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History of Psychiatry June 2014 25: 171-186, doi:10.1177/0957154X13518721

The published version can be found at <http://hpy.sagepub.com/content/25/2/171>

Shifting boundaries between the normal and the pathological: The case of mild intellectual disability.

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Acknowledgements: Versions of this paper have been presented at the conference on The Concepts of Health and Illness, held at U.W.E., Bristol, 2010, and also at the Philosophy of Psychiatry Work in Progress workshop held at Lancaster University, 2010. I am very grateful for the comments of those present.

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Abstract

When disorders fade into normality, how can the threshold between normality and disorder be determined? Via considering mild intellectual disability I argue that economic factors partly determine thresholds. We tend to assume that the relationship between disorder, need, and services is such that, first, a cut-off point between the disordered and the normal is determined, second, a needy population is identified, and third, resources are found (or at least should be found) to meet this need. However, the changing definitions of intellectual disability can best be understood if we think of this happening in reverse. That is, first, certain resources are thought obtainable, and then a cut-off point is for disorder is selected which supplies an appropriately sized 'needy population'.

Key words:

boundaries of disorder; economics; intellectual disability; moron; threshold

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...classification always has a purpose: frequently it seeks to rationalize administrative decisions which have already been implemented, and to invest them with a scientific flavour and precision which they do not in fact possess. (Clarke, 1965: 47)

1. Introduction

Distinguishing disorder from normality is a matter of moral, political and economic importance, as the disordered are treated differently from others in numerous respects. It is broadly accepted that society has a duty to care for those who suffer from disorders, and so medical treatment and sickness and disability benefits are provided. We tend to think that wrongdoing can be excused if it is caused by a disorder, and so those who commit crimes because of disorder are placed in hospital rather than prison. Diagnosis also places obligations on the diagnosed; they are expected to try to get better. However, distinguishing the normal from the pathological is frequently difficult. In particular, there are many disorders that fade into normality. Mild depression fades into sadness, alcoholism into heavy drinking, high blood pressure into normal blood pressure, and so on. Such conditions raise the question of how the threshold between normality and disorder can be determined. This paper focuses on a specific case – mild intellectual disability – as a means of exploring the issues.

My strategy will be to examine the ways in which the cut-off point for diagnosing intellectual disability has shifted over time and to seek to explain the changes that have occurred. My story will involve many of the usual suspects: eugenics, war, the control of deviants - but principally economics. We tend to assume that the relationship between disorder, need, and the provision of resources is such that, first, a cut-off point between the disordered and the normal is determined, second, a needy population is identified, and third, resources are found (or at least should be found) to meet this need. However, I will suggest that the shifts with regard to the definition of intellectual disability can best be understood if we think of this happening in reverse. That is, first, certain resources are thought obtainable, and then a cut-off point for disorder is selected which supplies an appropriately sized 'needy population'. Generalising from the case of mild intellectual disability I will argue that in the case of those disorders that shade into normality, the cut-off point between normality and disorder may shift as a result of social and economic factors. It need not be the case that we first identify the disorders and then find the resources to help the disordered. Rather the reverse can occur. We may have certain resources and then gerrymander the contours of a disorder to fit. Those will be my claims; now for the argument.

2. Intellectual disability

'Intellectual disability' is one label in a family of labels that includes 'idiocy', 'feeble-mindedness', 'mental defect', 'mental retardation', 'mental handicap', 'learning disabilities'. It is not quite the case that the more modern terms are simply newer labels for the old populations as over time the populations labelled have shifted. Shifting has occurred for two main reasons. First, there are problems with the calibration of different versions of I.Q. tests

over time such that it is not at all clear that a test result of 70 gained today is equivalent to a test result of 70 gained early in the twentieth century (Tizard, O'Connor, Crawford 1950; Flynn 1984, 1987, 1998; Scullin 2006) . Second, individuals are only seen as being candidates for diagnosis if in addition to having a low I.Q. their behaviour is judged unacceptable, and what counts as unacceptable has shifted over time. For example, our society is more tolerant of sexual promiscuity, but less tolerant of racist remarks, than societies early in the twentieth century.¹

At present, in the U.S., 'mental retardation' remains in widespread use. In the U.K., the terms currently most used are 'intellectual disability' and 'learning disability'. The term 'learning disability' is somewhat ambiguous. Sometimes it is used to refer to people with domain specific learning problems – such as dyslexia, and sometimes it is used to refer to people with generalised difficulties. Here I am interested only in people with generalised intellectual difficulties, and so I will stick to the term 'intellectual disability' in preference to 'learning disability'. Although the terms 'feeble-minded', 'mental defective', 'idiot', 'imbecile' and 'moron' are no longer in regular use, and are now regarded as offensive, where appropriate they will be used throughout this paper. The populations described by changing terms have shifted in complex ways, such that 'morons', to take an example, are roughly, but not quite, equivalent to current populations with an I.Q. that is below average but above 50. The changing nature of the populations under discussion means that attempting to translate between 'historical' terms and current usage can be problematic and so will be avoided where possible. However, using a general, historically insensitive term is also unavoidable, and where necessary I will use the term 'intellectual disability'.

