly from civilians.

All who have seen much of criminals agree that they have a singular family likeness or caste. Prison officials and detectives know them at a glance. An accomplished writer who is well qualified to speak on this subject says, “I believe I have looked as many scoundrels in the face as any man alive, and I think I should know all such wherever I should happen to meet them. The thief appears to me as completely marked off from honest working people as black-faced sheep are from other breeds.” In this statement I quite concur.

Their *physique* is coarse and repulsive; their complexion dingy, almost atrabilious; their face, figure, and mien, disagreeable. The women are painfully ugly; and the men look stolid, and many of them brutal, indicating physical and moral deterioration. In fact, there is a stamp upon them in form and expression which seems to me the heritage of the class.

“The physical, being,” as I take it, “the foundation of the moral man,” the criminals as a class exhibit a low state of intellect compared with the industrial classes. A large proportion of prisoners, as I shall afterwards show by figures, are weak-minded congenitally, and give a large proportion of insanity compared with the civil population. I know this is in the face of popular prejudice, encouraged by the drama and sensational romance, which makes heroes of criminals, endowing them wondrously—as some one said, “with rare abilities, of which God has given the use and the devil the application.” These are drawn from exceptional cases for dramatic effect. On the contrary, teachers say prisoners are slow to learn. Officials find it a hard task to train them to the plainest industrial work. Taste in any art or mechanical ingenuity we seldom see among them. Sir W. K. Shuttleworth observed, what is plain to all intelligent observers, that the juveniles at Parkhurst were defective in

physical organisation—from hereditary causes, probably, and early neglect and privation.

These remarks *in limine* on the characteristics of the criminal class it is necessary to carry along with us in our inquiry as to the effects of imprisonment, so as to judge what belongs to caste and what to imprisonment.

It seems necessary to premise also a few words *on the separate system of discipline* in present operation.

The *separate* is a modification of the *solitary system*, which has been everywhere almost wholly abandoned as injurious to the mind. It is singular enough that Howard, the great friend of the prisoner, and true philanthropist, was himself the author of the solitary system, the most severe of all penal systems. The object was to prevent the evils of association; but insanity was the frequent result.

Even the original separate system has been much modified. At first, the prisoner was strictly confined to his cell, which was his workshop and dormitory. He had little or no communication with officers. The exercise was short, and in isolated cages under absolute silence. A mask was worn to avoid personal recognition. The chapel was cellularly divided; or the chaplain stood in the corridors of a gallery, each prisoner only hearing, not seeing him, through the cell-door upon the bolt. The food was passed through a small service door, so that even the warder was not seen. Two purposes were aimed at by this—viz., entire isolation, and seclusion to encourage self-communion and lead to reform.

As you may well believe, it was not long until relaxations were called for of the severities of separation. After a confinement of nine months male convicts, and after twelve months female convicts are partially associated. Exercise is had more freely in open airing-grounds. The chapels are not cellular, but open-seated. Masks are abolished. Warders see and speak to prisoners at least twelve times daily. Silence is not strictly enforced; and medical officers have free power to associate all who are regarded unfit to bear the separate system: such are juveniles, epileptics, weakminded, and suicidals, Highlanders who cannot speak English, and all the sick.

I hasten to consider now—

- I. *The effects of the separate system of prison discipline on the body.*
- II. *The effects upon the mind of prisoners.*

I. *Of the general health, sickness, and death-rate of prisoners.*

The general health has of late been very good in Scotland, especially during the last decennial period. During the decennial period 1844 to 1853 it was not so. General debility, scrofula, and scurvy were found to prevail among our prisoners, in consequence of a de-

fective dietary. The truth is, the dietary of prisoners must be good for two obvious reasons: their systems are deteriorated by hereditary and habitual vices; and in prisons, the same amount of assimilation of food does not take place in imprisonment as in freedom. This latter, I suspect, applies to asylum and hospital patients generally.

I am satisfied that a bare minimum of subsistence is a dangerous allowance to prisoners, and a liberal dietary is the truest economy in prison. Hence, during the decennial period 1854 to 1863, an improved dietary proved more economic than the lower dietary, there being reduced sickness and death-rate, and, consequently, more labour from prisoners. A good diet and careful hygiene, also, I think, help to explain our singular exemption from epidemics.

