

A class apart

***The social stratification of HIV infection
among homosexually active men***

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Briefing Paper

Preface

Sigma Research's *CHAPS R&D Briefing Papers* aim to provide a focussed research briefing in a particular area of interest to people engaged in HIV health promotion.

This paper grew out of the finding from the *National Gay Men's Sex Survey 1997* (Hickson, Reid *et al.*, 1998) that men with no formal educational qualifications were two and half times more likely to have been diagnosed with HIV infection (10.4% had been) than men with a university degree (4.2%). This observed difference may arise for a wide variety of reasons. The aim of this paper is to clarify, separate and consider these reasons, in order to facilitate constructive responses in programme planning to this 'inequality in infection'.

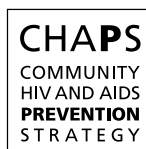
Sigma Research endeavours to facilitate HIV health promotion thorough the dissemination of research findings in clear, accurate and credible documents. Towards this end, we are assisted by many individuals who are willing to read earlier, wordier and usually more tortuous drafts of papers such as these. Earlier drafts of this paper have benefited from the attention of: Richard Scholey and Will Nutland (Terrence Higgins Trust, London), Berkeley Burchell (Aled Richards Trust, Bristol), Michael Bochow (Intersofia, Berlin) and David Reid and Laurie Henderson (at Sigma Research). Thanks, as always to these readers and commentators.

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1 Introduction

1.1 CLASS CONCEPTS

Perhaps the best place to start a discussion of class in Britain is where class certainties remain firm: the films of Gracie Fields (or any of those British films of the 1930s and 1940s). Our ideas about class are rooted in a pre-war Britain, shot in black and white, where class differences are real and simple. Birth confers class status and class identity as certainly as it confers hair colour and name. They can be changed by hard work or subterfuge, but any change is cosmetic.

Class conflict is often a major part, if not the mainspring of the films' action. The 'message' of the films is usually that as long as everyone keeps their place and co-operates, all will be well. Without belabouring the point, Gracie Fields is able to resolve "t'trouble at t'mill" by seeking common cause with the mill owner's son (marrying him, of course) and making each 'side' understand the other better. In these films we 'read' class difference in any number of dichotomies: wealth vs poverty, suits vs overalls, BBC vs regional accents, mansions vs back-to-back housing, arrogance vs deference and so on. The point is that it takes no time for a viewer to 'place' a new character in their class.

These films may be at the back of our minds when we try to talk about class differences, or try to define our own class position. But a number of things have happened since the second world war to disrupt this apparently 'natural' situation. The traditional working class has been decimated. Whole industries have disappeared and the number of people employed in those that remain has sharply declined. Many communities now have at their heart a common experience of unemployment, rather than a common employment. At the same time, many new occupations have been created, in service industries and information systems, selling and the voluntary sector.

Since 1945, there has been a system of free, universal education in the UK that has eroded the class system by opening up 'escape routes' for many working class children. Previously, only the very bright and the very lucky could use the education system to escape their class roots. Lastly, there has been an overall increase in affluence since the 1950s. Now, even the most traditional working class homes have amenities undreamt of before the war.

Add to these long term changes other broad social movements such as globalisation (one of whose effects is to export the dull, dirty, and dangerous jobs from rich to poorer countries); post-Fordism (which, sometimes, breaks down the separation between management and workers); the rise of the superstore and fast-food chains (that have wiped out a whole class of independent traders and substituted part-time, poorly paid shop work) and it is far from clear that a traditional 'class analysis' remains a useful exercise.

Although class is central to sociology and is widely used in other social sciences and in marketing, it remains a very poorly defined concept. Its most famous advocate is Marx who wrote of two main classes: 'capitalists' (who owned the means of production: factories, workshops, mills) and the 'proletariat' (who had nothing but their labour to sell). This definition of class is economic. As far as Marx and Marxists are concerned, all the other markers of class are distractions from this basic 'truth'. The exploitation of the workers by the capitalist is the fundamental injustice in society. Thus, Marx proposed that the 'proletariat' or working class will come to realise their

oppression, rise in revolution and set up a workers' state. Famously, the working class will develop 'class consciousness': recognise the basic fact of their oppression, organise and revolt.

Somewhat later, the German sociologist Weber modified Marx's ideas. He defined classes as social groups who shared a common 'market relationship'. In other words, an individual belongs to a class of people who do jobs similar to themselves. Thus, in the Weberian system, it makes sense to talk about the managerial class, or the professional class. In other words they are groupings of people with similar education, lifestyle, job security etc. This rather more subtle definition is more able to deal with the complexities of twentieth century society than the simple, if beguiling, Marxist system and forms the basis of the British classification of occupations.

1.2 CLASS IN BRITISH STATISTICS

At present the British Government is in the process of changing the way it defines the class categories used in national statistics. Until recently, a fascinating publication called *The Classification and Dictionary of Occupational Titles* was used to sort every job title in the country into one of six main categories (see box) or Socio-Economic Groups, rather like Weberian classes.

The Registrar-General's System of Occupational Classification (The British Class System)		
	Occupational Class	Example
Middle class	I: Professional	Judges, Doctors, Lawyers
	II: Intermediate Non-Manual	Teachers, most Managers, Senior Administrators.
	IIIN: Skilled Non-Manual	Clerks, Shop Assistants, Outreach Workers.
Working class	IIIM: Skilled Manual	Bricklayers, Bus drivers
	IV: Semi-skilled manual	Bus conductors, Postpersons
	V: Unskilled Manual	Porters, Cleaners, Labourers

These groups are further divided into two 'classes': middle class (groups I, II, IIIN) and working class (IIIM, IV and V). The split is supposed to distinguish between 'manual' and 'non manual', or, in other words, between white- and blue-collar occupations. The same classification, but with the groups labelled A, B, C1, C2, D and E are used in marketing, advertising and opinion polling.

There are, of course, many anomalies, and there are major problems with the whole business (see for example, Davies *et al.*, 1986) but the sense is simple and straightforward. As far as this approach is concerned an individual's class status is entirely fixed by their job. (People who are out of work take the class position of their last job, but those who have never worked are a problem and, notoriously, non-working wives are assumed to take the class position of their husbands.)