People with intellectual disabilities form a heterogeneous group. The severity of intellectual disability differs widely. Severely intellectually disabled people may function at the level of infants, and be unable to feed themselves, or to sit unaided, and doubly incontinent. At the other end of the spectrum, people with mild intellectual disabilities merge into the normal population. The causes of disability also vary. Some cases are associated with genetic abnormalities, such as Down Syndrome, others with poisoning in utero or birth trauma. For the most part, however, and particularly with less severely disabled people, the causes of intellectual disability are unclear. Genetic factors and aspects of the childhood environment may well play a part.

Intelligence is assumed to be roughly normally distributed in the human population, although a slight excess of severely intellectually disabled people is expected due to genetic abnormalities and accidents. It is worth noting that normal distribution is a methodological assumption rather than an empirical fact, as I.Q. tests are themselves calibrated on the assumption that the I.Q. distribution is normal (Tredgold and Soddy, 1963: 362). In other words, the tests are constructed to produce a normal curve; they do not discover a normal curve.

Given that most cases of mild intellectual disability have no known cause, people with mild intellectual disabilities are best conceived of as simply being those whose intelligence level sits towards the bottom end of the bell-curve. This raises the question of where the cut-off point for disability should be. There is no natural distinction in nature between people who are mildly intellectual disabled and normal people of little intellect. As such the cut-off must be somewhat arbitrary, and indeed the cut-off point chosen has varied widely ever since intelligence tests first became widely used.

As I.Q. is distributed on a bell-curve, once one moves away from the extreme tail, tiny differences in the cut-off point for I.Q. make a massive difference to the prevalence of intellectual disability. If the cut-off point is taken as being below 70 only 2.28% of the population will be taken to have an intellectual disability; if the cut-off is raised to 75 or below this increases to 5.48% (Reschley, Myers and Hartel, 2002). Whether someone counts as suffering from an intellectual disability makes a difference to the services and support they will receive. As tiny differences in I.Q. cut-off point make a large difference to the reported prevalence of intellectual disability, deciding where the cut-off point for disability should lie becomes a matter of economic importance.

I.Q. tests are widely used in the diagnosis of intellectual disability, but ever since their introduction authors have raised doubts about their usefulness. The basic problem is that I.Q. scores can fail to correlate with someone's adaptive ability. Thus some people with I.Q. scores in the 50s can hold down jobs and raise families, while other people with I.Q.s in the 80s experience major difficulties in day-to-day living (Edgerton, 1967). People with very low I.Q.s who function well tend to escape detection – so long as they are not detected during school years. One of the rare occasions on which 'normal' adults have their I.Q. tested is during medical checks for military service and here surprises emerge. Granat and Granat (1973) studied Swedish males signing up for military service. Those with I.Q.s less than 70 who had been identified during school made up 0.7% of the population, but tests found a further 1.5% of the recruits to have I.Q.s less than 70. Apart from their test-scores, these previously unidentified low-I.Q. men differed little from their higher-I.Q. peers - many had jobs and families.

Problems with I.Q. tests have led to calls for other measures of adaptive functioning to be developed. As far back as 1959, Heber noted that I.Q. tests were constructed to predict school achievement, and can successfully be used to predict little else (Heber, 1959b). He called for research that would enable I.Q. tests to be replaced by something better: 'If we are to relegate the I.Q. to its proper role it will be necessary for research to isolate the major dimensions of behaviour which relate to the ultimate socio-cultural adequacy we are interested in predicting' (Heber, 1959: 1019). Despite attempts, actually producing a reliable test for measuring 'adaptive functioning' has proved difficult (Lorge, 1959; Orr and Matthews, 1961; Reschley, Myers and Hartel, 2002). This has meant that many researchers and practitioners have continued to rely primarily on I.Q. tests, despite acknowledging problems with such an approach (Adams, 1973; Hawkins and Cooper, 1990).

The criteria for distinguishing between the normal and those who suffer from intellectual disabilities have varied over time. U.S. criteria have tended to be more explicit in using I.Q. scores to distinguish the normal from the disabled and thus changes over time are quantitative and easy to trace. In contrast, criteria in use in the U.K. have tended to be more qualitative and thus tracking changes over time is more problematic. For this reason, here I shall focus only on the criteria in the U.S.

3. The Changing Classifications

The main classifications of intellectual disability in use in the U.S. have been those included in the *Diagnostic and Statistical Manual of Mental Disorders* (generally known as the D.S.M.), produced by the American Psychiatric Association, and the classification produced

by the the American Association on Intellectual and Developmental Disabilities (A.A.I.D.D., known in previous incarnations as the American Association on Mental Retardation (A.A.M.R.), the American Association on Mental Deficiency (A.A.M.D.), and the American Association for the Study of Feeble-mindedness). Table 1 shows the cut-off points chosen in the various editions of these classifications. All the classifications include advice that states that the I.Q. score should not be considered alone, but in tandem with an assessment of ‘adaptive functioning’ (that is, the extent to which the person copes with the tasks of everyday living).

