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“DEGENERATE CRIMINALS”
Mental Health and Psychiatric Studies of Danish Prisoners in Solitary Confinement, 1870–1920

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Inspired by the breakthrough of the discipline of criminology and biological theories of degeneration, prison psychiatry became a flourishing field during the latter decades of the 19th century. This is reflected in the history of the Vridsløselille penitentiary in Denmark, which operated as a Pennsylvania-model institution with strict solitary confinement from 1859 to the early 1930s. Throughout the period, this prison experienced extensive problems with inmate mental health, and as the discipline of psychiatry developed, mental disorders were given new names and old diseases disappeared. Although prison authorities were willing to acknowledge the damaging effects of the isolation regimes being employed, a number of psychiatrists located the causes of mental disorders among biological dispositional traits rather than situational factors. In doing so, they downplayed the power of the prison context and offered biological “degeneration” among criminals as an alternative explanation.

Keywords: solitary confinement; isolation; Danish prisons; biological factors in criminality

The Vridsløselille penitentiary in Denmark opened in 1859 and operated as a Pennsylvania-model institution with strict solitary confinement through the early 1930s. Throughout the period, this prison experienced extensive problems with inmate mental health. Prisoners were diagnosed with different illnesses, and as the discipline of psychiatry developed, mental disorders were given new names, and old diseases disappeared. During the 1860s, many inmates suffered from “lethargy,” whereas “neurological complaints” became a big problem in the 1880s. During the early 20th century, these disorders were replaced by, for example, “neuralgia” and “hysteria.” By looking at the records of prison doctors and the official statistics of the prison service, and by consulting detailed psychiatric studies of the mental health problems in Vridsløselille penitentiary and other Danish prisons from the 1870s to around 1920, it is possible to describe how the prison authorities and psychiatric experts perceived “disturbed offenders,” their mental health, and criminal behaviour.

THE PENNSYLVANIA MODEL INTERNATIONALLY AND IN DENMARK

From the 1770s to the middle of the 19th century, the ideology of the modern penitentiary became established. With the construction of the so-called Auburn and Pennsylvania prison models in the 1820s, the aim of this modern penitentiary system became the rehabilitation of criminals through the use of isolation. The Auburn system (developed in the Auburn prison in New York State) permitted the inmates to work together during the day,
but under a regime of total silence. In Pennsylvania-model institutions (finally developed in Philadelphia in the “Cherry Hill” prison), there was no compromise with the ideal of isolation, and the prisoners spent almost all their time in their cells, where they worked and slept. Here, inmates were supposed to turn their thoughts inward, to meet God, to repent of their crimes, and eventually to return to society as morally cleansed Christian citizens (Smith, 2004b, 2006b; also see Foucault, 1995; Ignatieff, 1978).

The ideology of the modern penitentiary had an enormous impact all over the Western world. In the United States, the Auburn model became the most popular, but a number of Pennsylvania-model prisons were also constructed. In Europe, on the other hand, the Pennsylvania system, the most severe form of isolation, was favoured. In Denmark, solitary confinement was implemented on a large scale from 1859, when Vridsløselille Penitentiary opened based on the Pennsylvania system. During the early 1860s, however, it became apparent that serious health problems had arisen in the prison. It quickly became normal procedure, for example, to transfer a number of the worst inmates (who became more or less uncontrollable) to insane asylums in different parts of the country, and the prison authorities fought a constant battle to avoid a general state of mental health chaos (Smith, 2004a). In fact, mental health problems seemed to arise in all Pennsylvania-model prisons, where the isolation was enforced much more strictly (Franke, 1992, p. 128; Smith, 2006b).

THE EXPERIENCE OF SOLITARY CONFINEMENT

Before we turn to a detailed account of the mental health situation in Vridsløselille and the way it was interpreted by professional psychiatrists, we should allow ourselves a view from the inside and from below. I therefore give voice to a prisoner who experienced the Pennsylvania model regime at Vridsløselille during 1918 and 1919, when it was still being conducted according to the original plan. In terms of the actual regime, the experience of solitary confinement in Vridsløselille was very similar—indeed, almost identical—in the 1860s and in the late 1910s.

Niels Johnsen began serving his 8-month sentence in Vridsløselille in 1918. Technically, he had received a sentence of 1 year’s imprisonment, but when sentences were served in solitary confinement, they were always shortened, a reminder of the official acknowledgement of the hardships associated with such a regime. Johnsen was convicted of writing political articles, which, according to the court, were revolutionary in nature. Johnsen was, in other words, an able writer and as such a relatively unusual guest in the prison system. Luckily, he later produced a brief written recollection of his prison experience, on which the following is based (Johnsen, 1929).

According to Johnsen, an ordinary day at Vridsløselille began at 6:00 in the morning and consisted of solitary work in one’s cell until 7:30 in the evening. Carving toy horses became Johnsen’s occupation. There were three daily breaks for eating—2 hours in all—which also took place in the cell. Half an hour of fresh air (if the weather permitted) was also allowed each inmate, but time in the yard also took the form of solitary confinement. The prisoner’s mask, worn while being moved around the prison, was also still in operation in 1918. Nor did the occasional visits to both the prison church and the prison school allow inmates any social contact (unless the regulations were broken). In Johnsen’s time the church and school were still designed panoptically, with isolation booths for each inmate visitor. Visits and
correspondence with one’s family were also severely restricted. Each prisoner was allowed a 15-min visit every third month, which, according to Johnsen, was awaited with great excitement not only days but weeks ahead. Correspondence was limited to receiving and sending one letter a month.