That is, briefly, the current picture as far as the state is concerned. However, it has recently been agreed that a new social classification will replace the current government classifications from 2001 (see Rose & O'Reilly, 1998). Called the National Statistics Socio-Economic Classification (NS-SEC), all official government statistics (including the census) will use the new classification from 2001. The classification has seven major classes, the first of which can be subdivided:

- 1 Higher managerial and professional occupations
 - 1.1 Employers and managers in larger organisations
 - 1.2 Higher professionals
- 2 Lower managerial and professional occupations
- 3 Intermediate occupations
- 4 Small employers and own account workers
- 5 Lower supervisory, craft and related occupations
- 6 Semi-routine occupations
- 7 Routine occupations.

An additional category (8) will usually be added to cover those who have never had paid work and the long-term unemployed or others who cannot be classified on the basis of occupation.

This classification is based on employment conditions and relations, which are now considered central to describing the socio-economic structure of modern society. Functionally, the new classification is very similar to the one it replaces, since it requires the same information about occupation and employment status which are combined to allocate individuals to classes. However, the basis on which the combinations of occupations and employment status details are assigned to the classes is quite different. The primary classification is on the basis of employment status: employer, self-employed or employee. The occupations of employees are then further divided by the nature of their typical employment terms and conditions and their future prospects.

1.3 THE END OF CLASS?

Marx was wrong, of course – at least so far. The class revolution has never taken place. The working class has never come to recognise its own oppression and wrest control of the means of production from the capitalists – although the Labour Government of 1945–1951 made some efforts to do this. Rather, in the late twentieth century a number of different ‘revolutions’ took place. Since the 1950s, a wave of ‘social movements’ moved attention away from class as the prime marker of inequality in Britain and focussed instead on other sources of inequality. The youth movement of the late 1950s, black liberation and women’s liberation in the 1960s, and gay liberation in the 1970s were all attempts by some oppressed group to assert their own value in the face of inequality.

Like the black and the women’s liberation movements that preceded it, the beginnings of gay liberation were heavily influenced by Marxist ideas, especially those of the 1960s (the so-called New Left) which focussed Marxist concerns away from its economic pre-occupation and towards culture and the ways in which inequality is produced and reproduced in everyday life. Thus, these movements shied away from the idea of revolution to free the working class and focussed instead on the ways in which individuals spoke, acted and interacted with each other to ensure that some groups retained their superiority over others. Thus, in the phrase of the time, the ‘personal became political’.

Whilst the axes along which inequality is analysed have fractured, the economic inequality pointed out by Marx has not been eradicated or replaced. In contemporary Britain, despite John Major’s famous claim of ‘classless society’, the population can be organised and layered (or stratified) along the lines of those who have, and those who do not. This notion of ‘class’ is more of a gradient than the two camps proposed by Marx and the distribution of the population along

it has certainly changed since his time. It may now be unhelpful to use class terms to describe this inequality. However, most of us still do (or can) make generalised assessments about where the people we know, meet and observe sit on this axis and many people still have a sense of their own and others' class. The job a person does and, correspondingly, their income and wealth, are important, but so are accent, upbringing, education, interests, residence, and social network.

1.4 CLASS AND ILLNESS

Most people now accept that there is a link between class (or social status) and illness. The most comprehensive recent study in Britain was that published as 'The Black Report' (Townsend & Davidson, 1982). The report reviews data from a range of studies that all show class effects for a range of diseases and conditions:

"Most recent data show marked differences in mortality rates between the occupational classes, for both sexes and at all ages. At birth and in the first few months of life, twice as many babies of the 'unskilled manual' parents (class V) die as do babies of professional class parents (class I). In the next eleven months, four times as many girls and five times as many boys. In later childhood, the ratio of deaths in class V to class I falls to 1.5 to 2.0, but increases again in early adult life. ... Available data on chronic sickness tend to parallel those on mortality. Thus, self-reported rates of long-standing illness ... are twice as high among unskilled manual males and 2½ times as high among their wives as among the professional classes." (p. 206)

The conclusion of the report is that people in the 'higher' classes live longer and suffer less illness than those in the 'lower' classes. But, even having accepted this (and the Conservative Government to whom the Report was submitted most definitely did not), the real question remains to be answered: why is this the case? We generally seek to make sense of these findings by comparing the very rich and very poor (as does the above quote), but this is not the only comparison. Mortality (the incidence of death) and much morbidity (the prevalence of illness) have class gradients: people in class I do better than those in class II, who in turn do better than those in class III, and so on. A number of general explanations for class gradients in illness have been put forward which are worth reviewing before turning to HIV. As different diseases have different causes, we should not expect all explanations to be equally applicable for any particular illness (including HIV).

Occupational hazards

It is undeniable that some occupations carry higher risk of injury or death than others. Deep sea diving is more hazardous than librarianship, coal mining than nursing, manual steel work than advertising. It is also true that the manual and unskilled occupations are probably, on the whole, the more dangerous per se. On the other hand, predominantly sedentary, non-manual jobs also carry health risks, albeit of a different kind.

Poverty and income

There can be no doubt that wealth can remove health hazards which those in poverty are less able to avoid, through a variety of mechanisms such as better housing and diet etc.

Social Selection

Some argue that the greater incidence of ill-health in the lower classes is a result of natural selection. People who are born 'sickly' or prone to ill-health find themselves doing less well at school, less well in work and drifting towards the 'lower end' of the employment market. While this has some plausibility, it fails as a comprehensive explanation because of the profound

structural inequalities that undoubtedly exist, particularly, the way in which class is, so to speak, inherited from generation to generation. The poor are drawn, almost exclusively, from the working classes. By far the best clue to a person's class status, despite all the changes that we have noted above, remains the class of their parents.

Education

There is a strong link between (formal) education and social class and some suggest that health inequalities arise from the fact that the working classes simply do not have access to, and comprehension of, the link between certain behaviours (eg. smoking) and illness. While it may be the case that many working class people are distanced from the fads of food and exercise that infest the magazines of the affluent, there is no evidence to suggest that common sense is highly correlated with education.

Class is not, of course, the only source of inequality in Britain, nor the only correlate with illness. *The Black Report* considered also the effects of gender, region, race and ethnicity as well as housing tenure and conclude that these factors have their own effects, separate from – and sometimes contradictory to – class effects.

