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INTRODUCTION

It is sometimes suggested by scholars that eugenics was some form of pseudoscientific aberration of the first half of the twentieth century which is nowadays of historical interest perhaps, but has no place in contemporary scientific society. Indeed for James Watson, co-discoverer of the basic physical properties of the DNA molecule and a long-serving human geneticist:

[t]he science underpinning [eugenics] was bogus, and the social program[me]s constructed upon it utterly reprehensible.¹

Nonetheless, eugenic ideology, and particularly ideas that the human race may and should be 'improved', is certainly extant today. It is uncommon for what Watson (op cit) terms 'the E word' to be explicitly cited, but the links are there with this 'bogus' and 'reprehensible' way of formulating social policy (in passing, and of contemporary interest in the UK, the prime mover behind the 1948 Welfare State, William Beveridge, was an active and committed member of the English Eugenics Society). The fundamental issue to be borne in mind is that the overt eugenics movement in the west had two key values: the 'improvement of the human stock' and the avoidance of financial drain on society.

This is clearly seen in the 1929 report of the UK government Mental Deficiency Committee (The Wood Committee):

[t]he science of eugenics is doing invaluable service in focussing scientific thought and public opinion upon the racial, social and economic problems that the subnormal group presents to every civilised nation ... no nation that regards its future welfare seriously can afford to ignore the results and recommendations of the scientific study of this problem,²

and was also made explicit by Marie Stopes:

birth control was the best method to eliminate the hoards (*sic*) of weak, unhealthy, and tainted poor children whose dependence on taxsupported welfare program[me]s prevented the overburdened middle classes from producing more children of good quality.³

In the UK, the seminal English Eugenics Education Society (founded in 1907) is now known as the Galton Institute.⁴ This organisation is both diverse and wellconnected, as the 'aims' section of its website indicates:

The Institute has a wide range of inter-disciplinary interests which include the measurement and description of human attributes, human heredity, genetic counselling, the influence of the environment and the causes of disease, the family unit, birth control, differential fertility, marriage guidance, infecundity, artificial insemination, voluntary sterilisation,

termination of pregnancy, demography, population problems and migration.⁵

The Institute hosts an annual conference for discussion of topics within its area of interest. In a paper presented to the 1999 conference, one academic contributor (USA Professor G Whitney) waxed lyrical about the future eugenic potential of genetic research. In his view, the twenty-first century heralds a 'golden age for eugenics'.⁶ Similarly James Watson, despite his denouncement of eugenics noted above, is enthused by the idea that individuals may be enhanced, and thus 'improved', by genetic treatments and manipulation.⁷

Watson certainly has clear and unambiguous views about the uses of genetic testing of fetuses in this context. Having noted that such tests 'do not cure', he calls instead for the eradication of 'genetic disability' as a practical alternative to what is, in his view, a misconceived idea that 'we will ever effectively control the majority of genetic diseases'.⁸ Meanwhile John Sulston, 'Britain's leading geneticist' (and, at the time of the article, vice-chairman of the (UK) Human Genetics Commission), adds his weight to the argument: 'if we can select children who are not going to be severely disadvantaged then we should do so'.⁹ It is this blending of eugenic ideology (whether openly acknowledged or not) and genetic science that is here thought of as '*eugenics*'.

The root ideas of 'normality', 'difference' and 'unworthiness', leading to the encouragement or discouragement of procreation, are readily associated with the eugenic tradition. They are also to be found within the contemporary practice of genetic counselling. According to political scientist Diane Paul: '[i]n the 1950s and 1960s, genetic counse[l]ling was characterized by most of its practitioners as an extension of eugenics'.¹⁰ Citing the originator of the term 'genetic counselling', Sheldon Reed, Paul reports that in current usage the word 'eugenics' is being increasingly replaced by the rather more user-friendly 'counselling in Human Genetics'.¹¹ It is unlikely to be coincidental that this change in nomenclature began in 1947, a time when the debate about Nazi involvement in 'eugenics' was at its height.