Johnsen found the food in Vridsløselille simple but edible, but he was very distraught at the hygienic conditions and, for example, severely disliked the fact that eating utensils were placed on a shelf directly above the toilet. His attitude was much more positive toward the access to school education, which was provided once a week. He was also appreciative of the prison chaplain, with whom the prisoners were allowed an occasional brief conversation. Johnsen was not religious and was well aware of the rehabilitative aspect of the prison regime—which had a religious moral foundation (Smith, 2004a)—but he enjoyed Sunday service as distraction from the otherwise extreme monotony of life in Vridsløselille. Another way of addressing the lack of sensory stimulation was to knock on the wall in an attempt to communicate in some way with one’s neighbour.

All things considered, Johnsen saw the isolation to be the dominating feature of Vridsløselille. In his view, a need for social relatedness was intrinsic to human nature, and in solitary confinement one was “instantly overpowered” by a “depressing” and “poignant solitude.” As one who had experienced it himself, Johnsen knew “what it meant to measure out the cell with tiny footsteps hour after hour, while over and over again a perpetual emptiness grinds away and throws the prisoner into a condition which borders on insanity” (Johnsen, 1929).

It is obviously difficult to acquire a precise picture of the health situation in specific institutions when attempting to do so more than a 100 years later. Still, the available material from Danish prisons in general and Vridsløselille penitentiary in particular permits us to do this in quite remarkable detail. I have described how the regime of solitary confinement affected prisoners in Vridsløselille from 1859 to 1873 thoroughly elsewhere (Smith, 2004a) and therefore make only some brief remarks here before turning to the later period from 1873 until the 1930s, when the Pennsylvania model regime was finally abandoned.

In the early 1860s, shortly after Vridsløselille penitentiary had been opened, the staff and management both became aware of the problems surrounding the use of isolation, and in the mid-1860s the prison governor of Vridsløselille, Frederik Bruun, concluded that the system was no longer fulfilling its original intentions. It appeared from prison records, especially from the prisoners’ medical records, that a wide range of symptoms were flourishing among the inmates in solitary confinement, including lethargy, apathy, headaches, anxiety, paranoia, hallucinations, and mental illness in general. Every year, a handful of prisoners who represented the worst cases were moved to various psychiatric institutions around the country, whereas a much larger group of prisoners were treated at the prison hospital and in their cells. Often these prisoners either lapsed into a state of complete inactivity or became more or less unruly and disrupted order in the prison.

An example of the latter is prisoner Mads J. Petersen, who arrived in Vridsløselille in 1861 and initially behaved and worked well. Petersen started to feel depressed, but apparently his personal Bible studies helped him. In the early summer of 1863, however, he
became confused and was admitted to the prison hospital, from where he was returned to his cell 10 days later. Petersen became very introverted, and quite soon afterward he began to hallucinate, after which he was ordered outside for more fresh air. This treatment did not help, and Petersen became aggressive, dirty, and destructive and also continued to hallucinate. He was admitted to the prison hospital again but without success, and in the end he was transferred to an insane asylum (Smith, 2003, p. 206). If Peterson had become lethargic during his treatment in the prison hospital, he would undoubtedly have been returned to his cell.

In 1867, Bruun concluded that long-term isolation represented a “significant danger to the prisoner’s mental health” (Bruun, 1867, p. 59). During the following year, Bruun wrote a report on the entire Danish prison system, in which he described in detail the health problems that troubled Vridsløselille—problems that did not exist in the Auburn model prison, Horsens, where inmates were allowed a certain level of social contact. According to Bruun, the inmates in solitary confinement fell into a state of a total lack of energy and willpower, into a mental and physical laxity . . . which was either cured by means of fortifying medicine, a changed and improved diet, longer exercise spells or light work in the open air, or else developed into a depression, and subsequently, to higher degrees of mental disorder. (Bruun, 1867, pp. 95-96)

Accordingly, a common disorder among the inmates in solitary confinement was simply termed “lethargy” or “listlessness” in medical reports (Smith, 2004a, p. 15).

In the official reports of the Danish prison service, it was acknowledged that from April 1863 to 1867 an estimated 2.28% of the inmates in Vridsløselille became insane (Smith, 2003, p. 233). In a 1863 report on the moral character of the inmates and the effects of the Pennsylvania model on them, it was also acknowledged that 14.2% of the inmates (from 1859 to 1863) left Vridsløselille penitentiary in a low moral state and lacking self-control—a condition that, according to the report, had probably been worsened by the effects of solitary confinement (Bruun, 1864, p. 50).

By conducting a detailed archival study of the prison records—including medical records and other individual information on prisoners—I have previously shown that the health problems related to the regime of solitary confinement were actually even more widespread than the above account suggests. According to an analysis of this material, around one third of all inmates were negatively affected by solitary confinement. Slightly more than one third of these—that is, 12% of all inmates—should be regarded as highly serious cases: “They were described, for example, as very sickly in appearance, deranged, hallucinating, having delusions . . . [or it was simply directly] stated that they could not bear the solitude” (Smith, 2004a, p. 22). According to Bruun, more than half of those in long-term solitary confinement were severely affected by it, whereas the rest were just “tolerably” normal (Smith, 2004a, p. 22). Furthermore, according to one of the very few prisoners who later produced a written recollection of his stay in Vridsløselille during this period, the prison hospital (where he spent much of his time) functioned as a “little private madhouse” where the most unruly of those who could not handle the isolation were treated. Accordingly, some bizarre events unfolded from time to time in the prison hospital. For example, the inmate in question remembered a “mad” and paranoid prisoner who helped clean the prison hospital:
This poor man suffered, among other things, from the fixed idea that the doctor and the barber wanted to kill him; he thought he could hear people digging his grave outside the windows, and during this time he lay convulsively crying all night long because he was waiting for them to come and kill him. (Pio, 1877/1975, p. 68)