Classification	Year of Publication	IQ cut-off point
D.S.M.-I (A.P.A. 1952)	1952	85
A.A.M.D. (Heber 1959a)	1959	85
D.S.M.-ii (A.P.A. 1968)	1968	85
A.A.M.D. (Grossman 1973)	1973	70
D.S.M.-iii (A.P.A. 1980)	1980	70 +/- 5
A.A.M.D. (Grossman 1983)	1983	70 +/- 5 for test error
A.A.M.R. (Luckasson et al. 1992)	1992	75
D.S.M.-IV (A.P.A. 1994)	1994	70+/- 5
A.A.M.R. (Luckasson et al. 2002)	2002	70+/- 5
A.A.I.D.D. (Schalock 2010)	2010	70+/- 5
DSM-5 (A.P.A. 2013)	2013	70+/- 5

Table 1. Classifications of intellectual disability.

Since 1992, the A.A.M.R. has adopted a 'level of support model' whereby 'rather than emphasizing I.Q.-based subgroups (mild, moderate severe and profound) professionals were encouraged to describe needed supports for individuals with intellectual disability' (Harris, 2006, p.60). As yet, this model has not been widely adopted by either policy makers, or researchers, and I.Q. scores continue to be of paramount importance in practice (Detterman, Gabriel and Ruthsatz, 2000).

Prior to the 1950s there were no classification schemes in widespread use and individual researchers suggest various cut-offs. Clarke (1965: 56) surveys the literature and finds cut-off points that ranged from an I.Q. of 60 (Pintner, 1933; Bernreuter and Carr, 1938), through to 70 (Terman, 1916), to 80 (Stern, 1914).

As one can see from Table 1 during the 1950s and 60s the agreed cut-off point tends to be high with both the D.S.M. and A.A.M.D. classifications using 85 as a cut-off score. Then in the 70s and 80s it goes down. Bear in mind that these shifts make a huge difference to the prevalence of intellectual disability. About 2% of people have an I.Q. less than 70; about 16% have an I.Q. less than 85. The two key shifts – from disagreement to 85 in the 50s and 60s, and then down to 70 in the 1970s require more detailed examination.

The introductions to the classifications and contemporaneous journal papers supply some information on the shifting classifications. The A.A.M.D. produced the 1959 classification in response to the publication of the D.S.M.-I in 1952 (Heber, 1958). The A.A.M.D. was not satisfied with the D.S.M. approach to mental deficiency and began work on its own classification. Despite setting out to produce an alternative to the D.S.M., the cut-off point for mental deficiency is the same in the D.S.M.-I and in the A.A.M.D. 1959 classification. Both agree that one can be diagnosed as mentally deficient if one has an I.Q. of 85 or less. This

cut-off point is the highest suggested in any time period. It is worth noting that for the D.S.M.-I to include a diagnosis for a comparatively mild diagnosis is rare. The D.S.M.-I was constructed from previous classifications designed for use in mental hospitals and by the armed forces (A.P.A., 1952: v-xi). As such it concentrates on severe mental illnesses and on disorders that are related to combat. At first glance, comparatively mild mental deficiency fits into neither of these categories, and its inclusion in the D.S.M.-I will thus require explanation.

The main journals regarding mental deficiency contain very little discussion of the D.S.M.-I and 1959 A.A.M.D. criteria. Arguing in favour of having 85 as a cut-off, Robinson and Robinson argue that the definition 'encourages professional attention to those who can most readily profit from relatively less extensive help in the form of special education, minor supervision by a social agency, and other community services outside institutions' (1965: 38). Arguing against the 85 cut-off, Garfield and Wittson worry that it extends the concept 'much further than has been the case traditionally in the area of mental retardation or in the field of intelligence testing' (1960: 953). Clausen notes that many people with an I.Q. of less than 85 function normally and that thus,

It would appear that when a person with an I.Q. of 85..shows impairment of adaptive behaviour, the maladaptation is caused by factors other than intellectual, and the person should therefore not be classified as mentally deficient...It is the opinion of the present writer that the traditional cut-off point of 70 or 75 ...is more adequate on the grounds that it primarily below this level that individuals show impairment of adaptive behaviour, caused by low level of general intellectual functioning. (Clausen, 1967: 743)

In 1973 the A.A.M.D. I.Q. cut-off was reduced to 70. This cut-off (sometimes allowing for plus 5 for test error) remains to this day. Once again, this shift met with little discussion in the journals. Those authors who mention the change frequently see it as a return to tradition, and the 85 threshold as a blip that had been corrected (Baroff, 1974; Ingalls, 1978; Detterman, Gabriel and Ruthsatz, 2000). MacMillan, Gresham and Siperstein (1993) suggest that the reduction was required to reduce the numbers of black and Hispanic children who were being diagnosed as mentally retarded and fed into the special education systems (The I.Q. curve for black children is off-set from those for white, such that the peak for black children is lower – the reasons for this are contested. Some argue that I.Q. tests are culturally biased; some argue that low I.Q.s are associated with social deprivation and poverty).

The criteria included in D.S.M.-III were written in accordance with the terminology and classification used by the American Association on Mental Deficiency. This has an I.Q. cut-off of 70, plus or minus 5, to allow for test error (A.P.A., 1980: 36). The text explains the change between D.S.M.-II and D.S.M.-III.

Since the large majority of persons with borderline intellectual functioning (I.Q.= 70-84) do not have significant impairment in adaptive behaviour, this range of intellectual functioning is no longer included within Mental Retardation. Rather 'Borderline intellectual functioning' with an I.Q. of up to 84 is included as a V-code. (A.P.A., 1980: 371).