COUNTING COSTS, CONSTRAINING CHOICES

Genetic counselling has not always confined itself to strictly genetic concerns. Dwight J. Ingle, writing in the 1970s, is clear that:

a substantial percentage of steady welfare clients should not have children ... [as] to be born into a culture that enslaves may be as much of a handicap ... as to be born with defective genes.¹²

This amounts to the medicalisation of what is today most frequently considered to be a social problem, poverty, and may appear to continue in the tradition of the Wood Committee and of Marie Stopes cited above (end notes 2,3). As such, this idea does not seem to draw upon scientific research so much as eugenic ideology, and the prescribed antidote would not have been out of place in the early-twentieth-century deliberations of one or other of the established national eugenics societies.

The remedy for Ingle is genetic counselling, with the very clear expectation that potential parents found amongst 'steady welfare clients' will be dissuaded from procreation. It is no doubt sound advice to anyone to consider carefully economic factors when contemplating parenthood, but it is not immediately clear just where 'genetic' fits in this particular equation. 'Eugenic counselling' would be equally appropriate here, a point similar to that made by Nancy Ordover in relation to current drives in the USA to 'persuade' young, poor and (Ordover asserts) often Black, women to accept long-lasting contraceptive treatment (Depo-Provera) as a means of countering poverty. Ordover finds very strong links between this policy and earlier eugenic ideology.¹³

There is seeming tacit acceptance of a very similar position to be found within the 'genetics' White Paper recently published by the UK government Department of Health [DoH].¹⁴ Whilst not addressing 'welfare dependency' in the same sense as that of Ingle or Ordover, economic costs to society are of concern to the DoH. Much of this document is couched in optimistic and 'therapeutic' terms, but it is noted on page 12 that 'most NHS genetics work is concerned with inherited disorders caused by a defect in a single gene ... The treatment and care of patients with these disorders costs ... about £2 billion each year'. Thus these conditions are both expensive to treat and a major target of current UK human genetics concerns.

The DoH concern with cost here resonates with both a neo-Malthusian argument that the non-working poor were in danger of out-breeding the gainfully employed (with allegedly disastrous social consequences), and the repetitive refrain of eugenicists throughout the twentieth century that, in the 1925 words of the (US) eugenicists Paul Popenoe and Roswell Johnson, 'society is putting a heavy burden of expense ... on coming generations' by failing to curb the fecundity of the 'dysgenic classes'.¹⁵

Certainly the DoH does not explicitly mention eugenics, but then again the sentiments of Watson reported above would suggest that this is not surprising. Nonetheless, there is a very clear continuation of a strand of thought which concentrates on the cost to society as opposed to any intrinsic value accorded to the individual, as is sketched above. The contention here is that there is an implicit division of society into two broad categories, or 'classes': the 'fit' and valued contributors to the greater whole, and the potentially 'unfit' who might represent a charge against the collective wealth or material wellbeing of society.

From a contemporary perspective, these supposed 'dysgenic classes' of Popenoe and Johnson may in many cases be equated to 'disabled people'. Within a British disability studies paradigm there is an extensive body of specialist literature which develops the theme of a social model of disability.¹⁶ On this view, 'disability' results from the (in)actions of society towards people who have some form of impairment: thus any ensuing 'problem' lies with society, not the individual. The view implicit within eugenic thinking, that individuals are themselves 'the problem', is diametrically opposed to this social model construction. This type of view is often characterised as a medical, or individual, model approach to disability and is frequently associated with the disvaluation of an individual identified as 'impaired'.

The DoH White Paper introduced above, having discussed the integration of services such as genetic counselling and testing, undertakes to ensure that, in England, 'all pregnant women are offered antenatal screening for Down's syndrome and are then counselled by midwives to help them make an informed choice'.¹⁷ This, alongside the introduction of other genetic tests, will have the 'benefit' of 'enabling more informed reproductive choice'. Tellingly, the White Paper also prioritises the aspiration that 'by 2006 genetic test results should be available ... within three days where the result is needed urgently (e.g. for prenatal diagnosis)'.¹⁸