2 Class and sex between men

2.1 THE NATIONAL STUDY OF SEXUAL ATTITUDES & LIFESTYLES

The National Study of Sexual Attitudes & Lifestyles (NSSAL, Johnson *et al.*, 1994) interviewed over 8,000 men, broadly representative of men aged 16 to 59 in England, Scotland and Wales. NSSAL data is reviewed in the following since it is one of the few UK studies to report findings across both social class (current occupation) and educational qualification. Before turning to sex between men, the first table reports three variables concerned with sex with women. The following section then reports three variables concerned with sex with men.

Heterosexual behaviours

More men currently occupying lower occupations (and more of those with lower education) had vaginal intercourse before the age of heterosexual consent. Why this may be the case cannot be deduced from these data. However, further analysis by NSSAL which attempts to tease out the contributions of 'class' (current occupation) and educational attainment on whether men had vaginal intercourse by the age of 16 suggested education to that age (attaining O-levels) was particularly important (Johnson *et al.*, 1994, p.82).

Men in the lower occupation groups reported more female partners in the last five years than did men in the higher groups. However, the median number of female partners in the last five years was one for all groups and the authors point out the relationship between occupation and numbers of partners is relatively weak. Also, the pattern is not the same across the education groups: men in the middle occupation groups reported the highest mean number of female partners.

Condom use for last vaginal intercourse is more common among men with higher education. This pattern for condom use was not evident in occupational classes, showing no clear and unequivocal relationship between condom use and occupation.

Heterosexual behaviours by occupation & education	Entire sample (men)	Social class (current occupation) Johnson <i>et al.</i> (1994)						Highest education qualification Johnson <i>et al.</i> (1994)			
		V	IV	III M	III N	II	I	None	O-level	A-level	Degree
% under 16 yrs at first vaginal intercourse	18.7	27.7	24.2	25.3	17.0	15.0	5.9	24.5	22.5	15.8	7.0
Mean number of female partners in the last 5 years	2.6	3.4	3.2	2.8	2.4	2.2	2.1	2.2	2.7	2.8	2.2
% condom use last vaginal int.	23.2	22.6	23.9	21.6	22.1	20.9	24.0	15.5	23.9	25.9	27.9

Homosexual behaviours

The following table gives three NSSAL measures related to sex between men, across the occupation and education groups.

Homosexual behaviours by occupation & education	Entire sample (men)	Social class (current occupation) Johnson <i>et al.</i> (1994)						Highest education qualification Johnson <i>et al.</i> (1994)			
		V	IV	III M	III N	II	I	None	O-level	A-level	Degree
% consider sex between men 'Not at all wrong'	29.8	17.3	24.5	20.4	27.4	37.6	44.2	16.3	25.4	33.4	56.8
% had 3+ male partners ever	1.4	0.2	1.7	0.5	1.3	2.0	3.4	0.4	1.1	1.4	3.8
% had male partner in the last 5 years	1.4	0.2	2.2	0.7	1.4	1.6	2.7	0.6	1.4	1.3	3.4

Men were asked to indicate an opinion about sex between men and women under five relationship conditions and their general opinion about sex between men and sex between women (p.409). All questions used the following scale: always wrong; mostly wrong; sometimes wrong; rarely wrong or not at all wrong. Respondents could also indicate they did not know, or that 'it depends'. Note that the mid-point of this attitudinal scale is 'sometimes wrong'.

Bearing this in mind, there are striking differences in attitude towards sex between men across both occupation and education groups. Among men with degrees, more than half did not consider sex between men 'to be wrong', but this decreased step-wise across the education groups to 16.3% of men with no educational qualifications. Current occupation shows a similar pattern, with increasing disapproval as we go down the occupational ladder and this should be borne in mind when considering self-reports of homosexual behaviour. There is, however, a 'bump' of lower approval, among skilled-manual workers, than a stepwise pattern would suggest. This may account for (and be self-sustaining with) the pattern of lower reports of homosexual activity among this group.

In NSSAL, homosexual behaviour is mainly reported independently of heterosexual behaviour. Overall 1.4% of men indicated a male partner in the last five years. Far more men (8.1%) indicated no sexual partners than did a male partner. Over half (0.8%) of those who did report a male partner also reported a female partner in the same time period. But the proportion of homosexually active men in each education and occupation group who were also heterosexually active is not reported. NSSAL only asked men about who they were attracted to and what they did sexually: the survey did not ask about men how they thought about or described themselves sexually. Hence we do not know what proportion of these homosexually active men think of themselves as gay.

Having ever had sex with three or more men, was most common among men with degrees and least common among men with no educational qualifications. Occupation, however, is not so neat a pattern. Although men in occupational class I and then II are most likely to be homosexually active, the pattern among other groups is less clear.

Comment

Comparisons of previous NSSAL measures across the occupation and education groups suggest that there is not a single organising principle (class) underlying the occupation and educational differences in sexual behaviour and associated measures. Class, like ethnicity, is a relative and composite category system, whose elements may have different impacts on different outcomes. If we wish to understand these impacts, we will need to consider them separately as well as together.

It may be the case that homosexual desire and social exclusion operate in different ways in different 'classes'. The occupational 'bumps' may reflect avoidance by homosexually active men of the traditionally male only occupations in class IIIM (skilled manual), and who instead enter occupations in classes IIIN (skilled non-manual) but especially class IV (semi-skilled manual). Growing up gay in middle-class families may isolate boys from groups and games, and encourage pursuit of available intellectual and cultural pastimes, including studying and education. Those boys who would not normally be expected to pursue further education because of their working class background, are also excluded from training for manual occupations by the culture of homophobia those occupations maintain, and the available alternatives are less extensive than for those in a middle-class environment. In conjunction with patterns of social networks, this could mean male homosexual desire coincides with social advancement in the middle classes and increasing disadvantage among the working classes.

2.2 EXCLUSIVE HOMOSEXUALITY AND BEHAVIOURAL BISEXUALITY: GAY MEN AND NOT-GAY MEN

Historically, the gay community and 'scene' developed alongside a homosexual sub-culture that had existed for decades, probably centuries. This clandestine, loose arrangement of cruising grounds, informal associations of men, secretive circles of friends and acquaintances has never gone away. This earlier arrangement was the source of much concern to contemporary society, not only because it struck at the heart of the patriarchal family, but also because it threatened the class system. It was clear at the trials of both Oscar Wilde in the 1890s and Peter Wildeblood in the 1950s (Wildeblood, 1955) that their homosexual activity was considered not only gender inappropriate, but also as a threat to the class system because they had sex with working class men.