SOLITARY CONFINEMENT VERSUS CONGREGATE PRISON CONDITIONS IN DENMARK, 1878 UNTIL THE 1930s

Assessing the actual health situation and the effects of solitary confinement in Vridsløselille through archival studies becomes slightly more problematic from the 1870s onward because of changes in the prison’s way of keeping records. Some time during the 1870s, new procedures were adopted with regard to how inmate health was recorded in the central prisoner protocols. Suddenly, virtually all prisoners were thus described as “unchanged” in terms of their health on release, whereas during the preceding period, a large proportion of those who were released were described as having been negatively affected by their imprisonment. This new practice could have something to do with the change of prison governor that took place in 1873, when Bruun became head of the prison service: His successor might not have shared Bruun’s strongly critical attitude toward the use of strict solitary confinement. The underlying reason certainly cannot be that the ill effects of incarceration in solitary confinement were all of a sudden mitigated. Consequently, the official reports from the prison service tell a very different story. Although they convey a somewhat more positive picture of the health situation in the various institutions—compared to that for the period 1859 to 1873—they improve their health reporting during the latter part of the 19th century and become an increasingly useful resource.

In the official reports of the Danish prison service, it was, for example, acknowledged that from 1878 to 1883 more than 13% of inmates who had arrived in the prison in a healthy condition suffered from health problems directly related to the regime of solitary confinement (see Table 1). Furthermore, in addition to the figures below, at least 10 inmates (and most likely several more) were permitted association specifically because the prison authorities concluded that they were unable to handle solitary confinement. Why the prison service thought that 11 cases of scurvy were caused by the imprisonment is unclear.

<table>
<thead>
<tr>
<th>Table 1: Number of Illnesses Which, According to the Danish Prison Service, Were Caused by the Regime of Solitary Confinement, 1878–1883 (“Beretninger fra Kontoret for Fængselsvæsenet,” 1885)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dyspeptic Problems</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>Vridsløselille</td>
</tr>
<tr>
<td>Percentage of inmate population^a</td>
</tr>
</tbody>
</table>

^a. Based on the 1,904 prisoners who passed through the prison during the period and were deemed healthy on arrival. See “Beretninger fra Kontoret for Fængselsvæsenet” (1885, p. 50). During the 5-year period, 500 inmates were treated for health problems. In the official statistics, these inmates were only recorded as having one disease (allegedly their primary disease if they had more than one), which makes it possible to calculate the actual percentage of prisoners suffering from solitary confinement–related health problems.
Later official reports of the Danish prison service make it easier to identify some of the health effects of solitary confinement because they distinguish more clearly between prisoners in solitary confinement and prisoners permitted association. From 1883 onward—for example, during the 3-year period from 1883 to 1886 and the 5-year reporting period from 1886 to 1891—the Danish prison service made a clear distinction between

### TABLE 2: Number and Percentage of Prisoners Experiencing Health Problems Caused by the Regime of Solitary Confinement (SC), 1883–1886 (“Fængselsvæsenet om Strafanstalterne i Danmark,” 1899)

<table>
<thead>
<tr>
<th>Removed Because of Health Problems Related to SC Conditions</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC (1254)</td>
<td>191</td>
<td>15.2</td>
</tr>
<tr>
<td>non-SC (66)</td>
<td>7</td>
<td>10.6</td>
</tr>
</tbody>
</table>

a. The term dyspeptic problems was no longer used (as it had been in the 1878 to 1883 report mentioned above), but I have grouped indigestion, diarrhea, and constipation together.

b. During the 5-year period, 846 inmates were treated for health problems. In the official statistics, these inmates were recorded with only one disease (allegedly their primary disease if they had more than one), which makes it possible to calculate the actual percentage of prisoners suffering from SC-related health problems.

c. Ten of the 62 were moved to Horsens, an Auburn regime, because they could not cope with solitary confinement. See “Beretning om Straffeanstalterne i Danmark” (1899, p. 21). The remaining 52 prisoners were transferred to an Auburn regime inside Vridsløselille penitentiary for exactly the same reasons (p. 24).

d. Non-SC means “not subjected to solitary confinement”—that is, Auburn conditions.

### TABLE 3: Number and Percentage of Prisoners Experiencing Health Problems Caused by the Regime of Solitary Confinement (SC), 1886–1891 (“Beretning fra Overinspektionen for Fængselsvæsenet,” 1898)

<table>
<thead>
<tr>
<th>Removed Because of Health Problems Related to SC Conditions</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC (1965)</td>
<td>404</td>
<td>20.56</td>
</tr>
<tr>
<td>non-SC (78)</td>
<td>5</td>
<td>6.41</td>
</tr>
</tbody>
</table>

a. During the 5-year period, 1,965 inmates were subjected to the Pennsylvania regime of SC, whereas 78 inmates were subjected to an Auburn regime. During the same 5-year period, 846 inmates were treated for health problems. In the official statistics, these inmates were only recorded with one disease (allegedly their primary disease if they had more than one), which makes it possible to calculate the actual percentage of prisoners suffering from SC-related health problems.

b. According to the official report from the Danish prison service, these 97 prisoners were permitted association because they could not handle SC. Out of 40 transferred to Horsens, 32 were removed from Vridsløselille because SC was harmful to them. In addition 65 prisoners were permitted association inside Vridsløselille for similar reasons. See “Beretning fra Overinspektionen for Fængselsvæsenet” (1898, pp. 39, 43).
those serving under conditions of solitary confinement under the Pennsylvania model and those permitted association according to the Auburn model. This distinction was also revealed in relation to the health situation of the inmates. Furthermore, these reports described in greater detail how often transfers from solitary confinement to association took place because of health problems that were often judged to be specifically related to isolation (a row has therefore been added in Tables 2 and 3 to include this information).