It is unlikely that this presumption of urgency will be conducive to a calm and considered decision-making process on the part of the prospective parent(s). Indeed, the only feasible clinical need for such urgency here is to enable an abortion to be performed at the earliest opportunity in the event of a so-called 'positive' result. Such emphasis on the 'eradication' or 'prevention' of disability has serious implications for disabled people both as individuals and collectively. The personal case has been put powerfully by Alison Davis (who, being associated with the Society for the Protection of the Unborn Child, may well have a political case to make here) in 1999. She is 'fully aware that about 85% of babies who would otherwise grow up to be like me are now aborted, following a positive pre-natal screening result'. Davis is in no doubt about the framework of norms and values which contemporary society has constructed around the area of pre-natal screening: '[t]here is a clear expectation that abortion will follow a positive screening test'.¹⁹

The use of 'positive' in relation to prenatal genetic test results, which refers to the identification of some 'defect' or 'abnormality' in the foetus, is often problematical to disabled people. In terms of the foetus, such a 'positive' test often has decidedly negative results leading to abortion.²⁰ Meanwhile psychological effects on the pregnant woman are often negative²¹ and, as Davis makes clear, disabled people with similar conditions may feel that their validity as members of society is undermined.²²

Davis' is not a lone voice in this debate. The influential British Council of Disabled People [BCODP] states categorically that:

[a]s disabled people who have faced sterilisation, prenatal termination, euthanasia and even wholesale elimination in the name of eugenics we attest to the historic and continued links between genetics and eugenics and the dangers this poses for everyone, not just disabled people. The question of the value of a life is far too important to leave to geneticists.²³

In the eugenic utilitarian tradition, it could be argued that the outcome of genetic testing of foetuses for society is nonetheless 'positive' in reducing 'social costs'. On this point, Talcott Parsons has this to say:

the birth and rearing of a child constitute a "cost" to the society, through pregnancy, child care, socialization, formal training and many other channels. Premature death, before the individual has had the opportunity to play out his (sic) full quota of social roles means that only a partial "return" for this cost has been received.²⁴

In the functionalist tradition of Parsons, it is possible to extrapolate from 'death' to 'functional death', wherein a person could be deemed incapable of making a positive contribution to society. By aborting an 'impaired' foetus society avoids the consequences of such 'functional death' of the proto-person. Eugenically this 'saving' may then be applied to the conception, birth and nurturing of an 'acceptable', 'healthy', child: one who is more likely to provide a return on this investment.

It might appear that pregnancy has become in many instances conditional. The continuance of such a *provisional pregnancy* to full-term is increasingly dependent upon the 'satisfactory' completion of pre-natal screening. This point has been clearly made by a prominent bioethicist, and founding Director of the University of Pennsylvania Center for Bioethics, Arthur L Caplan: '[m]any physicians and nurses equate difference with disease'.²⁵ The context of Caplan's paper is that of an exploration of the philosophical and ethical implications of human genetic research, and he is very clear that within the therapeutic community, of the USA at least, the concept of 'disease' is surprisingly ill-defined. This is seen as being problematical:

[e]quating normality with health and abnormality with disease as ways of defining these key concepts seems open to devastating conceptual and empirical problems. ... If a particular trait or behavior or physical structure is seen as causing impairment, dysfunction, pain, or other disvalued states then it is a prime candidate for categorization as a disease.²⁶

Caplan continues his discussion at length, and in particular draws his readers' attention to a case of a foetus aborted on the grounds that it was found to be subject to XYY syndrome, a condition which Caplan 'finds difficult to defend' as a bona fide 'disease'.²⁷ Thus it is that, for Caplan at least, to be found different is potentially to be considered 'diseased', and to be 'diseased' is seen to be at risk of being aborted.

From a British disability studies perspective, this search for foetal perfection is fraught with difficulty. In broader academic and medical circles there is a widelyheld regard for a woman's 'right to choose' whether to abort or not in the general case, but a division of opinion over issues surrounding female foeticide.²⁸ Similarly, in disability studies, whilst the 'right to choose' is generally acknowledged, it becomes problematic where the sole ground for abortion is foetal 'defect'. There is here not so much a collision of rights, as a veritable motorway pile-up. Women have rights, disabled people have rights and, arguably, so do foetuses.²⁹ Following the Parsonian functionalist tradition, it is also arguable that society has rights.