In retrospect, the gay community that emerged in the 1970s was a middle-class, even an intellectual affair, despite its pretensions to a revolutionary role (see for example, Weeks 1990, p.198). People with more education were also more able to formulate and articulate the political ideas involved in the early stages. Many were in occupations where being gay was less of a concern than the traditionally macho working-class jobs. Being middle class meant that they were more likely to be able to move away from home to take up a job, so becoming able to create a gay 'lifestyle' away from parents and family.

One feature of the gay life-style was and is the (assumed) absence of sex with women. However, studies suggest that less than half of men who identify as gay have been exclusively homosexual throughout their lifetimes (Fitzpatrick *et al.*, 1989; Bennett *et al.*, 1989; Weatherburn *et al.*, 1990), and up to 10% are behaviourally bisexual in any given year (Bell & Weinberg, 1978; DHSS, 1987; McManus & McEvoy, 1987). Whilst there is no straightforward relationship between sexual identity and sexual behaviour, the vast majority of exclusively homosexually active men are probably gay (or bisexual), and the majority of behaviourally bisexual men are certainly not gay, and may not identify as bisexual. Indeed, there is now substantial evidence that many men

who regularly have sex with men, do so without ever adopting a gay or even a bisexual identity (Myers *et al.*, 1993; Weatherburn & Davies, 1994; Weatherburn & Reid, 1995; Weatherburn *et al.*, 1996; Crawford *et al.*, 1996).

The point is that the development of a gay identity is a secondary socialisation process which follows entry into a gay social scene and entry to that gay social scene is differentially available to middle class and better educated men. Australian studies (Connell *et al.*, 1991; Dowsett *et al.*, 1992; Connell, 1993) in particular have consistently found such class differences among homosexually active men, and have noted that many working class homosexually active men, outside the main gay centres in that country, retain a form of socialising and sex that may be more akin to pre-gay homosexual sub-culture.

In the following we concentrate on the effects of occupation and education (as components of class) on HIV prevalence, then on the ongoing likelihood of HIV exposure and transmission, and finally on HIV health promotion needs. These debates pertain mainly to gay men, who form the vast majority (about 95%) of the samples.

3 Education differences in diagnosed HIV infection among gay men: testing, mortality or incidence?

HIV, viewed globally, disproportionately affects poorer people (Kreuger *et al.*, 1990; Aggleton *et al.*, 1994) as do all infectious diseases. The reasons for this are complex and multiple and concern the differences between countries as well as the differences between people within them. However, as noted above, within countries many if not most diseases are more common among those at the lower end of the socio-economic scale. To an extent it would be surprising if this *were not the case* for HIV infection and homosexually active men.

The first large scale observation of this relationship in England was in the 1997 *National Gay Men's Sex Survey* (Hickson *et al.*, 1998). This survey showed a significant relationship between men's highest educational qualifications and their HIV testing history: the proportion tested positive declines markedly as education level increases. So, for example, 10.4% of those with no formal qualifications had tested positive, compared to 4.2% of men with a degree, and there was a predictable pattern in between. This step-wise pattern across the education groups was replicated in the sub-samples of men living in different cities in England. Similar studies in France and Germany had earlier shown a similar relationship between 'class' (a composite of education and occupation) and levels of diagnosed HIV infection (Bochow, 1998).

3.1 IS DIAGNOSED INFECTION HIGHER BECAUSE DIAGNOSIS IS HIGHER?

The first possibility to consider is that the observed difference in diagnosed infection is a result of HIV testing patterns and not underlying rates of HIV infection. That is, we would observe the same difference if the groups had the same actual prevalence, but infected men with less education were more likely to have had their infection diagnosed than infected men with higher education. This may arise because HIV testing is simply more widespread, or because infected men with higher education are more likely to decide to delay diagnosis than men with less education. This hypothesis is given some support by French research which found higher education to be significantly and positively associated with delayed diagnosis of HIV infection among gay men in Paris and Bordeaux (Coutrier *et al.*, 1998). If this is correct, then undiagnosed HIV infection would be more common among men with higher education than among those with lower education.

However, an education difference in ever having had an HIV test was not, observed among 4,207 homosexually active men in the 1997 *National Gay Men's Sex Survey* (Hickson *et al.*, 1998). Overall, 42% of men had never tested and this did not significantly vary across the education groups. We take this to suggest that, in England and Wales at least, the observed difference in diagnosed infection is a reflection of differences in actual prevalence of infection, and not simply the extent of diagnoses.

3.2 IS PREVALENCE HIGHER BECAUSE MORTALITY IS LOWER?

The proportion of people with any infectious disease (ie. it's prevalence) varies as people become newly infected and as others are cured, or die. As HIV infection is incurable, the prevalence of infection goes down only as people die. Hence we would observe a higher HIV prevalence in one group compared to another (1) if the first group has a higher incidence (the rate at which people are becoming infected) or (2) if the second group has a higher mortality (the rate at which people die) among people with HIV.

As diagnoses of infection is the gateway to clinical management and care, delayed diagnosis is associated with higher mortality. If HIV infected men with higher education were diagnosed later compared to men with lower education, this might result in a higher mortality among them. This would result in a higher prevalence of infection among men with lower education, simply because they survive post-infection for longer. This, however, would be contrary to all other socio-economic patterns of illness, and seems unlikely.

3.3 IS PREVALENCE HIGHER BECAUSE INCIDENCE IS HIGHER?

This leads us to the possibility that men with lower education have a higher prevalence of HIV infection because they have a higher incidence of HIV infection. If this is the case, the above two factors influencing the prevalence of diagnosed infection (testing and mortality) may also have a bearing on prevalence, but be masked by differences in incidence. HIV incidence is a function both of the number of exposures occurring and the probability of transmission when infection does occur. A small number of exposures with a high probability of transmission could give rise to the same number of new infections as a large number of exposures with a small probability of transmission.