The V-codes in the D.S.M. are used to code non-disorder conditions that can be the focus of professional concern and include codes for marital problems, or spiritual problems, and so on.

All in all, the introductions to the classification systems, and the relevant journals, give very little insight into the reasons for the shifts in the thresholds of intellectual disability. In order to understand the changes we need to look beyond these sources, and consider how intellectually disabled people have been considered across the course of the twentieth century.

Before doing so, however, a brief note on current developments is in order. In recent years the intellectual disability diagnosis has lost ground to the new diagnosis of 'learning disability' (dyslexia, and so on). In one study, the U.S. Department of Education found that the percentage of school aged children classified as having intellectual disability decreased 40% between the 1976-1977 school year and the 1994-1995 school year. During the same period, the percentage of students with learning disabilities increased as much as 200% (Harris, 2006: 61). It appears likely that the stigma associated with suffering from intellectual disability is such that children who clearly meet the formal diagnostic criteria are still given a diagnosis of learning disability as a cover-up diagnosis (Reschley, Myers and Hartel, 2002: 240). With the use of the label diminishing, determining the limits of mild intellectual disability is of less importance than previously.

4. A broader history of intellectual disability

Intellectually disabled people first came to be seen as a sizable problematic population with the introduction of compulsory education (Trent, 1994). In each school some children appeared to be unable to learn. In the past, such children could simply have dropped out of school, but with compulsory education their presence became problematic. The French

government commissioned Alfred Binet to find a way of identifying those children who would be likely to fail in school so that they could be removed from regular classes.

Binet's tests soon arrived in the U.S. where they were translated and popularised by Henry Goddard (1910). In the U.S., schools for the intellectually disabled had started to appear from the mid-nineteenth century. The first establishments tended to be small and aimed to train their residents for reintroduction to the community (Johnson, 1899). As such, they often only accepted residents under a certain age, and kept them for training in a trade for a few years. Less able children who would be unlikely to make progress were excluded, and either cared for by their relatives or in other state institutions.

By the late nineteenth century, the mood had changed (Johnson, 1898; Waggaman, 1920; Haviland, 1929). Family studies made many think that feeble-mindedness, as it was then called, was linked with a multitude of other signs of degeneracy - crime, prostitution, alcoholism, insanity. Furthermore, the suspicion arose that those with the mildest intellectual disabilities were the most socially dangerous. Able to blend in with the normal population, they would have children. Unable to compete fully with their peers or to completely appreciate moral norms, they would fail to hold down jobs and resort to crime and prostitution.

To such thinking, training and releasing the feeble-minded appeared a mistake. It became commonplace for writers to argue that feeble-minded people should instead be detained, segregated from the broader community, and prevented from breeding (Douglas, 1910; Hodson, 1919; Waggaman, 1920). The colony model, whereby a large institution is made self-sufficient by residents working in adjoining farms and workshops, meant that institutionalisation on a vast scale might be economically viable. More able residents might

be used to care for the less able. Johnson advocates that ‘the improvable can be cared for, with decency and humanity, at a very moderate ratio of expense, by utilizing the labor of the trained higher grades’ (1899: 471). Such schemes could be marketed as being in the residents’ interests. Johnson, writing in 1899, advertised the colony system thus

The institutions can take these undesirable and hurtful citizens and make of them, or of many of them, self-supporting members of a separate community, and at the same time avert the dangers of reproduction and increase (Johnson, 1899: 471).

He continues,

...let the whole colony become a ‘village of the simple’, its inhabitants an industrious, celibate community, having all that other villagers enjoy, except the excitement of popular elections, and the pleasures, trials and anxieties of married life. (Johnson, 1899: 472)

Although talk of the ‘menace of the feeble-minded’ provided a theoretical foundation for the institutionalisation of people with comparatively mild intellectual disabilities, in this period few were in fact placed in institutions. Even those authors who applauded the detention of the mildly disabled did not imagine that their numbers would be very great. In 1927 Conklin estimated the prevalence of intellectual disability to be roughly 1 in 200. The detained and the detainable seemed to be fairly few.

The mass I.Q. testing that occurred during the First World War showed that the prevalence of feeble-mindedness was greater than anyone had ever imagined. Up until this time many had considered a mental age of 12 to be the cut-off point for normality. As Goddard writing in 1919 explains this cut-off point had been chosen as ‘it was found that no inmates of

institutions for the feeble-minded have an intelligence above twelve years – except a few who had been placed in the institution mainly for delinquency and whose ability otherwise to get along in the world was demonstrated’ (Goddard, 1919: 59) . During the First World War huge numbers of U.S. army recruits were tested. The results were shocking. 45% of those tested had a mental age of twelve or less (Goddard, 1927: 42). This could be interpreted in two ways. Some saw an epidemic of feeble-mindedness. Others concluded that the results showed that normal humans were simply not as intelligent as had been thought, and that less intelligence is required for many everyday tasks than had previously been assumed (Anonymous, 1928). Either way, one thing that the new prevalence rates ensured was that the dream of segregating all the feeble-minded was over. The gap between the feeble and normal mind was seen to be far narrower than previously considered, and the institutionalisable were simply too numerous to be locked up. However, although it could no longer be thought feasible to institutionalise all the mildly intellectually disabled, the Great Depression would soon lead to conditions that meant that more mildly intellectually disabled people would be detained than ever before.