Although the health problems mentioned above could, of course, have several causes, most cover symptoms that, according to recent research, can be related to solitary confinement—something I have discussed in detail elsewhere (Smith, 2006a; also see Haney, 2003; Haney & Lynch, 1997). The category of “dyspeptic problems” may be somewhat problematic in this regard, partly because of their general and quite common (often purely physiological) character. Although some modern studies on the effects of solitary confinement have in fact identified problems with digestion, diarrhea, and weight loss as related symptoms (Gamman, 2001; Koch, 1982), the present historical material is not clear in that regard. In later reports of other Danish prisons, for example, dyspeptic problems also occur with high frequency among inmates serving under an Auburn regime.1 However, high scores in the other categories seem repeatedly to be closely linked to Pennsylvania regimes (i.e., solitary confinement) also when compared to nonsolitary regimes such as conditions at Auburn. If dyspeptic problems are removed from the tables above, the remaining levels of morbidity still significantly disfavour solitary confinement.

I have also examined data from a much later period, dating from 1911 to 1915, when the Pennsylvania and Auburn regimes were still in operation in Denmark according to the original plans. During that period, the Danish prison service published annual figures instead of 5-year reports. I have included Horsens penitentiary in the tables below. Horsens was an Auburn facility, but a limited number of prisoners were subjected to solitary confinement under conditions that were almost, but not quite, as strict as in Vridsløselille. The rest were allowed to work together under a rule of silence during daytime according to the principles of the Auburn model. The reports distinguished between those in solitary confinement and other prisoners with regard to the prevalence of diseases and disorders.

The following four tables show that the tendency disfavouring solitary confinement is also evident in this period, with the exception of the first year (1911-1912), when four cases of lethargy and five cases of neuralgia among the small number of Auburn regime inmates in Vridsløselille boosted the associated percentage. The remaining 3 years, however, clearly disfavoured the solitary confinement model in relation to the disorders in question.

Tables 5 to 8 show a prevalence of mental illness and related health problems in Vridsløselille ranging from 10.22% to 15.89% among inmates in solitary confinement, with an average score of 13.0%. In looking at prisoners with association in Vridsløselille, there is a prevalence of the listed disorders ranging from 4.17% to 22.22%, with an average score of 10.35%. However, the relatively small samples of Vridsløselille prisoners not in solitary confinement create some statistical uncertainties. In looking at the figures for 1911-1912, 10 treated inmates among those not in solitary accordingly boost the associated percentage. If we take a closer look at the total number of inmate days lost through sickness that year, however, there were 44 days for inmates not in solitary and 2,091 days for those in solitary (“Beretning om Straffeanstalterne i Danmark,” 1913, p. 107). Each inmate not in solitary thus had on average of just less than 1 day of sickness, whereas those in solitary had more than 2 days of sickness—that is, more than double by comparison. If, bearing this in mind,
we focus our attention on Tables 6 to 8, the average prevalence of the disorders among Vridsløselille inmates in solitary rises to 13.64%, compared to 6.23% among inmates with access to communal activities.

If we include the figures from Horsens, the trend becomes even clearer. The average prevalence of the disorders in Tables 5 to 8 among Horsens inmates in solitary is 14.71%, compared to 2.82% among inmates with access to communal activities. This difference can almost exclusively be explained by those who were transferred to an Auburn regime because they could not handle solitary confinement. One could furthermore speculate that some of the cases of insanity among the population with association could relate to transferred inmates who had initially been subjected to solitary confinement, but we do not

### TABLE 4: Number and Percentage of Prisoners Experiencing Health Problems Caused by the Regime of Solitary Confinement (SC), 1886–1891 (Excluding Dyspeptic Problems) (“Beretning fra Overinspektionen for Fængselsvæsenet,” 1898)

<table>
<thead>
<tr>
<th>Removed Because of Health Problems Related to SC Conditions</th>
<th>Total</th>
<th>Percentage a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lethargy Insanity Neurological Complaints</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vridsløselille SC (1965)</td>
<td>40</td>
<td>56</td>
</tr>
<tr>
<td>ynescom SC (78)</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

a. During the 5-year period, 1,965 inmates were subjected to the Pennsylvania regime of SC, whereas 78 inmates were subjected to an Auburn regime. During the same 5-year period, 846 inmates were treated for health problems. In the official statistics, these inmates were only recorded with one disease (allegedly their primary disease if they had more than one), which makes it possible to calculate the actual percentage of prisoners suffering from SC-related health problems.

b. According to the official report from the Danish prison service, these 97 prisoners were permitted association because they could not handle SC. Out of 40 transferred to Horsens, 32 were removed from Vridsløselille because SC was harmful to them. In addition, 65 prisoners were permitted association inside Vridsløselille for similar reasons. See “Beretning fra Overinspektionen for Fængselsvæsenet” (1898, pp. 39, 43).

### TABLE 5: Number and Percentage of Prisoners Experiencing Health Problems Potentially Related to Solitary Confinement (SC), 1911–1912 (“Beretning om Straffeanstalterne i Danmark,” 1913)

<table>
<thead>
<tr>
<th>Removed Because of SC-Related Health Problems</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hysteria Lethargy Observed for Insanity Insanity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vridsløselille SC (972)</td>
<td>27</td>
<td>3</td>
</tr>
<tr>
<td>Vridsløselille non-SC (45)</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Horsens SC (276)</td>
<td>—</td>
<td>0</td>
</tr>
<tr>
<td>Horsens non-SC (441)</td>
<td>—</td>
<td>12</td>
</tr>
</tbody>
</table>

a. Seven prisoners in Vridsløselille suffered from insanity, but it is not clear whether or not they were SC or non-SC prisoners.
TABLE 6: Number and Percentage of Prisoners Experiencing Health Problems Potentially Related to Solitary Confinement (SC), 1912–1913 ("Beretning om Straffeanstalterne i Danmark," 1914)