Men with lower education could have a higher incidence because more of them are exposed to HIV, or those who are exposed are exposed more often. This would result in more of them sero-converting to HIV. If the same proportions of men with lower and higher education are being exposed to HIV, the same average number of times, more men with lower education would become infected if their exposures more often feature those factors which increase the probability of transmission. Of course, men with lower education could be involved in more exposures, and have a higher probability of transmission when exposures occur. This would obviously result in far more infections among this group. Exposure and transmission are now considered separately in the following two sections.

4 Occupation and education differences in involvement in sexual HIV exposure

An obvious explanation for the discrepancy in HIV infection is that men with lower education are more likely to be exposed to HIV infection during sex. Obviously, the relationship we are looking for here is one between education and sexual HIV exposure. This is not the same thing as unprotected anal intercourse (UAI), although many studies use UAI as a surrogate for exposure.

In a recent Australian paper (van de Ven *et al.*, 1997), there was no relationship between education and unprotected anal intercourse (UAI) with casual partners, but there was a relationship between occupational class and UAI. This relationship is difficult to interpret however, affirming the complexity of the relationship between class and sexual practice. UAI with casuals was more common among men with a white collar occupation or who were unemployed, compared to men with a professional/managerial role. American studies rarely report or investigate class effects, although ethnicity is often used as a surrogate for poverty (Navarro, 1990; Hickson, Reid & Weatherburn, 1997). Nevertheless, one study did find a direct link 'between lower income and unsafe sexual practices' (Doll *et al.*, 1991).

In this country, early work failed to find a relationship between UAI and class, education or income (Davies *et al.*, 1993; Fitzpatrick *et al.*, 1990). As was recognised at the time, the sample sizes may not have been large enough to detect any differences.

4.1 OCCUPATION AND UAI IN BIRMINGHAM

Hope and MacArthur (1998) surveyed 858 men with a self-completion form, recruited from multiple, predominantly gay, settings in the West Midlands (not all were commercial venues). Sexual behaviour in the last year was classified on the basis of answers to three questions about condom use (always / usually sometimes / never / not applicable) with three partner types (boyfriends / other regular partners / casual partners). Overall, 35% of men indicated they had UAI in the last year. Any UAI was further differentiated by 'UAI with one boyfriend only' or 'UAI with other-regular or casual', or 'UAI with more than one man'.

This survey used occupation as an indicator of class, and respondents were classified according to whether they were (1) not working, (2) working in (lower class) occupations IIIIM, IV or V, (3) working in (middle class) occupations I, II or IIIN, or (4) full time students (a third working category of 'unclassified due to missing data' is reported but not shown below).

All HIV testing histories Source: Hope & MacArthur, 1998	Not working N=131	V, IV or III m N=141	III n, II or I N=327	Student N=117
% had any Anal Intercourse (AI)	81	82	79	82
% had protected AI only	37	35	48	56
% any Unprotected AI (UAI)	44	47	31	26
% UAI with 1 boyfriend	16	19	16	10
% UAI with not-boyfriend or 2+ men	28	28	15	15

The first row of results show that the proportion of all four groups had anal intercourse (AI) was similar at 79-82%. The next two rows show how these men were divided between those who had AI only with condoms, and those who had any unprotected AI (UAI). More of the men who were not working or working in lower class occupations had UAI than students and men in higher occupations. The bottom two rows show how those who had UAI divide into those who did it with a single 'boyfriend' and those who did it with someone they indicated was not a boyfriend or did it with more than one man. The proportion who did so with more than one man is greater for those not working or working in lower class occupations.

This suggests that unemployed men and those in lower occupations are more likely to engage in UAI, and more likely to do so with multiple partners, compared to men in higher occupations and students. Why this is the case cannot be surmised from data like these. However, the authors do suggest it is not solely because of income as students have incomes more similar to the unemployed than men in higher occupations.

4.2 EDUCATION AND UAI IN ENGLAND

Hope and MacArthur's findings were supported and expanded on by The National Gay Men's Sex Survey 1997 (Hickson *et al.*, 1998). The following is unpublished data from that survey. All the sample had sex with another man in the last year. Since we are attempting to look for possible differences in exposure to HIV infection, the following considers only those men who had not tested HIV positive.

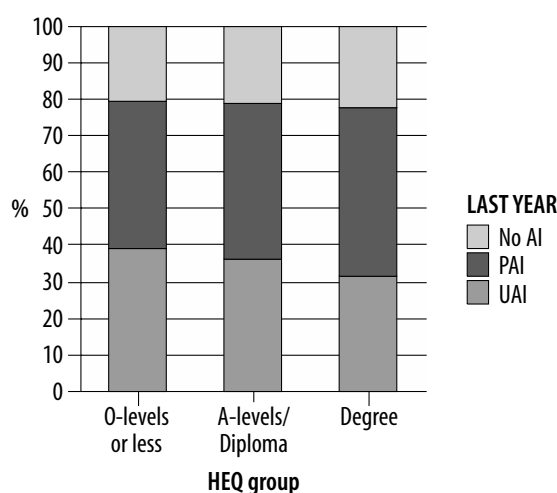


Figure 4.1: Proportions of men in each HEQ group having AI and UAI (N=3632 men who had not tested HIV positive, group n=926, 1201, 1505; GMSS '97)

There were significant differences across the three HEQ groups in the proportions who had UAI but not AI (Figure 4.1, $X^2=15.715$, $df=4$, $p<.05$). The proportion of men engaging in AI is the same across the three groups (79%, 79%, 78%) and is very similar to Hope & MacArthur (1998). The proportion who had UAI decreased with increasing HEQ (39%, 37%, 32%) although the range is not as wide as Hope and MacArthur's (26-47%).

UAI with regular and casual partners

Condom use for AI significantly varied by HEQ group with both regular (Fig 4.2, $X^2=17.216$, $df=6$, $p<.05$) and casual partners (Fig 4.3, $X^2=17.312$, $df=6$, $p<.05$).