In prosperous times, many school-leavers with low I.Q.s can be expected to find jobs and will be absorbed into the general population.² When jobs are hard to get this is more difficult. The Great Depression began in 1929. Unemployment peaked in 1933 at around 25%, but remained high at over 14% until the U.S. entered the Second World War (Bureau of the Census, 1975). During this period many school-leavers of all levels of intelligence failed to secure jobs. However, those unemployed young people who also had lower than average I.Q.s could easily find themselves unemployed and institutionalised. Those who had no relatives willing to provide for them, or who fell into crime, or, in the case of women, had illegitimate children, would be perceived as being incapable of managing and locked up.

Although the prevalence rates for mild intellectual disability meant that even the keenest of eugenicists could not hope to institutionalise all intellectually disabled people, many eugenicists still thought it was worthwhile seeking to institutionalise as many as possible. Now the economic climate provided a pool of such people who could be seen to be in need of care and control.

Here I use data collected by the U.S. Bureau of Census for the years 1922, 1938 and 1944 (Bureau of the Census 1926, 1941, 1947) to examine admission statistics during this period. 1922 is prior to the start of the depression. 1938 is during the depression. 1944 is two years after the U.S. entry into World War Two. Unemployment rates for these years were 6.7% in 1922, 19% in 1938, and 1.2% in 1944 (Bureau of the Census, 1975). It would have been better to have figures just prior to the depression and during its very peak but unfortunately statistics for the years 1923-1925 were not collected, 1926 proved unobtainable, and those for 1928-32 do not break down first admissions by age.

The data records first admissions to institutions for the feeble-minded in the United States by mental status, sex, and age of admission. The mental status is recorded as 'idiot', 'imbecile' or 'moron'. Unfortunately the definition of these terms shifts slightly between 1922 and 1938 (Bureau of the Census, 1926: 14; Bureau of the Census, 1941: 119). In 1922 an idiot is defined as someone with an I.Q. of less than 25, in 1938 this shifts to less than 20.

Correspondingly, in 1922 an imbecile is someone with an I.Q. of 25-49; in 1938 an imbecile has an I.Q. of 20-49. In both years a moron has an I.Q. of over 50. Definitions of all categories in 1938 and 1944 are the same (Bureau of the Census, 1941, p.119, 1947, p.42). It is likely that these shifts would have made little difference on the ground. Institutions in this period had very high patient-staff ratios and so plausibly few patients would have received

full I.Q. tests. In practice the mental status would probably have been a rough-and-ready characterisation rather than based on a precise I.Q. score.

The data records details of the feeble-minded who were admitted to institutions dedicated to their care. One potential problem with the data is that some hospitals failed to return census forms. In addition, some institutionalised feeble-minded patients were institutionalised in almshouses or in psychiatric hospitals rather than in specialist institutions for the intellectually disabled.³ In 1922 around 12,000 feeble-minded people lived in almshouses and 43,000 in specialist institutions (Bureau of the Census, 1926: 25). In 1938 and 1944 the number of feeble-minded people in almshouses is not recorded. It is possible that the missing cases differ from the institutionalised population on which data is available.

In some cases, either the age or the mental status of a patient has not been recorded. These cases have been excluded from the analyses. In 1922, the data set lumps together all patients aged over 70. In 1938 and 1944, all patients aged over 60 are lumped together. Given that there are very few old first admissions, and to achieve consistency between the data sets, all patients aged over 60 were excluded from the analyses. In total the 1922 data set contains 7259 individuals, the 1938 data set contains 8337 individuals, and the 1944 data set contains 8262 individuals. With the above exclusions, there remain 6785 individuals from 1922, 7871 individuals from 1938, and 6762 from 1944.