There are no easy answers to this problem. Davis, herself a disabled person (but see also the caveat above about SPUC, a position which may well place Davis at odds with many feminists), explores the conundrum in some depth. Starting from an acceptance of feminist ideals, Davis develops her thinking to include a wider view of 'rights' which includes those of the foetus. She concludes that '[c]hoice is a relative thing ... and can only be regarded as a right when it infringes on no one else's rights'.³⁰ On her way to this position, Davis offers an in-depth discussion of the key issues surrounding what may be thought of as eugenic abortion.

Davis makes much of her proposition that women in general are in danger of projecting their oppression by a patriarchal society upon even more powerless societal segments, disabled women and fetuses:

the mainstream women's movement has made the mistake of transferring our oppression to the unborn ... it became natural to eliminate or ignore those [with] conflicting interests who were too vulnerable to fight back ... the mainstream women's movement claims to support women with disabilities and help them fight against their double oppression [as women and as disabled people], but I do not now believe that it is possible to do so while ... defending so aggressively the 'right to choose' to kill unborn children because they suffer from exactly the same disabilities.³¹

There is another aspect to a woman's 'right to choose': to be a meaningful choice, the decision must be free from constraint. There is much evidence that, in the case of a 'defective' foetus, a pregnant woman may be bombarded with the preconceptions of others. These ideas range from a supposed duty to bear children who will be 'useful' members of society to the reported stresses of caring for child with high dependency needs. It has been claimed that healthcare professionals as a whole tend to accentuate the negative aspects of bearing a child with one or another impairment,³² and that UK society does not offer appropriate support to either parent or child.³³ The result, for one commentator, is that 'neither society nor ... parents are prepared to take on ... social, economic and personal costs involved in having a disabled child'.³⁴

Emotive as it is, eugenic abortion is neither the only nor necessarily the most important example of genetically- (and arguably eugenically-) informed social policy. Unfeeling as it may appear, the aborted have no claim on society. This is not the case with the living, at least in a modern western democracy. There is a body of evidence which suggests that the growth in the incidence of genetic testing, coupled with technological advances in human genetics, could have serious socio-economic effects on people with a 'defective' genetic structure.

EUGENIC ECONOMICS OR ECONOMIC EUGENICS?

Western economic conditions in the final quarter of the twentieth century, particularly following the 1973 'OPEC crisis', coupled with what appears to have been a 1980s paradigm shift in domestic politics in the USA under Reagan and in the UK under Thatcher, have led to changing attitudes towards state-funded welfare. In particular, there is a clear move away from direct state provision and a corresponding emphasis on the role of the individual in securing access to 'welfare benefits'. As a result greater emphasis has come to be placed by social policy practitioners upon the role of employers on the one hand, and individuals *via* private insurance policies on the other, as providers of welfare. The (UK) Human Genetics Commission (HGC) comments that 'insurance is increasingly seen as an essential social good that is required to buy a house, secure income and provide for long term care. The role of insurance is changing'.³⁵

In effect an insurance contract is a gamble between policy holder and insurer. The insurer is driven by the commercial imperative to generate profit, the consumer by a desire to provide against future risk. This leads to an inevitable conflict of interests between the parties, for the insurer will require evidence of the true level of risk whilst it is to the benefit of the policy holder to seek to present the most advantageous profile. It is very clear that genetic profiling has the potential to serve the interests of insurers, a fact emphasised by many recent media reports. The potential for harm is great. For example in the USA, which has progressed further along this path than has the UK to date, of a total population of 250 million, 'about 150 million have private group insurance, usually as an employee or as an employee's spouse or dependent. Another 10 to 15 million people, many of them self-employed, rely on insurance policies they have purchased themselves'.³⁶ Some two-thirds of Americans are directly dependent upon the commercial insurance market for access to welfare benefits, and thus at grave risk of some form of discrimination.

A major policy problem here is that, in a free market economy, the vendor is under no obligation to supply a product, or to supply a product at a uniform price. Just as the prospective purchaser has the right to compare 'value for money', so does the vendor have the right to consider profitability and risk. Insurance premiums are based on risk assessment and have no upper limit. No insurer is obliged to accept a 'bad risk', with the result that some prospective clients may be either priced out of the market or simply refused insurance. In the UK, simple observation of the workings of the motor car insurance market, with its differential premiums based upon perceptions of likely risk levels *to the insurer*, illustrates the point. Similar considerations may well lead to the exclusion of certain people from welfare provisions, for ultimately the actuarial system is based upon discrimination against those judged likely to prove unprofitable.