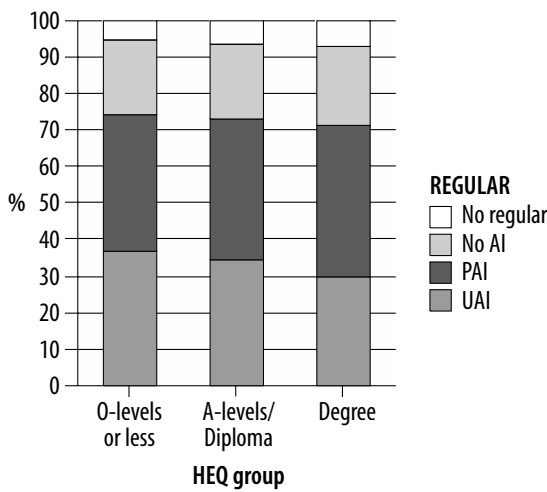


Figure 4.2: Regular partners, AI and UAI in each HEQ group (N=3614 men who had not tested HIV positive, group n=919, 1197, 1498; GMSS '97)

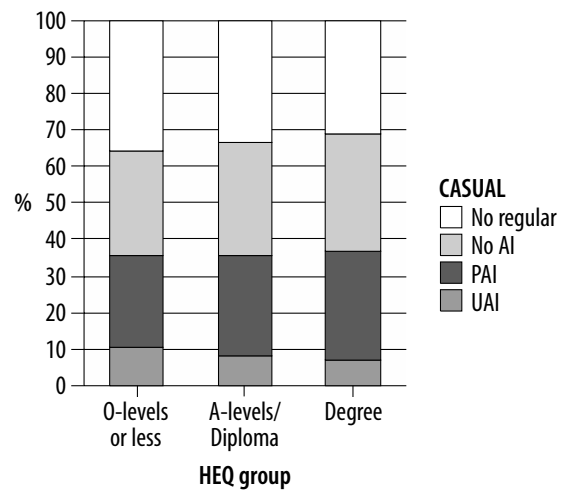


Figure 4.3: Casual partners, AI and UAI in each HEQ group (N=3592 men who had not tested HIV positive, group n=921, 1186, 1485; GMSS '97)

Having a regular sexual partner in the last year varied little across HEQ groups (95%, 94%, 93%), as did the proportion who had AI with them (78%, 78%, 77%). However, among those who had AI with a regular partner, the proportion who had UAI decreased with increasing education (50%, 47%, 42%). More men with higher education always used condoms with their regular partners.

The proportion of men who had a casual sexual partner in the last year increased with increasing education (65%, 67%, 69%). Slightly more men with higher education had casual sex.

However, among men who had casual partners, those with higher education were less likely to have anal intercourse with them. Moreover, when men with higher education had AI with casuals they were more likely to always use a condom.

With increasing education, casual sexual partners become more likely but UAI with them becomes less likely. This means that, despite being less likely to have casual sex, a higher proportion of men with O-levels or less had casual UAI (10%) than did men with degrees (7%), because men with O-levels or less were more likely to have AI and less likely to always use condoms when they did have casual sex.

All of the above data suggest that, among men who have not tested HIV positive, those with less education are more likely to engage in UAI than are men with higher education, both with their regular and casual partners. In the absence of any UAI partner selection on the basis of HIV status, this would support the hypothesis that men with lower education are more likely to be sexually exposed to HIV. However, we know that men's understanding of their HIV sero-concordancy with their partner influences whether or not they have UAI with that partner (Hickson, Weatherburn, Davies, 1997).

4.3 KNOWLEDGE OF HIV SERO-CONCORDANCY

Men who did have UAI were also asked whether they had done so with a man they knew at the time was HIV positive; with a man whose status they did not know at the time; and with a man who they knew at the time was negative. The pattern of a decreasing proportion of men engaging in UAI with increasing education was seen in both men whose last test was negative (see Figure 4.4), and those who had never tested (not shown).

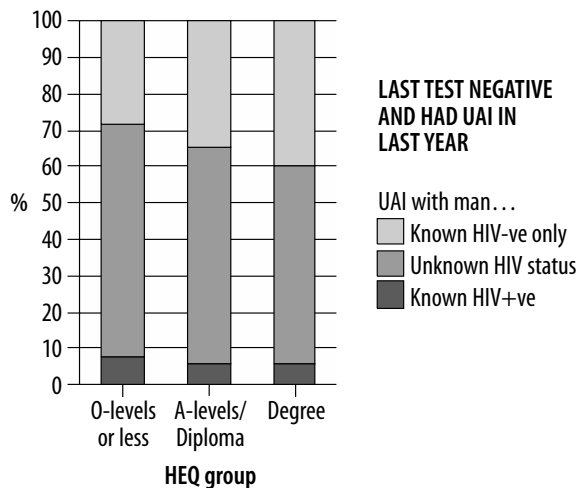


Figure 4.4: What men knew about the HIV status of their UAI partners, by education group (those whose last HIV test was negative and who had UAI in the last year) (GMSS '98)

Figure 4.4 represents those men whose last test was negative and who had UAI in the last year. The proportion who had UAI with a man they knew at the time had HIV positive was slightly higher among men in the lower education group (8%) compared with the other two groups (6% and 6%). More striking was the proportion who indicated they had UAI only with men they knew at the time to be HIV negative. Of the men in the lower education group, 28% did this, and the proportion increased to 35% in the middle group, and 40% of men with a degree. This suggests that, among those men who have UAI, those with higher education are much more likely to always be engaging in UAI with a strategic regard to the (likely) HIV status of their partner.

Hence, although men with higher education were overall less likely to have UAI, they were also more likely to only have UAI with men they 'knew' were HIV negative. Men with lower education were more likely to be engaging in UAI, and they were less likely to be doing so only with men they knew to be of the same HIV status (sero-concordant).

4.4 EDUCATION OR OCCUPATION?

The National Gay Men's Sex Survey 1997 (Hickson *et al.*, 1998) asked men their occupation as well as their education level, and classified them in a similar fashion to Hope and MacArthur (1998). Figure 4.5, below, shows the proportion of men who had UAI in the last year first for all the men then grouped by occupation or education. Each of the three occupation groups are sub-divided into the three education groups and vice versa.

Among men who were unemployed, there was no relationship between education and engagement in UAI. However, among men who were employed, UAI became significantly less likely with increasing education, for both working class and middle class men (by occupation).

Although employment was not statistically significant among groups sharing their education level, there was a trend for unemployment to be associated with UAI among men with A-levels or degrees. This figure suggests that, in terms of men's probability of being sexually exposed to HIV, (a) being employed or not is more important than education level, and (b) among men in employment, their education level is more important than the type of job they do (ie. whether it is a middle class or working class job).