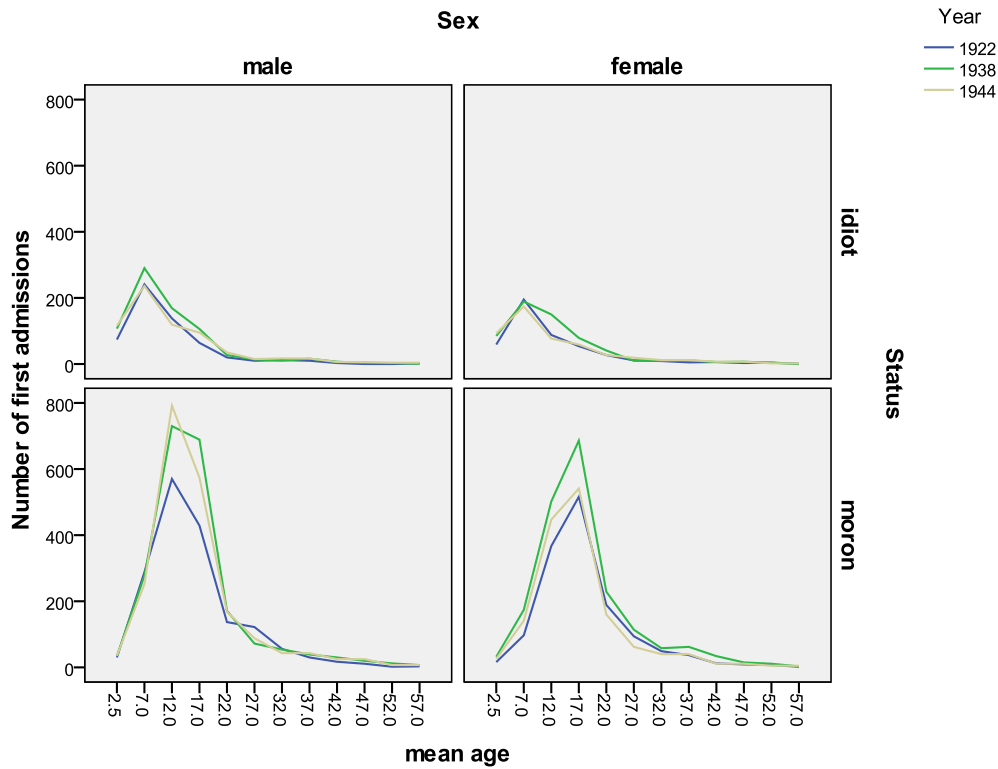


Figure 1. Graphs of first admissions of idiots and morons by age and sex for the years 1922, 1938 and 1944.

The statistics show that admission patterns differ depending on the mental status of patients. Idiots (i.e. those with very low I.Q.s) tend to be admitted when very young – presumably once it becomes clear that they are intellectually disabled. Morons tend to be admitted during adolescence. Admission patterns also vary depending on sex. While sex makes little difference to the admission patterns for idiots, greater differences are seen amongst morons. The peak age of admission for moron boys is around 12, while for girls it is around 17. This is consistent with the findings of Hollingworth (1922) who reports that intellectually disabled female children were more likely to remain living in the community for longer than were

males. In some states, the legal requirements for detention differentiated between men and women. The 1922 report notes that larger numbers of women are detained from ages 15 to 44 as a result of ‘the special provision made in some States for the institutional care of feeble-minded women during the child-bearing period’ (Bureau of the Census, 1926: 51).

The graphs show that first admissions for idiots differ little between the years. Somewhat more idiots of all ages are admitted during the depression – presumably economic problems have limited the ability of families to provide care at home. Admission rates for morons are much more variable, with many more adolescent and young adult morons being admitted during the depression than in 1922. These teenagers fall into two groups – those aged over 15 or 16 (the laws for school leaving age vary from state to state) are school leavers who could be expected to search for employment. Those aged less than fifteen are too young to work. Following the entry of the United States into the Second World War (in 1942) the rates of admission for older teenagers, and for younger adolescent girls, fall, while that for younger adolescent boys does not. Presumably, younger adolescent boys continue to be institutionalised as with fathers at war, and many more women employed, keeping them at home becomes more problematic. Adolescent girls are perhaps easier for single women to deal with and might more easily find a useful role helping at home. With the entry into the Second World War, rates of admission for older teenagers decrease. Plausibly this is because older teenagers are able to gain employment during war time.

In most wars the demand for man-power has soon pushed the military to accept recruits who would be considered unsuitable during peace-time. By the end of the First World War, in the United States ‘a feeble-minded individual who has the intelligence of a child of eight years may be accepted to service in the Army’ (Bliss, 1919, cited in Smith and Lazaroff, 2006:

434). During the Vietnam war, men with I.Q.s of 70-91 were accepted as part of Project 100,000 to make up divisions popularly known as McNamara's Moron Corps (Smith and Polloway, 2008). Some intellectually-disabled men served in the U.S. military during World War Two. Whitney & MacIntyre (1944, cited in Smith and Lazaroff, 2006) reported on "boys" with a connection to the Elwyn State School who were currently in the military. These included two staff sergeants (I.Q. 59 and 75), two sergeants (I.Q. 74 and 91), an instructor in the Army Air Force (I.Q. 60), and a corporal (I.Q. 81). Throughout World War Two, however, I.Q. testing served to limit the number of intellectually disabled recruits. The rejection rate for 'mental or educational deficiency' of 9 per 1,000 during World War I increased to 40 per 1,000 during World War II (Ginsberg, 1959a: 45 cited in Smith and Lazaroff, 2006). Still, the demand for labour during war time meant that even those intellectually disabled men who were rejected for military service could hope to find employment elsewhere.

The graphs of admissions show that rates vary for young people by year far more than do the rates for older age groups. This is consistent with the hypothesis that mildly intellectually disabled school-leavers came to be institutionalised during the depression as a result of being unable to find work. Intellectually disabled people find it harder than average to obtain jobs, but studies suggest that once employed, in a downturn they are not the first to lose them (Halpern, 1973). Unemployment can thus be expected to disproportionately affect intellectually disabled people of school-leaving age. A somewhat similar pattern of admissions was reported in the U.K.. Writing in 1952, MacMahon notes that 'high grades' (i.e. the group roughly equivalent to the U.S. 'morons') no longer sought admission into institutions. He reports that in an era of full employment they had all found jobs.