<table>
<thead>
<tr>
<th></th>
<th>Hysteria</th>
<th>Lethargy</th>
<th>Observed for Insanity</th>
<th>Insanity</th>
<th>Removed Because of SC-Related Health Problems</th>
<th>Neuralgia</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vridsloselille SC (825)</td>
<td>16</td>
<td>9</td>
<td>4</td>
<td>—</td>
<td>6</td>
<td>82</td>
<td>117</td>
<td>14.18</td>
</tr>
<tr>
<td>Vridsloselille non-SC (46)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>2</td>
<td>4.35</td>
</tr>
<tr>
<td>Horsens SC (76)</td>
<td>—</td>
<td>—</td>
<td>0</td>
<td>1</td>
<td>13</td>
<td>—</td>
<td>14</td>
<td>18.42</td>
</tr>
<tr>
<td>Horsens non-SC (560)</td>
<td>—</td>
<td>—</td>
<td>10</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>11</td>
<td>1.96</td>
</tr>
</tbody>
</table>

a. In this and the following 3 years, a number of diseases were grouped under the heading of “insanity and related diseases of the nervous system,” which could include, for example, hysteria, nervousness, and simulation. No single category was called insanity, unlike in the figures from Horsens.

TABLE 7: Number and Percentage of Prisoners Experiencing Health Problems Potentially Related to Solitary Confinement (SC), 1913–1914 ("Beretning om Straffeanstalterne i Danmark," 1915)

<table>
<thead>
<tr>
<th></th>
<th>Hysteria</th>
<th>Lethargy</th>
<th>Observed for Insanity</th>
<th>Insanity</th>
<th>Removed Because of SC-Related Health Problems</th>
<th>Neuralgia</th>
<th>Nervousness and Melancholia</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vridsloselille SC (851)</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>—</td>
<td>6</td>
<td>65</td>
<td>2</td>
<td>87</td>
<td>10.22</td>
</tr>
<tr>
<td>Vridsloselille non-SC (48)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>4.17</td>
</tr>
<tr>
<td>Horsens SC (90)</td>
<td>—</td>
<td>—</td>
<td>0</td>
<td>0</td>
<td>20</td>
<td>—</td>
<td>—</td>
<td>20</td>
<td>22.22</td>
</tr>
<tr>
<td>Horsens non-SC (586)</td>
<td>—</td>
<td>—</td>
<td>4</td>
<td>7</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>11</td>
<td>1.88</td>
</tr>
</tbody>
</table>

a. Two new diseases, which were not recorded prior to 1913–1914.

know. The way that a number of inmates were taken out of solitary because of health problems each year is, on the other hand, a fact that is clearly stated in each official report. The opposite was apparently never the case—that is, that inmates were transferred to solitary confinement because of health problems relating to the Auburn regime. Sometimes, however, one or two prisoners were returned from an Auburn regime to solitary confinement because their health had improved.

So once again the statistics disfavour solitary confinement, and with more recent research on the effects of solitary confinement in mind (Haney, 2003; Smith, 2006a), it is reasonable to conclude that the majority of the above-mentioned disorders were caused by the Pennsylvania model practice of solitary confinement. The difference between the two prison models in terms of health effects should also be seen in light of the fact that they were both
essentially isolation practices. However, the level of social contact allowed in the Auburn model apparently had a significant effect in terms of creating a more healthy prison.

Another interesting aspect of the mental health situation in Vridsløselille, which is indicated by the tables above, is the way in which a number of new diseases reveal themselves at different points in time, such as, for example, hysteria and neuralgia. This relates to the history of psychiatry and the breakthrough of biological models of explanation during the late 19th century (Stone, 1998, p. 114).

### TABLE 8: Number and Percentage of Prisoners Experiencing Health Problems Potentially Related to Solitary Confinement (SC), 1914-1915 (“Beretning om Straffeanstalterne i Danmark,” 1916)

<table>
<thead>
<tr>
<th></th>
<th>Observed</th>
<th>Removed</th>
<th>Nervousness</th>
<th>Hysteria</th>
<th>Lethargy</th>
<th>Insanity</th>
<th>Insanity</th>
<th>Neuralgia</th>
<th>Melancholia</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Because</td>
<td>and</td>
<td></td>
<td></td>
<td>for</td>
<td>of SC-</td>
<td>Health</td>
<td>and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vridsløselille SC (661)</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td>—</td>
<td>—</td>
<td>91</td>
<td>1</td>
<td>105</td>
<td>15.89</td>
</tr>
<tr>
<td>Vridsløselille non-SC (44)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td>—</td>
<td>—</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>11.36</td>
</tr>
<tr>
<td>Horsens SC (104)</td>
<td>—</td>
<td>—</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>7</td>
<td>10.58</td>
</tr>
<tr>
<td>Horsens non-SC (510)</td>
<td>—</td>
<td>—</td>
<td>3</td>
<td>4</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>7</td>
<td>1.37</td>
</tr>
</tbody>
</table>

THE HISTORY OF PSYCHIATRY AND THE DEVELOPMENT OF NEW DISORDERS

An enquiry into the history of psychiatry quickly reveals that many diseases were discovered, reinvented, and labelled during the later decades of the 19th century and the early decades of the 20th. In the following, we take a closer look at how these developments in clinical and theoretical psychiatry were reflected in the official reports on the mental health of Danish prisoners subjected to Pennsylvania model solitary confinement.