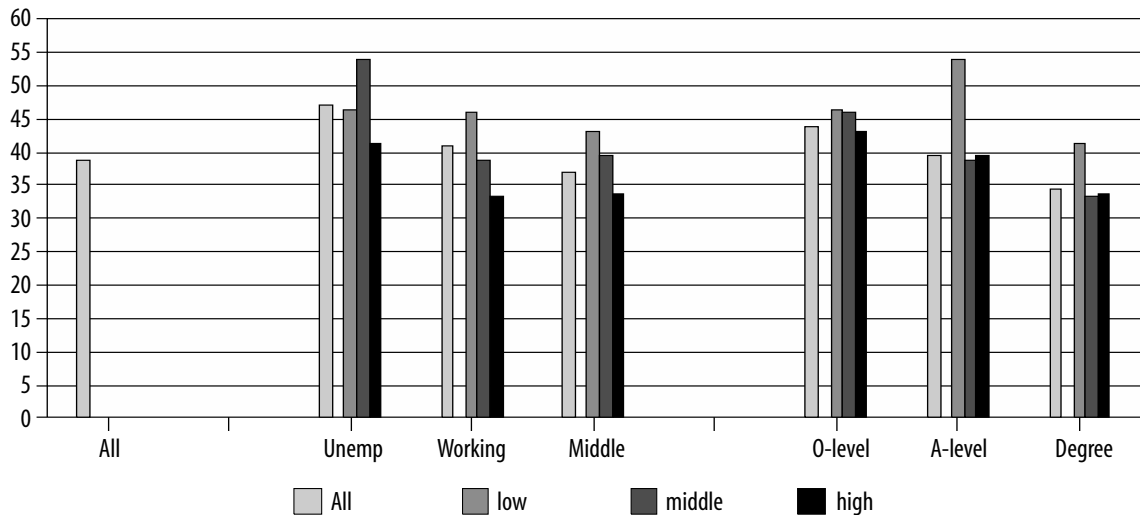


Figure 4.5: Proportion of men who had UAI in last year: the interaction of occupation and education.

Source: GMSS'98. Men who had sex with a man in the last year, were not in education and had not tested HIV positive. N=4532

4.5 CLASS, MOBILITY AND HIV PREVALENCE

There is considerable evidence (Johnson *et al.*, 1994) that in England, gay men are concentrated in urban centres, particularly London. The major reason for this appears to be inward migration. All other things being equal (and given the choice), a gay man may very well choose to move to a city, rather than remain in a rural area, smaller town or area of his birth. This desire is not confined to gay men, and is not the only reason sex between men is more prevalent in urban conurbations. However, it is clear that men with more educational qualifications, are more able to move in this way.

The major cities, particularly London, are also where rates of HIV infection are highest. HIV prevalence in an area is as pertinent to HIV incidence as sexual behaviour: exposure to HIV is more likely when UAI takes place between residents from areas with a high prevalence of HIV.

This gives rise to the situation where, at the National level, education confers both protection and risk. It facilitates men moving to high prevalence areas and thus increases the likelihood they will be exposed to HIV, whilst at the same time appears to increase the likelihood they will always use a condom when they have anal intercourse, or have UAI only with men they 'know' are HIV negative.

4.6 CONCLUSION

This contradictory effect makes it difficult, at a National level, to say whether men with higher or lower education are more likely to be involved in sexual HIV exposure. However, at all local levels it is clear that to increase their impact on HIV exposure, programmes should prioritise the needs of gay men with lower education, and in lower occupations, before those of men with higher education and/or in higher occupations. What these behavioural data cannot tell us is what those needs are.

5 Factors influencing the probability of transmission when exposure occurs

After considering whether men with less education are more likely to be exposed to HIV during sex than are men with higher education, it is worth briefly considering what happens when they are exposed. Is it possible that men with lower education are more likely to sero-convert to HIV when they are exposed compared to men with higher education? While we have very little evidence regarding factors influencing the probability of HIV transmission when exposure occurs, it is worth briefly reviewing the possible factors involved.

Speculatively, it may be that: men with less education are more likely to receptive rather than insertive during exposure; when they are receptive, more of their positive partner(s) ejaculate into them; they may be more susceptible to infection either through physical co-factors such as increased likelihood of prior anal trauma when receptive, increased likelihood of concurrent nitrate use when receptive or through the general state of their immune system. Equally, their positive partners may have higher viral loads than the positive partners of men with higher education. For some of these factors, there is no plausible explanation of how they could be related to lower education and for others, common sense suggests the opposite may be the case.

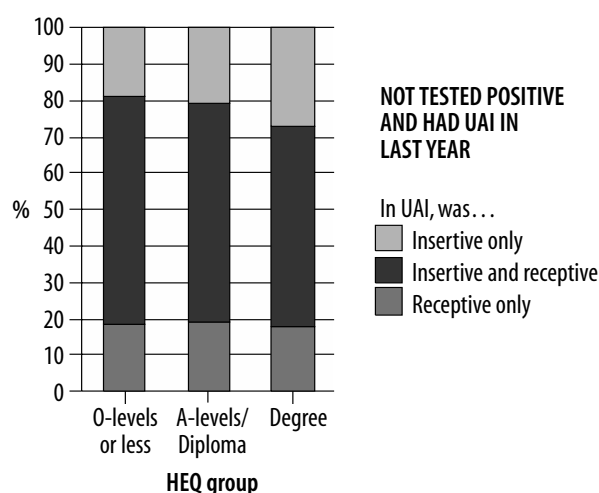


Figure 5.1: Modality of UAI among men (not tested HIV positive) who had UAI in the last year (GMSS '98)

There is some evidence that modality of UAI does vary by education. In GMSS'98, while the majority of all men who had UAI were both insertive and receptive, significantly more men with higher education were insertive only than were men with lower education. This difference in UAI modality may contribute to an increased HIV incidence among men with lower education.

This behavioural data cannot tell us why this is the case. However, men with higher education may be expected to be more likely to understand the biology of HIV transmission and be consequently less likely to risk receptive UAI but be as likely to risk insertive UAI.

6 HIV health promotion needs

There is growing evidence that, on a number of measures of knowledge, skills and abilities men with lower education are in greater HIV health promotion need compared to men with higher education. The following table of needs indicators comes from the *National Gay Men's Sex Surveys* in 1997 and 1998 (Hickson *et al.*, 1998 and 1999).