Recently in the UK there has been public discussion about potential problems associated with housing built on flood plains, the more so in the light of alleged climate change. A large scale government proposal relates to the 'Thames gateway', and this has attracted the attention of the UK insurance industry. Perhaps ominously, it is reported that, unless the Association of British Insurers is satisfied as to the efficacy of proposed flood defences, then the project is likely to stall.³⁷ The plans call for flood defences to be provided as part of the development, and at least some of these are likely to be funded from the public purse. This use of public money to ameliorate the effects of actuarial reckoning is not, to date, reflected in UK policy towards individuals found to have genetic 'defects'. Indeed, and all the more so in the wake of Hurricane Katrina and the devastation of New Orleans, media attention has largely shifted from 'yesterday's news' of the Human Genome Project and biotechnological innovation to discussion of climate change and impending ecological disasters. In the process, and largely by default, genetic technology and its use now seems to have been relegated to the mundane world of the everyday application of science. Genetics is no longer sexy, and public debate about both its practical use and associated ethical issues is largely muted.

The major ethical question in this is whether or not discrimination in something as fundamental to modern western social organisation as the provision of work, pensions,

health care and nursing care can ever be thought 'fair'. If the state is to attempt to withdraw from direct benefits provision and promote the reliance of individuals upon commercial insurers, then it must accept the workings of the market. On the other hand, if the market is acknowledged to be discriminatory, and is unfettered, then there are wider implications for those excluded and ultimately for society. Such considerations are not restricted to those with a 'poor' genetic prognosis. There is an equal chance of someone whose genotype indicates longevity being discriminated against when seeking to purchase, for example, a pension annuity.

Legislation or voluntary self-regulation by regulators are two possible avenues by which discrimination may be avoided or, at least, minimised. The preferred option in the USA is to legislate on access to genetic information, rather than specifically on the end use of such data, whilst self-regulation is favoured in the UK. The Human Genetics Commission [HGC] has raised concerns over this reliance on voluntarism, which:

is not achieving the objectives which were envisaged when it was created ... insurance companies [are] ...using genetic tests that [have] not been approved ... there [is] no satisfactory means of monitoring and enforcing the Code.³⁸

The cautionary note sounded by the HGC has recently been reinforced in the respected pages of the journal *Science*: 'increased medical predictive power ... represents a societal challenge in terms of medical insurance ... once powerful genetic diagnostic tests are in place, it will be hard to withstand pressure from the insurance lobby'.³⁹ It has also been observed that, in Britain, '[a]n employer may lawfully require a prospective employee to undergo genetic testing ... It is not unlawful to discriminate on the basis of the result of such tests'.⁴⁰ Such a notion, of 'lawful' discrimination, does not sit easily alongside the pronouncement of Prime Minister Tony Blair that '[w]e should attack discrimination in all its forms'.⁴¹ There is, apparently, a credibility gap between rhetoric and action in this area.

A EUGENETIC 'UNDERCLASS'?

Particularly within the academic area of social policy, the concept of an 'underclass' is contested. The basic suggestion made by supporters of the notion is of the presence of a sub-stratum of society which lacks adhesion to the societal whole. As a contested idea there is clearly no 'authoritative' definition, but the formulation of Charles Murray (who seeks to apply US thinking to the UK situation) will be used here as an example. Murray offers a tripartite diagnostic tool to detect the presence of an 'underclass' within a given societal context. The legs of his tripod are 'illegitimacy', 'crime' and 'unemployment'.⁴² Noticeably, these three phenomena have all been linked by past eugenicists as indicative of a 'dysgenic class', and people contributing to one or the other have often been labeled with the shorthand description 'feble-minded'.