Psychiatry as a discipline underwent great development during the 19th century, where the rise of the asylum and the emergence of psychiatric specialists and neurologists influenced and nurtured the growing attempts to classify mental disorders (Porter, 2006, p. 255). Although psychiatry, in the form of the asylum, had been more or less institutionalised by the middle of the 19th century, the diagnostic catalogue and categorisation of symptoms and diseases continued to develop throughout that century. Thus, although the prison authorities and their health personnel originally had a quite limited choice when diagnosing those affected by solitary confinement, things changed as the 20th century approached. Accordingly, during the 1860s and 1870s it was mostly a question of labelling these inmates either insane or lethargic, and various kinds of dyspeptic problems were also referred to. Illnesses such as hysteria and neurasthenia, which in contemporary terms lay within the category of neuroses and personality disorders (Berrios & Porter, 1999), were not commonly cited until the later decades of the century.
The term lethargy—or listlessness—seemed to be an especially useful category for those who were affected by solitary confinement but whom the prison personnel were still able to control either in their cell or the prison hospital. Accordingly, lethargy was for many years one of the dominant diseases among Vridsløselille prisoners in solitary confinement. It was furthermore clearly acknowledged early on in Vridsløselille that this illness (which according to the health reports could be both chronic and temporary) was associated with the regime of solitary confinement (Bruun, 1867). In Horsens, on the other hand, very few cases of lethargy were recorded. Between 1878 and 1883, for example, 5.41% of all the inmates who were healthy on arrival suffered from lethargy in Vridsløselille, compared to 0.8% in Horsens (“Beretninger fra Kontoret for Fængselsvæsenet,” 1885).

During the 1880s, cases of lethargy declined somewhat in Vridsløselille (see Table 2) as a new disease called nervesmerter (neurological complaints) was introduced. This marked the introduction of a new set of disorders identified by a new psychiatric paradigm, which became established and was reinforced throughout the latter half of the 1800s. In the wake of Charles Darwin’s renowned theory of evolution, attention especially turned to the significance of hereditary factors in explaining human behaviour, including mental illness. Like many other disciplines, psychiatry took off in a biological direction and thrived on simultaneous and similar developments in anthropology (e.g., the Lombroso school, which later came to be associated with criminology) and previous and sometimes contemporary research in the area of phrenology and eugenics.

Much of the new psychiatric research focused on pathologies in the brain and the nervous system and showed a keen interest in theories of heredity. This was, for example, reflected in so-called theories of degeneration, that is, theories on genetic abnormality, which claimed that personality and behaviour were determined by hereditary material (biological determinism). Lombroso and many of his contemporaries in the latter decades of the 1800s, for example, believed that criminal behaviour was innate, although others disputed this theory (Garland, 2002, pp. 25-26). In a prison context, this could mean that the effects of the imprisonment itself—for example, solitary confinement—were more or less ignored, whereas the cause of the disorders was attributed to individual hereditary dispositions. This also meant that the term lethargy could be replaced by newer, more scientific categories, such as degeneration, hysteria, neuralgia, or melancholia.

During the 20th century, the breakthrough of a more professional, biologically oriented psychiatry was increasingly felt in Vridsløselille. In Table 5, we see that the prevalence of lethargy has been reduced, whereas two new mental disorders in the form of “hysteria” and “neuralgia” have been introduced. During the following year, 1912-1913, an amazing 82 prisoners were suffering from neuralgia. Throughout the period 1911 to 1915, the numerous cases of “neuralgia” ensured a high prevalence of mental illness among those in solitary confinement. Tables 7 and 8 also reveal two other, new disorders, which are simply termed “nervousness” and “melancholia,” but only a very few inmates were found to be suffering from these pathologies.

Neuralgia and hysteria were internationally recognised disorders at the time. Both were related to the term nervesmerter (neurological complaints), which was introduced in Vridsløselille in the 1880s. Moritz Romberg, John Huglings Jackson, and Jean-Martin Charcot, who were among the leading neurologists of the 19th century, all helped define this area of psychiatric disorders, and a large literature developed on the subject. Still, according to Simo Køppe, to some extent this area was exempt from the positivist methods
otherwise employed by these researchers. It was difficult to locate concrete anatomical lesions and shortcomings to explain, for example, hysteria or neuralgia (although it was generally believed that such lesions existed), and these diagnoses therefore became something of a residual category for a variety of symptoms and problems, making room later for psychologists who were not necessarily interested in biological definitions (Køppe, 2004, p. 237). This was undoubtedly also a reason why such categories made sense to the Danish prison service and psychiatrists working in the field. Neurological complaints, neurasthenia, and hysteria could easily cover the symptoms experienced by those in solitary confinement, and no specific organic cause had to be found.

During the period 1911 to 1915, hysteria, melancholia, nervousness, and neuralgia were not reported at all in the Auburn prison of Horsens (Smith, 2006a, p. 465). This fact alone suggests that a Pennsylvania model prison such as Vridsløselille, which had strict solitary confinement, had a particular set of health problems to deal with when compared to a prison that operated on the Auburn model and allowed a certain level of social contact among inmates.

In other words, the official health records from Vridsløselille clearly show that this prison produced a specific kind of health problem that made it particularly sensitive to topical developments in clinical and theoretical psychiatry. By adapting to scientific progress in the area, the prison authorities were simply able to diagnose and offer explanations for the significant number of disorders and health problems that continued to cling to the regime of solitary confinement. In the following, I more closely examine how the experts—the psychiatrists—could feed into this process.