% in need by education by HIV Testing History	To O-levels	A-levels/ diploma	Degree
Raped in the last year	2.7	2.0	1.4
Finds it hard to say 'no' to unwanted sex	24.0	20.4	17.0
Finds it hard sticking to safer sex	25.4	15.8	16.1
Problem getting hold of condoms	8.2	7.0	5.5
Does not know:			
Men can have HIV without knowing it	5.0	2.6	1.3
There is no vaccine against HIV	11.0	6.2	3.8
Men can have Hepatitis A or B without knowing it	25.9	20.6	15.7
Vaccines against Hepatitis A & B exist	19.3	15.0	11.0
Men can have gonorrhoea without knowing it	40.2	34.8	30.1
Gonorrhoea is easily treated with antibiotics	23.1	18.8	14.7
Treatments for HIV infection have improved (GMSS '97)	38	33	29
Would like more information about: (GMSS '97)			
Hepatitis B	28	36	42
Fucking and HIV	29	23	19

All of the indicators of need significantly varied across the three education groups, and all decreased with increasing education. These data suggest that men with little formal education are a population group for whom many of the health promotion aims are poorly met and should thus constitute a priority group relative to men with higher education.

With regard to information, this pattern is reflected in what men indicated they would like more information about. While men with higher education were more likely to want to know more about Hepatitis, more men with lower education were still seeking information about the basic sexual act most likely to transmit HIV.

7 Use of clinics and other health promotion settings

One final consideration is whether men with a higher education are disproportionately exposed to HIV health promotion interventions because such interventions occur in settings where such men are disproportionately likely to gather. The following table gives the proportion of (not tested HIV positive) men who reported using each of eight health promotion settings in the last month. The data is from GMSS '98 (Hickson *et al.*, 1999)

Setting use in the last month p<.05 – shaded. Not Significant – not shaded.	Men not tested HIV positive	Employment (N=4934)			Highest Education Qualification (N=5837)		
		Unemployed	Lower Occ.	Higher Occ.	None/O-level	A-level	Degree
Gay pub/ club	94	90	94	95	92	95	95
Gay press	95	90	94	96	93	95	96
Gay sauna	22	17	20	24	21	21	23
Cottage OR Cruising area	29	35	28	29	31	27	29
Gay social group	23	29	21	23	21	25	26
GP	31	40	31	30	33	32	29
GUM clinic	13	17	12	13	14	13	13
Telephone Helpline	8	11	8	7	8	8	7

Use of all settings except telephone helplines varied significantly by employment. Men who were unemployed were less likely to frequent gay pubs and clubs and gay saunas. They were also less likely to see the gay press, which may be a consequence of reduced access to it, since pubs and clubs are the main points of distribution for the press.

Conversely, unemployed men were more likely to use cottages/cruising grounds and gay social groups. (As both saunas and pubs/clubs are common sources of sexual partners, men who do not use them may be more likely to use other potential sources, such as cottages/ cruising grounds.) Unemployed men were also significantly more likely to use their GP, GUM/ HIV clinics and telephone helplines.

Five of the settings outlined are used by similar proportions of respondents, irrespective of education – General Practitioners; cottages and cruising areas; gay saunas; GUM/ HIV clinics; and HIV (telephone) helplines. However, men with a lower HEQ are less likely to attend a gay social group, read the gay press, or go to a gay bar or club than men with a higher HEQ.

8 Implications for planning

Working class men probably form a lower percentage of gay men than of the male population as a whole. For the reasons we have touched on, fewer working class men are inclined to or able to come out as gay compared to middle class men. Many working class men have sex with men while retaining a heterosexual lifestyle, and actively avoiding a gay or bisexual identity (and hence any identity based on sexual preference or practice). As we have pointed out elsewhere (Weatherburn *et al.*, 1996), these men are not ignorant about HIV and its prevention and, as far as it is possible to tell with a non-random sample, have a low prevalence of HIV. Thus, our recommendation that programmes prioritise men with lower education/ and in lower (or no) occupation, comes after prioritisation of the needs of exclusively homosexually active (or gay) men before those of behaviourally bisexual men.

The effects of class, income and educational achievement on HIV exposure and transmission are complex and often contradictory. However, the needs of men with less formal education should be prioritised before those of men with higher education because:

- (1) they appear to be more likely to be involved in sexual HIV exposure, and
- (2) as a group, they have fewer HIV health promotion aims met (ie. they are in more need).

Although the pursuit of equality (see CHAPS/ SDG, 1998 for example) would have some effect, the large-scale societal changes necessary to significantly alter levels of risk taking among working class gay men are primarily beyond the capacity of any HIV health promotion programme. It is also not necessarily appropriate to set about targeting working class gay men with particular methods and messages. Rather, it may be better to consider whether those methods and messages that are most commonly used in HIV health promotion might be better tailored to the needs and aptitudes of working-class gay men.

Class is strongly associated with two important factors: education and income. In other words, working class men have had, on the whole, shorter periods of (formal) education and hold fewer (and lower) educational qualifications. They also, on the whole, have lower incomes (although there is considerable overlap here). It is worth considering the implications of this on the methods and messages most commonly employed in HIV health promotion.

By the nature of the work that they undertake, working class men are less practised at dealing with the written word, and dealing with complex, abstract concepts. If, therefore, they are to retain the attention of working class men, *printed materials* used in HIV health promotion campaigns need to be designed with as little and as accessible a text as possible. The same point is relevant to any *information giving*, whether printed or verbal. Working class men will be among the first to find themselves excluded from *discussions*, whether between individuals or in groups, where high levels of abstraction are employed.

Relative lack of disposable income limits access to services that have to be paid for, such as (in most cases) *counselling, therapy etc.* Access to the *Internet* is steadily becoming easier and cheaper, but may remain a middle-class pre-occupation for some time. Although *access to clinical services* is free in this country, working class areas are typically less well provided than middle class areas, and choice over, say, HIV testing centres may well be diminished.

Lack of disposable income also restricts (but does not bar) access of working class gay men to many community venues – especially clubs with high door and/ or drink prices, gyms and saunas and many gay businesses also cater predominantly for middle class men. On the other hand, most cities will have gay pubs known for their working class clientele, and cruising grounds are open to all. As *access to free condom distribution* is a function of the setting used, such schemes will increase their equity by diversifying the settings used.

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