A table before me shows all the cases of disease (noting the diseases) which occurred during the decennial period 1856 to 1865, inclusive, in the General Prison for Scotland under my charge.

The total ten years' population was 646, of whom 1 out of 72 were placed on the sick register; the sickness being, therefore, at the rate of 14 per cent.

The prison rule for registering sickness is, "The surgeon shall enter in his register every case of illness which is sufficient to prevent a prisoner from working, or which is infectious."

A few months ago, in a joint report by Professor Christison and myself, the following statements in regard to our death-rate and sickness of prisoners in the different prisons of Scotland are given:

"In consequence of an improved dietary during the last ten years, the death-rate (notwithstanding the substitution of long imprisonments for transportation) has fallen from 1.41 to 1.15 per cent.

"Diseases from defective nutrition have disappeared.

"Diseases contracted *after* admission to prisons have decreased from 27 to 15 per cent.

"Prisoners off work from sickness have been reduced from 4½ to 3½ days on the total average daily prison population.

"The amount of sickness has fallen from 65 to 45 per cent. over all Scottish prisons."

To this very favorable account of the general health, sickness, and death-rate of prisoners, I must offer some exceptions.

1. Juveniles and those at the growing periods of life suffer much from stiffness of limbs; and a standing rule is, to associate all under fourteen years of age, and even sixteen, the governor and surgeon concurring; also juveniles are drilled to military manœuvres and exercises, as precautions against stiffness of limbs.

2. *Untried prisoners*, partly from their recent dissipations, and partly from being tossed betwixt hope and fear as to their trial and sentence, fall off, but revive again after their trial.

3. Convicts, a few months before liberation, become anxious,

sleepless, and lose health and strength from their anxieties as to the future. Convicts say the most irksome period of imprisonment is immediately preceding liberation.

4. Out-door labourers, shepherds, poachers, fishermen, as a general rule, fall off under imprisonment.

I am bound further to make this general observation, that more or less in all prisoners there is a slow and torpid state of the locomotive organs (partly, perhaps, mental), which seems to be the result of seclusion.

Upon the whole, the foregoing facts and figures satisfy us that the effects of imprisonment do not materially injure the body; but rather that the general health is well sustained, and certain diseases, phthisis and scrofula, are ameliorated or arrested. I look upon the hygienic and sanatory treatment of prisoners as one of the best triumphs of medical science; and looking to the condition of paupers when contrasted with prisoners, I do not wonder that some have sneered at our care of criminals, like Rochefoucault, when he says, "Il s'en faut bien que l'innocence trouve autant de protection que le crime."

II. *Effects of imprisonment on the mind.*—What I have advanced seems sufficient to relieve all anxiety as to the effects of imprisonment on the mind. But, remembering the effects of the solitary and silent systems, of which the separate is but a modification; keeping in view the necessary ameliorations lately introduced into the separate system; and further, considering the sources, physical and moral, of insanity belonging to the criminal class—there appears a foregone conclusion that there is danger to the mental condition from the separate system of prison discipline.

Let me bring before you figures showing the amount of mental disease which is found to prevail in the General Prison for Scotland, and compare this with the ratio found among the civil population.

I observe that among criminals there is a large amount of weak-mindedness, not regarded as insanity, viz.:

Prisoners weakminded, but not in the lunatic department—of two kinds: *Separate*, but under special observation; *not separate*, but whose mental condition does not bring them within the category of the insane.

Perhaps there are few see so much of this class as I do of various grades, verging upon and lapsing at times into insanity, reminding one of Hamlet's description of falling

"Into sadness—then into a fast;  
Thence to a watch—thence to a weakness;  
Thence to a lightness; and by this declension,  
Into the madness wherein madmen rave."