A key claim of this paper is that, once admitted, economic incentives existed for some depression year moron teenagers to be retained within institutions. The colony model, adopted when the dream of total segregation of the feeble-minded had seemed possible, meant that the organisational structures were in place to use the labour of more able inmates. Such inmates could care for less-able residents, and perform work on farms and in industrial units tied to the institution. They worked for little or no pay. The institutions argued that such work was therapeutic for the patient. Many also believed that patients 'owed' society labour in exchange for bed and board. Many residents preferred to work. They had little else to relieve the tedium of institutional life and privileges were often tied to working. As such labour made the institutions economically viable it was in the institutions' interests never to release the trained. More able patients thus came to be used essentially as slave labour.

Economic incentives led to the long-term detention of the borderline intellectually disabled on a significant, but not massive scale. Overall, discharge rates were comparatively high. In 1938 for every 100 morons admitted, 76 were discharged, with 60 of these being judged capable of either complete, or partial, self-support on release (Bureau of the Census, 1941:133). My claim is not that all of the mildly intellectually disabled were retained for their labour, but merely that significant numbers were.

It is worth noting that by the 1950s the eugenic arguments for detaining intellectually disabled people appeared weak (Thomas, 1957). At the theoretical level, studies suggested that I.Q. was not inherited in any straightforward way. At the practical and policy level, even those who still believed in eugenics, had no reason to segregate feeble-minded people rather than to sterilise them.⁴

Although the theoretical arguments for detaining mildly intellectually disabled people had collapsed, 'high-grade' residents were still detained, with many remaining in institutions into the 50s and 60s. The D.S.M.-I (1952) was designed with hospital inpatient and military populations in mind. As such, severe and combat related conditions are emphasised, and comparatively few mild disorders are included. Still, the D.S.M.-I contains a classification for people with mild mental deficiency with a suggested cut-off point of 85. Plausibly this is because psychiatrists at the time realistically expected to meet such people as inpatients. In the U.K. too, in the late forties people with relatively high I.Q.s (i.e. over 75) could be found in some numbers in institutions for intellectually disabled people (Tizard, O'Connor and Crawford, 1950).

In the late 50s and early 60s, studies found that some inmates with relatively high I.Q.s had been institutionalised for many years, and public outrage led to deinstitutionalisation in some cases. In 1958 *Life* magazine published the story of Mayo Buckner who had spent 59 years in an institution, but had a tested I.Q. of 120 (Trent, 1994: 253). Garfield and Affleck in a study of inmates who were released as 'not retarded' note that 'one of the more frequent reasons for being institutionalized appeared to be a combination of social difficulty and lack of an adequate home situation' (1960: 908). They note that 'one individual remained in the institution 35 years after an I.Q. of 87 was obtained' (p.911) and that 'generally it was more difficult to get an individual out of the institution than it was to get them in' (p.913).

The deinstitutionalisation of high-grade residents was met with concern by those who worked in hospitals. Ward staff complained when 'their workers' were released on vocational programs (Gage and Wolfson, 1963: 564), and worried that lower-grade patients would need to be trained to do necessary work (Kaplan, 1961). Kaplan (1961) records that some patients

did more than 80 hours work a week, and notes that not only was patient labour essential to ensure the functioning of institutions, but also that many of the patient care needs performed by patients were unpleasant and would not be done by paid workers. As one hospital superintendent admitted, ‘The economy of a mental hospital is based on “patient labor”..[W]ithout it the hospital ...would collapse.’ (Friedman, 1974: 570).

By the early 1970s, the economic and institutional arrangements that had made the detention of high-grade residents possible were no longer viable. In 1966 the Fair Labor Standards Act, which established minimum wages, was amended to explicitly include people in hospitals or institutions for the mentally defective (Friedman, 1974). This meant that the use of unpaid patient labour became problematic, and led to a string of lawsuits in the early 1970s. At the time, the outcome of the lawsuits was by no means a foregone conclusion. The cases were not clear cut due to the difficulty of distinguishing between labour performed as part of therapy and that done for the institution. In addition, the Department for Labor had initially failed to enforce payment on the grounds that pay would only have to be returned to the institution for board (Anonymous, 1973). However, eventually the law courts over-ruled such rationalisations, and by 1973, a few states, including Washington and New York, had regulations prohibiting use of unpaid labour (Anonymous, 1973). Other states followed soon after.

As Trent (1994) has previously noted, once mildly intellectually disabled people could no longer be used as workers, they became an economic drain rather than an asset to institutions, and programs for their deinstitutionalisation gained momentum. Indeed without free patient labour, detaining even lower grade inmates became problematic. Care is labour intensive, and without free carers, pressures soon emerged to deinstitutionalise as many patients as

possible. I suggest that the changes in the patient population, led to pressures for the official cut-off point for intellectual disability to be reduced.

5. Conclusions

Drawing on the case of intellectual disability I suggest that in the case of ‘bell-curve’ disorders, the cut-off point between normality and disorder can shift as a result of social and economic factors. It is not always the case that we first identify the disorders and then find the resources to help the disordered. Rather the reverse can occur. We may have certain resources and then gerrymander the contours of a disorder to supply a ‘needy population’ that roughly fit.

If my thesis is correct we can expect the diagnostic shifts seen in the case of disorders where patients were once cared for on the ‘colony model’ to differ from those that have never been treated via such means. As we have seen, the colony model of care creates economic incentives to diagnose and detain those on the borderline with normality. Thus we can expect the diagnostic criteria for ‘colony-disorders’ to have been comparatively broad during the years in which colony-care was employed and to shrink thereafter.