There is no credible research which has in recent times sought to determine a genetic factor leading to the reluctance of mothers to enter into matrimony, although in earlier twentieth-century eugenic writing 'immorality', and hence 'illegitimacy', has often been said to be an attribute of the supposedly 'feble-minded'. The case of the remaining two-

thirds of Murray's tripod, both legs of which have attracted the attention of contemporary researchers in the area of genetics, is more clear-cut. Murray declares baldly that 'Work is at the Centre of Life' (original capitalisation).⁴³

The thrust of his argument here is that the act of working leads to societal cohesion as people form networks and relationships, gain skills, acquire self-esteem and become self-supporting. Withdrawal from the world of work, for Murray, means that the unemployed may become 'barbarians'. In similar manner, Parsons finds that nonemployment is both dysfunctional and dangerous to modern society.⁴⁴ The theme of access to employment as representing both a key human right and leading to full citizenship in modern society may also be found in the writings of T. H. Marshall: '[i]n the economic field the basic civil right is the right to work; ... [o]f paramount importance is the duty to work.'⁴⁵ Marshall is clear as to the nature of this compact between state and citizen: the one should facilitate work, the other perform it.

Blair, in his first public speech as British Prime Minister, adds a contemporary political dimension to the idea of work as cementing individual to societal collective. For him, 'people become detached not just from work, but also from citizenship in its wider sense'.⁴⁶ In this quote, Blair is not speaking of disabled people, nor does he mention anyone excluded from work by genetic considerations. His immediate context is a political imperative 'to tackle what we all know exists - an underclass of people cut off from societys (sic) mainstream, without any sense of shared purpose'. It is noticeable that Blair here seems to assume that the state of worklessness is an intrinsic attribute of his 'underclass', rather than some extrinsic imposition upon a sector of society. There are distinct echoes in his rhetoric of disparate strands of thought, ranging from the Thatcherite advice to the unemployed to 'get on your bike and find work', through the mid-century functionalism of the Parsonian school of thought to early twentieth-century eugenic notions of a genetically determined 'dysgenic class'.

The importance of work to, specifically, disabled people (or by extension, as is argued here, those with a 'suspect' genetic structure) may have escaped the early New Labour radar. This is not the case with those commentators approaching the topic from a different direction, that of disabled people themselves. Here there is full agreement, both with the suggestion that to be classed as 'unemployable' is to be forcibly 'cut off from society's mainstream', and that this leads to people becoming 'detached ... from citizenship'. The point is made forcefully by Paul Abberley, an influential voice within UK disability studies:

[w]ith less than one third of those in the relevant age group in employment in Britain today, for many disabled people the demand for access to work is seen as a crucial component of the struggle for equality. Both the British government and European programmes put entry to the workforce at the core of their strategies to combat social exclusion.⁴⁷

This theme was made explicit thirty years ago in the seminal document 'Fundamental Principles of Disability' published in 1976 by the Union of Physically Impaired Against Segregation [UPIAS].⁴⁸ Ready access to the world of work as a signifier of 'full' citizenship has become a cornerstone of British

disability studies and disability activism, a point made repeatedly within the literature. This has to some extent been recognised by the employment provisions of the 1995 Disability Discrimination Act.

What is problematic in the present context is the manner in which 'disability' has historically been constructed by British disability scholars (both the word and concept are used differently by USA commentators) and British domestic policy makers alike. Whether one adheres to a social or medical model of disability, present theory and practice tends to presuppose an extant 'impairment' which has concrete and current effects. For example in the UPIAS document cited above, '[d]isability is something imposed *on top of* our impairments ...'⁴⁹ (added emphasis).

Hence 'disability' cannot exist without some 'impairment' upon which it may be situated. In like fashion, the British Disability Rights Commission [DRC] declares that: '[a] person has a disability (sic) if he (sic) has a physical or mental impairment, which has a substantial and long-term adverse effect on his ability to carry out normal day-to-day activities.'⁵⁰ Meanwhile, the medical (or individual, or individual medical) model approach is largely based on 'incapacity' or 'ill-health'. Here again, the presence of an extant impairment is a necessary precursor to disablement.