Here is a decennial table, 1856 to 1865, showing the number of

those *associated* as unfit to bear the separate system of imprisonment :—

	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	Total.
<b>MENTAL CONDITION—</b>											
Imbecile or Weak-minded...	22	34	14	21	20	16	26	13	17	15	198
Ditto, and Suicidal . . . . .	3	2	2	4	7	9	6	2	4	1	40
Epileptic . . . . .	4	7	4	11	2	7	13	6	15	7	76
	<u>29</u>	<u>43</u>	<u>20</u>	<u>36</u>	<u>29</u>	<u>32</u>	<u>45</u>	<u>21</u>	<u>36</u>	<u>23</u>	<u>314</u>

For the last decennial period, we have had at the average of forty per annum who, in addition to the above, have been placed under special observation, expected to suffer from separation.

We have therefore had

<i>Associated</i> , as unfit for separation . . . . .	314
<i>Separate</i> , but specially observed . . . . .	400
<b>Total</b> .....	<u>714</u>

The average daily population having been 6468, or 646 per annum, we thus show that mental weakness (but not insanity) belonged to about 11 per cent. (nearly 1 out of every 9) of the general prison population. This is probably much within the actual mark. In a paper I lately published in the 'Edinburgh Monthly Journal,' being an analysis of fifty-nine epileptic prisoners' cases, it appeared that all, with the exception of fourteen of these, were noted for mental weakness; that prisoner epileptics were 1 per cent. of the prison population, while the ratio in civil and army populations was estimated at a mere fraction of this, viz., 0.009.

I proceed to give a table of the *number of prisoners who have become insane* in the General Prison during the last decennial period :

	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	Total.
From the General Prison...	2	4	4	6	6	4	2	3	3	9	43

In the form of an equation this gives—

$$\frac{\text{The average daily population} \dots \dots \dots 6468}{\text{The number becoming insane} \dots \dots \dots 43} = \frac{1}{150}$$

One out of every 150 became insane during the last ten years. The average daily population I speak of is the sum of all who during the year have passed through the prison divided by 365. I should add that I am aware of several who went out of our prison weak-minded, and shortly afterwards went to asylums; so that 1 out of 150 is probably a small enough calculation of those becoming insane under imprisonment.

Let me extend this inquiry beyond the General Prison for Scotland, and show as near as I can the number of existing insane

among the total prison population of Scotland. The criminal lunatics of Scotland are nearly all placed in the lunatic department of the General Prison for Scotland, under the authority of the Secretary of State and during Her Majesty's pleasure.

Some years ago, the Medical Superintendents of Asylums objected to the reception of criminal lunatics. It was not considered fair or favorable to insane patients that they should be classed with criminal lunatics, many of whom had committed heinous and violent crimes; and the Medical Superintendents objected to come under the obligation called for by the Secretary of State, to keep the criminal lunatics in "close and safe custody"—a condition not only highly responsible, but detrimental to the curative treatment of milder and ordinary cases, admitting of considerable freedom within and even without the asylum precincts. Lunatic asylums, therefore, being found unfit places of detention for criminal lunatics, the late General Board of Directors of Prisons made arrangements, under statutory powers, for the present lunatic department of the General Prison to be fitted up for the custody, treatment, and maintenance of all criminal prisoners unfit to be brought to trial, found upon their trial to be insane, or at the time of committing the offence charged; also prisoners who have become insane while undergoing punishment. The hospital for lunatics was opened in October, 1846, and contains, with few exceptions, all the insane belonging to the criminal population.

The following shows the existing insane in the lunatic department for criminals during the last five years:—

	1861	1862	1863	1864	1865
No. ....	33	34	34	40	51

The entire prison population of Scotland, annually averaged for the last five years, amounted to 2,316; and the above would show—

Annual average number of criminal lunatics	38	=	$\frac{1}{60}$
Number of criminals .....	2316		

One out of 60 *existing* criminal insane.

Criminal insanity is on the increase, however, and my report of 1865 shows—

Criminals insane .....	51	=	$\frac{1}{47}$
Total criminals of Scotland .....	2416		

One out of 47 existing criminal insane, as reported for 1865.