THE PROFESSIONAL VIEW: CHRISTIAN TRYDE’S PSYCHIATRIC STUDIES

As explained above, the prison administration became very aware of the unusual scope of the mental health problems at Vridsløselille during the 1860s. As a result, the psychiatrist Christian Tryde was given the task of carrying out a study on the cases of regular insanity at Vridsløselille. To a large extent, Tryde based his assessment on biological factors, and like many of his contemporary colleagues, he leaned toward a somatic explanation in which the aetiology of mental illness was traced to defects in the brain and the nervous system (Smith, 2003, pp. 209-212). Tryde was, perhaps, sceptical of certain aspects of the degeneration theory, but nevertheless he was clearly inspired by biological determinism. He defined insanity biologically, as a “brain disease” (Waaben, 1997, p. 78), and also stated that the brains of criminals were already encumbered from birth “with a pathological genetic predisposition from a degenerate family.” Likewise, according to Tryde, the aetiology of mental illness in the prisoners in Vridsløselille was partly attributable to their hereditary material. Furthermore, he recorded that the prisoners masturbated frequently, which allegedly resulted in mental illness (Smith, 2003, p. 238). This was also a biological notion prevalent at the time, which emphasised that masturbation caused degeneration of the nervous system. Consequently, Tryde thought it most likely that the majority of cases of insanity in Vridsløselille were caused by either individual preexisting pathologies or the “foul habit” of masturbation, which could in itself provoke harmful biological change.

In other words, inspired by the overriding scientific discourse of his time, Tryde focused on the criminal’s alleged poor hereditary material and on biological defects that were considered to be caused by degenerate habits. Social conditions and environmental factors,
such as the prison system and solitary confinement, did not play an important role in his analysis. However, because the Danish psychiatrist did not dare base his entire explanation on somatic conditions, solitary confinement was not completely disregarded as a factor that might contribute to mental illness. This “situational loophole” was closed in a later Danish psychiatric study.

GEORGE SCHRØDER’S PSYCHIATRIC STUDIES

As already mentioned, Denmark continued to use the Pennsylvania model. The resulting ongoing health problems in Vridsøselille undoubtedly played a role in prompting another study, which was conducted on prisoners in the Danish correctional institutions in 1917 (Schrøder, 1917, p. 2). Its purpose was to draw conclusions on the general effects of imprisonment, in particular the effect of cellular punishment on a prisoner’s mental state. The term cellular punishment referred to solitary confinement, which once again was to be reviewed from a psychiatric standpoint. George E. Schrøder, MD, who in 1913 wrote Fængselspsychose og Psychose i Fængslet (Prison Psychoses and Psychosis in Prison), was commissioned to carry out the study.2

Scientifically speaking, Schrøder was clearly more advanced than Tryde, which simply reflected the developments that had taken place within the discipline of psychiatry. However, the methodology on which Schrøder based his work was unfortunately ill suited to providing a proper evaluation of the effects of imprisonment and cellular punishment because his assessments were based on a cross-sectional study, not a longitudinal one. Therefore, he was never able to draw any conclusions about the effects of imprisonment and solitary confinement over a period of time. But this did not trouble Schrøder because he generally relied instead on the prisoner’s data provided by the prison. If Schrøder did come across deviant behaviour, he sometimes decided to interview the prisoner several times, thus introducing a very limited and unsystematic longitudinal aspect into his study. This did not change the fact that the applied methodology made it nearly impossible to document or prove that imprisonment could have a negative effect on an otherwise healthy individual. As such, his conclusion was almost predictable. Early on in his original dissertation of 1913, Schrøder admitted to this perspective by stating, with reference to the international literature, “It can be maintained that in accordance with my own studies a disposition exists in the individuals who develop a psychosis from their imprisonment. . . . Most authors call this in short degeneration” (Schrøder, 1913, p. 22). In other words, Schrøder was a biological determinist, and his choice of research methodology, and thus his data and results, quite naturally stemmed from this. This unfortunately more or less acquitted solitary confinement as a cause of ill health right from the outset.

In his study, Schrøder therefore paid much more attention to biological deviation among criminals than the possibility that symptoms of ill health might be evident in otherwise healthy individuals. This tendency was natural among biological determinists. As an example, in 1913 Schrøder wrote that hysterical psychoses, that is, hysteria “is an illness, which is a result of latent character traits in the individual and will on request manifest itself as certain symptoms, i.e., the hysterical. This theory is so well accepted that support from the literature is unnecessary” (p. 27). Based on this approach, prison conditions, including solitary confinement, could never become the actual cause of hysteria—at most one could
only refer to a latent hysteria, which later surfaced in a prison setting. In 1913, Schröder admittedly accepted the notion that a depressive state could present itself during pretrial detention or imprisonment without “any previous depressive constitution” (p. 409). Nonetheless, in several cases Schröder even concluded that imprisonment did not influence preexisting mental problems at all (e.g., in manic depressive psychosis, in dementia precox, and usually in paranoid psychoses; pp. 374, 387). In other cases, he considered the prisoner’s environment and the social conditions a relevant factor, but not as the cause of mental illness. Schröder, for example, found that the paranoid notions that occurred along with a psychosis “almost exclusively drew their content from the prison environment and events during their imprisonment” (p. 375).

In his official report of 1917 titled *A Psychiatric Study of Male Prisoners in Danish Prisons*, Schröder concluded, with reference to “the influence of isolation on the mind,” that “no harmful consequences are seen in people who are in good mental health beforehand” (p. 262). Schröder acknowledged that some individuals could not endure isolation, but again he attributed this to their biological disposition. For example, in most cases the “degenerate dreamers” could not tolerate cellular punishment, and paranoid characters likewise encountered problems with isolation. Similarly, “those with a hysterical disposition” (who were classified as “psychopathic” degenerates) often developed a prison psychosis during their confinement. In this respect, Schröder devoted himself to an even greater extent to the degeneration theory. In contrast to physicians and psychiatrists in Germany (see Smith, 2006a), he therefore dismissed the possibility that solitary confinement could have negative effects on healthy individuals. Schröder in fact believed that it was defensible to prolong cellular punishment, that is, solitary confinement (Schröder, 1917).