With their assumptions of an 'impairment' which is either 'physical', affects someone's 'ability to carry out ... activities' or 'causes continuing health problems', it appears that none of these constructions of 'disability' would readily apply to someone whose genetic endowment was indicative of some potential future impairment. The DRC is explicit on this point: '[i]f a genetic condition has no effect on ability to carry out normal day-to-day activities, the person is not covered [by the Disability Discrimination Act]'.⁵¹ It follows from this that, in the UK, it is not unlawful to discriminate directly against someone who has been found to have a genetic predisposition towards developing some future impairment. There is nothing in law to prevent the estrangement from the world of work of someone who is, as it were, *genetically impaired*. Meanwhile the theoretical approach which is widespread within, and arguably fundamental to, disability studies does not obviously cater for this situation. The potential is here for a new but not yet fully theorised societal phenomenon: *genetic disablement*.

Returning to Murray and to the final leg of the 'tripod' of a supposed 'underclass': behaviour, and more precisely criminality. He is in no doubt that 'the habitual criminal is the classic member of an underclass' and in particular expresses concern about 'violent crime' and 'drug abuse'.⁵² Revisiting these themes four years later, Murray speaks of 'crime' and 'widespread drug and alcohol addiction' as factors which pose serious dangers for society.⁵³ Fears of innate criminality are a familiar part of the eugenic mindset. As early as 1876 (and thus before the founding of modern eugenics) the 'scientific' die was cast by Lombroso, who confidently identified a sub-species of humankind: the born criminal, or *Homo delinquens*.⁵⁴ The mode of thinking represented by Lombroso's 'discovery' was, from the start, a cornerstone of the eugenic theory of a 'degenerate' subset of modern society. By the late nineteenth century in the USA, 'leading social progressives ... saw crime and

poverty as inherited defects ... [and this] created a fertile reception for the infant field of eugenics'.⁵⁵

In more contemporary times the search for a hereditary causation of human 'immorality', criminality and behaviour more generally has regained 'scientific' status as the province of a recent sub-division of human genetics: behavioural genetics. The association of genetic endowment with criminality is emotive, but given that 'nearly all behavio[u]rs that have been studied show moderate to high heritability - usually, to a somewhat greater degree than do many common physical diseases',⁵⁶ this is an avenue of research which is likely to become increasingly well-travelled.

As discussed briefly above, A. L. Caplan discusses the case of a foetus which, having been tested for (and 'cleared' of) Downs Syndrome was incidentally found to have an abnormal chromosome structure of XYY as against the 'normal' XY or XX. Later, 'in counsel[ing] sessions' the parents were informed that 'a few researchers' had speculated upon a possible 'connection between criminality' and XYY syndrome. The proto-person was destroyed on the grounds of nothing more than a vague suspicion of a possible genetic predisposition to 'criminality'. This leads Caplan to raise the questions: '[i]s XYY syndrome a disease? If not, why were the parents told that it had been detected? And if it is, is it a disease which merits aborting ...?'⁵⁷ The thrust of Caplan's argument is that genetic testing is in reality not so much a test for 'disease' as a search for 'abnormality'. The immediate lesson may appear to be that a detected abnormality is very likely to be construed as a 'defect', and a 'defective' foetus may well be at risk of being aborted. At the very least genetic testing opens the door to identifying suspected proto-criminals and potential 'deviants'.

Certainly not all 'deviant' behaviour is criminal per se, but McGuffin et al identify Attention Deficit Hyperactivity Disorder [ADHD] and the rather vague trait of 'aggression' as two of the topics being studied by behavioural geneticists.⁵⁸ In the UK, ADHD is widely perceived as a medical condition possibly leading to unruly and arguably antisocial behaviour. There are 'an estimated six to eight percent of [UK] children' said to be subject to ADHD, with 'the families of 42,500 children' in receipt of Disability Living Allowance [and thus ADHD is officially an 'impairment'] on behalf of their 'affected' children.⁵⁹ The genetic component of ADHD has been traced to 'three contributory loci', which suggests that genetic testing is likely to prove diagnostic for this condition.⁶⁰

In the context of a particular family with a history of male criminality including attempted rape, assault and arson, it has been reported that 'Molecular Genetics techniques have identified a possible culprit gene'.⁶¹ This report does not claim that the gene has been definitively proven to be the culprit, but clearly it is a strong contender. In this particular case of 'aggression', as in haemophilia, the 'suspect' gene is carried by females but expressed in males. This raises the ethical issue of whether society should seek to prevent the birth of a female foetus who would herself display no 'deviant' traits, but whose son(s) may pose serious threats to society. It has

already been observed within the human genetics literature that, '[i]f ... determination of the sex of the fetus (sic) were performed in all pregnancies fathered by hemophilic (sic) males and every female fetus aborted, then the frequency of the hemophilia (sic) gene would be reduced'.⁶² Given the readily observed utilitarian approach of eugenics in general, one likely response to an identified 'aggressive' gene of this type may be assumed to be 'abort the female'.