Compare this ratio with what is found in this and other countries. The materials are by no means satisfactory, but I offer some of them:

In France the number of lunatics has been recently estimated at	1 in 1028
In England and Wales at .....	1 in 824
In Scotland, about .....	1 in 473
In Ireland, at .....	1 in 1291

The lowest calculation for England I have ever met with is made by Drs. Bucknill and Tuke in their work on 'Psychology,' which is an estimate made by adding a supposed number of lunatics and idiots to the reported number given by the Commissioners in Lunacy; and this lowest estimate supposes that 1 out of 300 is the ratio of insane to sane in the population of England.

The foregoing prison statistics lead to the following conclusions:—

1. That weakmindedness is very prominent in the criminal population as a class.
2. That in the General Prison for Scotland about 1 out of 9, or about 11 per cent. are weakminded.
3. That epilepsy shows a much larger proportion among prisoners than among the army or civil populations.
4. That prisoners are noticed *on admission* in considerable numbers to be weakminded; rendering it doubtful whether their mental peculiarities are the result of hereditary influences, or may be due to the seclusion of cell-life and frequent imprisonment.
5. That individual prisoners (not of the criminal class) suffer much mentally from the seclusion, want of intercourse, and inaction of mind as well as body under the separate system of imprisonment; these effects being shown chiefly in juveniles, foreigners especially, and Highlanders, who cannot converse in English, and those generally who do not belong to the criminal class.
6. That the ratio of those who become insane in the General Prison for Scotland has been 1 in 150.
7. That the existing criminal insane have been, during the last five years, at the ratio of 1 out of every 60 of the prison population in Scotland; and in 1865, 1 in every 47 of the prison population were criminal lunatics; *i. e.*, existing at the time.

The important corollary from these statistics is, that, with all its recent relaxations, the separate system of prison discipline is trying upon the mind and demands the most careful attention on the part of medical officers, inasmuch as mental diseases are most prominent among criminals in prisons, and seem to be on the increase.

I bring forward these facts and figures asking for further inquiry and regular statistical information from the surgeons of English convict prisons, especially on two points:

- a.* What is the proportion of insane (becoming insane or existing insane) among the criminals of England?
- b.* What proofs, if any, are there of this insanity being the result of imprisonment?

These statements seem to me extremely interesting, and I should like your free comments upon them.

The number of weakminded renders it probable that much crime,



when committed, is done by persons labouring under mental disease, crime and insanity having clearly a natural alliance which puzzled the old classic philosophers as well as modern psychologists, in regard especially to the question of responsibility. "A knave is always a fool" says the proverb; and Hale had an axiom, that "all criminals are insane." It has almost been asserted in as many words by eminent psychologists, that "all murderers are insane." Without going this length, I must admit that I am satisfied that, as a class, criminals are extremely liable to mental disorders and diseases, apart altogether from imprisonment.

Hear the divine Plato on this subject:—"All *disgraceful conduct* is not properly blamed as the consequence of voluntary guilt; *for no one is voluntarily bad*; but he who is depraved becomes so through a certain habit of body and ill-governed education. All the vicious are vicious through two most involuntary causes, which we always ascribe rather to the planters than the things planted, and to the trainers rather than those trained." Such doctrines, whatever truth may underlie them, are not tenable to the extent which this philosopher held; otherwise we must in a great measure set aside all moral responsibility.

*Paralytic Insanity and its Organic Nature.* By Dr. FRANZ MESCHÉDE. Abridged from 'Virchow's Archives,' 1865, by G. F. BLANDFORD, M.B. Oxon.; with a Prefatory Note.

THE disorder commonly called "general paralysis of the insane" presents so many points of interest to the pathologist and the physician, that as a necessary consequence it forms the commonest topic among the writings of those who specially study insanity. But after so much observation and so many treatises, it is disheartening to find that even now scarcely more than one fact with regard to it is laid down as settled and established beyond the possibility of doubt. One there is, the saddest that can be. It is, that for this malady we hitherto have found no cure; that to diagnose it is to pronounce the sentence, not only of incurable insanity, but also of speedy death. The marvel of the whole is, that although death occurs in every case at no very distant period, though post-mortem examinations of general paralytics are made by hundreds every year in this and other countries, yet even at this day no two observers are agreed as to the pathology and morbid anatomy, as to the part in which it has its origin, or which constitutes its peculiar and proper seat. No