A few examples taken from Schröder’s cases can illustrate how effectively he was caught up in a kind of biological determinism when diagnosing inmates. For example, one 36-year-old male prisoner was described like this in Schröder’s files:

Heavily drinking family; the father furthermore introvert and brutal. Currently nervous, anxious since childhood, still does not dare to ride a bicycle or ride in a car. Arrested one month ago for fraud. Claims to be innocent. Cried in prison, restless, sleeping problems, believed he saw his wife and children (who he cares about a great deal) and thought at one point that someone touched him. He makes an intelligent impression, quite knowledgeable. (Schröder, 1913, p. 139)

Schröder also noted that the 36-year-old inmate suffered from emotional instability but otherwise seemed to be coping with his punishment. The diagnosis was “Degenerated Psychopathic Hysteria,” and the prisoner was judged to be a hereditarily burdened hysteric (Schröder, 1913, p. 139). The hallucinations he experienced during his imprisonment and all the other problems were thus found to have a biological cause. Prison conditions, the regime, and so on—all the situational factors—were in other words neglected.

Seen from today’s perspective, the basis for Schröder’s verdict seems shallow indeed, but it was undoubtedly of great importance that the prisoner’s family was alcoholic. This alone in Schröder’s days could provoke a psychiatric diagnosis involving degeneration and biological disposition. According to Schröder (1913), the famous psychiatrist Kraepelin had stated “that inborn or hereditary material plays an important role in connection with alcoholismus chronicus” (p. 146).

Another of Schröder’s cases involved a 23-year-old man who had had a problematic upbringing but possessed “good skills.” He had never before suffered from delusions but did so
extensively during his imprisonment in solitary confinement. For example, he claimed that after “72 hours of continuous thinking” he had developed a new “cosmic system” and “defeated death.” Later the 23-year-old became solemn and grim looking, after which he was transferred to a hospital. On his return to the prison his delusions began again, and he hallucinated about a prison guard who was allegedly harassing him. Later he was transferred to an insane asylum, where he was described as a difficult and congenital “brick.” Schrøder’s diagnosis was “degenerated psychopath,” and although there was no preimprisonment history of delusions and hallucinations, a biological disposition was again blamed for this condition (Schrøder, 1913, p. 140).

This tendency in Schröder’s research does not justify us considering him a bad psychiatrist. It seems fairer to conclude that Schröder was a child of his time and his profession. Many others among his contemporaries diagnosed in a similar way without having access to better documentation—disciplines such as eugenics, phrenology, and criminal anthropology are useful examples in this regard.

CONCLUSION

As shown above, the Danish prison Vridsløselille experienced significant problems with adverse health effects because of the use of solitary confinement proscribed by the Pennsylvania prison model. These problems in fact continued throughout more than half a century from 1859 to the early 1930s. Unfortunately, this practice spilled over into remand prisons, where the use of solitary confinement became institutionalised during the pretrial period (Smith, 2005). This practice is still used today in Denmark—albeit to a lesser extent—and has been the target of substantial criticism since the late 1970s (Smith, 2006b).

Despite a great willingness on the part of the early management in Vridsløselille penitentiary to acknowledge the effects of solitary confinement, the question was passed into the hands of the rising class of mental health professionals—the psychiatrists. During the 1870s and the 1910s, two Danish psychiatrists were thus faced with the task of assessing the health situation in Pennsylvania and Auburn model facilities, where they were able to locate the causes of mental disorders among biological dispositional traits (and according to Tryde, also the “foul” habit of masturbation) rather than among situational factors. In doing so they downplayed the power of the prison context and discredited the willingness of prison authorities to acknowledge the health effects of solitary confinement. These psychiatrists, in other words, removed the blame from the regime of solitary confinement and offered biological determinism as a substitute. In doing so, they helped sustain an unhealthy and dangerous system, which might otherwise have been terminated earlier.

Nevertheless, several of the biologically founded psychiatric conclusions of the late 19th century were abandoned during the early decades of the 20th century. Developments within clinical psychiatry raised questions about whether the different diseases were caused by lesions in brain tissue or elsewhere in the nervous system. Although, for example, in the 1870s and 1880s hysteria had been defined as an organic illness in the nervous system by Charcot and others, it became more and problematic that no specific organic cause was found (Koppe, 2004, pp. 315, 334). Likewise, it was generally agreed early in the 20th century that there was no basis for maintaining a biological definition of neurasthenia (Wessely, 1999). Accordingly, several of these diseases and/or the symptoms they were associated with increasingly passed into the hands of a new emerging group of professionals—the psychologists.
Today, in an age when biological psychiatry is high on the agenda and, according to some, a “smashing success” (Shorter, quoted in Rogers & Pilgrim, 2006, p. xv), there may be good reason to draw some cautionary lessons from the history described in this article. This is perhaps especially true in a prison context, an environment that necessitates an analysis involving not only a dispositional but most certainly a situational perspective as well.

NOTES

1. However, it could be relevant to discuss the way that the disease “mavekatarrh” (stomach catarrh), according to later reports, was very prominent among prisoners subjected to solitary confinement and not among prisoners who were allowed association.

2. Part of the following analysis of Schrøder’s writings has been published previously in Danish in Smith (2006c).

REFERENCES


Beretning fra overinspektionen for fængselsvæsenet om straffanstalterne i Danmark i tidsrummet fra 1ste April 1883 til 31te Marts 1886 [Report from the prison service on the condition of the prisons. April 1, 1883, to March 31, 1886]. (1899). Copenhagen, Denmark: J. H. Schultz.

Beretning om straffeanstalterne i Danmark, finansaaret 1911-12 [Report on prisons in Denmark, the financial year 1911-12]. (1913). Copenhagen, Denmark: J. H. Schultz.


Pio, L. (1975). Erindringer fra redaktionskontoret og fængslet [Memoirs from the editors office and from prison]. Copenhagen, Denmark. (Original work published 1877)

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