In his 1994 *Recovery from Schizophrenia* Richard Warner shows how rates of complete (i.e. symptom free) and social (i.e. working) recovery from schizophrenia vary with the rate of unemployment. Warner argues that stress caused by unemployment is bad for people and can trigger psychotic symptoms. Furthermore, during a slump efforts at rehabilitation are reduced and those leaving hospital are unlikely to find employment.

Warner's study examines the effect of employment on rates of admission and recovery from schizophrenia. He does not draw any links between differing rates of hospitalisation and shifts in diagnostic boundaries. However, Warner's analysis makes it plausible that a story similar to that told here, about links between unemployment, rates of admission, and shifting diagnostic boundaries, could be told about schizophrenia. In many ways the histories of intellectual disability and schizophrenia are similar. The colony model of care was used in institutions for the mentally ill and intellectually disabled alike. Rates of admission for schizophrenia were high during the Great Depression (Brenner, 1999). Patient labour became essential to the economies of mental hospitals. As with intellectual disability, the concept of schizophrenia in the U.S. was very broad in the period from 1930s to the early 1970s, and then became much narrower from the late 1970s onwards (Warner, 1994, ch.1). The narrowing of the U.S. concept of schizophrenia that occurred in the late 1970s is generally seen as being a response to W.H.O. studies that showed that concepts of schizophrenia differed around the world, with the U.S. approach being out of line with narrower concepts employed in Europe (Warner, 1994, ch.1). It is still plausible, however, that the collapse of the colony-care model, and consequent deinstitutionalisation of mentally ill people, was also a driver in the narrowing of the definition.

This being said, some key differences between the case of schizophrenia and intellectual disabilities should be noted. Poverty may cause schizophrenic symptoms via mechanisms that are more direct than those linking poverty and intellectual disability. Poverty and low I.Q. are linked because of links between poverty and conditions that cause low I.Q. prenatally or in very early childhood. Schizophrenia may be more directly tied to stress experienced as an adult. Still, in both conditions, the degree of disability that will be experienced by someone can be expected to vary with social and economic factors. Getting by is frequently simpler for

those who manage to hold down jobs than for the unemployed. Employment often structures a person's day in such a way that many of the decisions that are required for everyday living fall naturally into place (one gets up in time to get to work, one goes to the canteen with one's colleagues, one goes home after work, and so on). In addition, in both cases, economic problems can be expected to reduce the capacity of friends and family to provide informal care and support. The cases of schizophrenia and intellectual disability can thus be considered similar in so far as, in both cases, broad definitions are only viable when the economic structures that provide care are intact, and narrower definitions thus come to be embraced with the collapse of colony-systems of care.

In disorders that have never been cared for utilising a colony-model of care, the trends in diagnostic criteria are quite different. Many conditions have been subject to a creeping medicalisation whereby gradually milder and milder conditions come to be considered disorders. The expansion of disorder boundaries has occurred for a number of different reasons. Marketing campaigns by those with an interest in the perceived prevalence of disorders increasing - which, depending on the context, can include pharmaceutical companies, patient support groups and medical groups - have of course played a role (Conrad, 2007). But increasing wealth has also been an important factor. With more money to spend on health it becomes possible to think of milder states as forms of sickness (Johansson, 1991).

On the basis of my case study examining intellectual disability, Warner's study of schizophrenia, and the general tendency for diagnostic categories to expand with increasing wealth, I conclude that it is plausible that, when normal conditions shade into pathological

conditions, the boundaries of disorder are negotiated so that a 'needy population' is identified that does not far outstrip the economic resources for care and treatment.

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Endnotes

¹ Looking to the more distant past, for a study tracing the links between historical concepts such as ‘fools’ and current concepts see Goodey 2011.

² Richardson, Koller and Katz (1988) look at the prospects for mildly mentally retarded school leavers. They review a number of studies and also look at a sample in Aberdeen entering the job market in 1966-77, a period in which gas and oil finds meant the local economy was booming. Of this cohort, 93% of the males and 45% of the females found employment (with an additional 40% of females working in the home).

³ Statistics for feeble-minded people institutionalised in psychiatric hospitals have been analysed. In his study *Mental Illness and the Economy*, Brenner (1999) shows that, in general, psychiatric hospital admissions increase during economic difficulties (including during the Great Depression) and he also shows that this tendency is particularly strong amongst the intellectually disabled (1999, pp. 140-142). Unfortunately, from his figures it is unclear whether the intellectually disabled people placed in psychiatric hospitals were admitted with a primary diagnosis of mental illness or of intellectual disability.

⁴ Indeed, the practice of sterilising feeble-minded people prior to release lasted far longer than the eugenic movement. Trent (1994) argues such practices became routinised within institutions and ceased to be subject to debate. Most probably they persisted due to concerns that discharged women would fall pregnant and be unable to cope or stigmatised. Until 1962 Nebraska had a law prohibiting discharge of residents unless sterilized or beyond reproductive age (Kurtz and Wolfensberger, 1969). Edgerton (1967) notes that women released from Pacific State Hospital between 1949-58 were routinely sterilised as a precondition for discharge.