Both Murray and Blair express the fear that substance addiction is disruptive to society and claim that its prevalence is indicative of an 'underclass'. In this they are, consciously or not, repeating the concerns of many eugenicists throughout the twentieth century. The current behavioural genetics position is that, although specific causative genes or combinations thereof remain to be identified, 'studies indicate that 40-60% of an individual's risk for an addiction, whether it is to alcohol, opiates or cocaine, is genetic ... A major focus of current research is to explore the ... influence of genetic factors'.⁶³ With around a fifty percent chance of an inherited predisposition to addiction, this seems rather more definitive than the very vague suspicions reported above by Caplan relating to XYY syndrome which led there to abortion.

Given the huge impetus of the Human Genome Project and associated advances in technology and technique, it is reasonable to suggest that the identification of causative, or at the very least suspicious, genes and genetic markers related to addiction will not be long delayed. Indeed, although press reports merit caution, it has already been claimed that '[i]f you cannot say no to that one last drink, or to the biggest piece of chocolate cake ... it may just be in your genes'.⁶⁴ The article continues to identify the 'crucial' gene, DRD2, which is reportedly linked not so much to addiction as to susceptibility to peer pressures. Certainly there are many academic voices raised against 'genetic reductionism', but in policy terms it is often the case that public perceptions carry as much, if not more, weight as do 'scientific facts'. In some regards, this idea of the possible role of DRD2 in determining behaviours approaches earlier eugenic notions of the 'feeble-minded'⁶⁵ person who is at risk of becoming a 'social problem'. Thus the wheel is seen to have turned full circle.

There is a group of people (labelled 'disabled') who exist at the fringes of society, but are denied full access to its benefits and responsibilities. In times past, their position was attributed to an innate inability to 'meet the standard' of modern society: today they are, it seems, 'genetically unfit' to be full citizens. They are to all intents and purposes a genetic underclass found beneath, and detached from, contemporary British society. This, it is claimed here, is evidence of *eugenics* in action.

Footnotes

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- ⁵ Website of the Galton Institute. <http://www.galtoninstitute.org.uk/> (accessed 06/08/06).
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- ⁸ James Watson, *A Passion for DNA Genes, genomes and Society* Oxford, University Press, 2000, p224.
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- ¹⁷ (UK) Department of Health, op cit., p42 para. 3.29).
- ¹⁸ Ibid., p30 para. 3.33.
- ¹⁹ Alison Davis, *A Disabled Person's Perspective on Pre-Natal Screening*, cited here from an unpaginated electronic source at <http://www.leeds.ac.uk/disability-studies/archiveuk/index.html> (accessed 29/08/06). It is necessary to follow the index 'Davis, Alison' and select the title to access the text.
- ²⁰ See, e.g., Jenny Morris *Pride Against Prejudice*, London, The Women's Press, 1991, p 72.
- ²¹ See, e.g., Ruth Hubbard, 'Abortion and Disability' in L J Davis (ed), *The Disability Studies Reader*, London, Routledge, 1997, pp190 et seq.
- ²² Alison Davis, op cit., 1999.
- ²³ British Council of Disabled People [BCODP] *The new genetics and disabled people*, subsection 'The official position statement on the new genetics' <http://www.bcodp.org.uk/about/genetics.shtml> (accessed 29/08/06).
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- ⁴⁷ Paul Abberley, *The Significance of Work for the Citizenship of Disabled People*, a paper presented at University College Dublin, 15 April 1999, p11. Full text available at <http://www.leeds.ac.uk/disabilitystudies/archiveuk/index.html> (accessed 29/08/06). It is necessary to follow the index 'Abberley, Paul' and select the title to access the text.
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