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CLS Cohort Studies

Working Paper 2007/3

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July 2007

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25 July, 2007

First published in 2007 by the
Centre for Longitudinal Studies
Institute of Education, University of London
20 Bedford Way
London WC1H 0AL
www.cls.ioe.ac.uk

ISBN 1 898453 61 6

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Acknowledgements

The authors gratefully acknowledge the assistance of Jennifer Maggs, Associate Professor of Human Development at Pennsylvania State University; Ian Plewis, Professor of Longitudinal Research Methods in Education at the Institute of Education, University of London; and an anonymous referee from the Centre for Longitudinal Studies at the Institute of Education.

Abstract

This paper provides a comparison of the drinking patterns of members of the 1958 British Birth Cohort at age 33 in 1991 and members of the 1970 British Birth Cohort at age 34 in 2004. In particular the focus is on the relationships between social class, gender and drinking behaviour and how these may have changed over time. In addition we exploit the detailed information available in the cohort studies about the kinds of alcohol that individuals drink to provide a description of how this varies between the two cohorts born twelve years apart. The paper also provides detailed descriptive analyses of the links between frequency of drinking and the number of units drunk for both cohorts. Results suggest that although the 1970 cohort report drinking more frequently than the 1958 cohort did at a similar age, there is only a modest increase in the average number of units of alcohol consumed per week for women and no increase for men. The paper also highlights some possible problems with data on alcohol consumption collected in the 2000 sweep of NCDS and BCS70 and concludes by making some comparisons between data collected in the cohort studies and data collected in the General Household Survey.

Introduction

Alcohol consumption, and in particular alcohol misuse, are major policy concerns. While over half of all violent crime is related to drink, alcohol-related diseases are reported to be costing the NHS approximately £1.7 billion each year (Prime Minister's Strategy Unit alcohol harm reduction project 2004). Since the 1970s alcohol consumption has increased dramatically partly due to the more widespread availability of alcohol and growing affluence and also because of reductions in the relative costs of alcohol. Alcoholic liver disease has become a major public health concern and the incidence of cirrhosis of the liver has increased ten-fold over the past three decades (Department of Health 2001).

In March 2007 Ian Gilmore of the Royal College of Physicians argued that the government's alcohol awareness campaigns focus too much on young binge drinkers. He stressed that older people drinking at home were also at risk of the severe health consequences linked to high alcohol consumption. A Mintel Survey suggested that more adults drink at home in Britain than in other European countries. Whereas 74.4% of adults in the UK report drinking at home this compares with 66% in France, 64.3% in Germany and 44.5% in Spain.

This paper uses data from the 1958 and 1970 British Birth Cohort studies to explore the ways that drinking behaviour has changed over time and how it varies by gender and social class. In particular the focus is on the number of units of alcohol that cohort members report drinking each week, the reported frequency of drinking alcohol, and the types of alcohol consumed. The paper is intended as a descriptive working paper that can be used as a foundation by other researchers examining the links between reported alcohol consumption and health outcomes within the cohorts.

One of the main advantages of having comparable longitudinal data on the alcohol consumption of two separate cohorts is that it is possible to examine the extent to which overall increases in alcohol consumption may be due to more recent cohorts of individuals drinking more than previous cohorts, or to an increase in alcohol

consumption for all age groups. In this paper we therefore compare the reported weekly alcohol consumption of members of the 1958 cohort at age 33 (measured in 1991) with the reported weekly alcohol consumption of members of the 1970 cohort at age 34 (measured in 2004). In addition we examine the changes in alcohol consumption from young adulthood through to the mid-forties for the 1958 cohort (at age 23, 33, 42 and 46).

Background: The 1958 and 1970 British Birth Cohort Studies

The 1958 British birth cohort study, known as the National Child Development Study (NCDS), started out as a cross-sectional Perinatal Mortality Survey. There were over 17,000 children in this birth cohort in Great Britain, all of whom were eligible for comprehensive follow-up. This occurred as funding permitted, at ages 7, 11, 16, 23, 33 , 42 and 46 years. In childhood, information came from interviews with parents and teachers and from medical examinations on the whole cohort, while the children themselves underwent educational tests. From age 16, the cohort members themselves were interviewed, and their examination results and other qualifications over the years were added to the record. Adult sweeps have collected data over a number of domains, including physical and mental health, demographic circumstances, employment, and housing. Over the years there has inevitably been some attrition from lost contact; refusals; emigration and death, but response rates remain high. The adult surveys each include information on approximately 11,000 individuals who are still participating in the survey (Plewis *et al.* 2004).

Twelve years after the 1958 cohort study, the 1970 British Birth Cohort Study (BCS70) began as the British Births Survey, when data was collected about the births and social circumstances of over 17,000 babies born in England, Scotland Wales and Northern Ireland. Data was collected using a questionnaire completed by the midwife who had been present at the birth and, in addition, information was extracted from clinical records. The original study was sponsored by the National Birthday Trust Fund in collaboration with the Royal College of Obstetricians and Gynaecologists. The study aimed to examine the social and biological characteristics of the mother in relation to neonatal morbidity, and to compare the results with those of the 1958 National Child Development Study. When the cohort children were 3.5y the study transferred to the Department of Child Health at the University of Bristol and under the leadership of Neville Butler, Professor of Child Health, the cohort was surveyed at age five ten and sixteen years. In 1991 responsibility for the study was taken over by the Social Statistics Research Unit (SSRU), based at City University London. This moved to the Institute of Education, London and became the Centre for Longitudinal Studies (CLS) in 1998. CLS also houses the NCDS, and in 1999/2000 a simultaneous survey of both cohorts was undertaken to facilitate comparisons between these two groups born 12 years apart. There are now plans to interview both cohorts every four years with core funding provided by the ESRC.

Measuring alcohol consumption in the 1958 and 1970 cohort studies

In adulthood, (23, 33, 42 and 46 years for NCDS and 30 and 34 for BCS70), cohort members were asked about usual frequency of drinking. Categories differed slightly between surveys but remain comparable. A full listing of the categories used at each

age is provided in Appendix A. In addition, in 1991, at age 33 NCDS cohort members were asked: 'In the last seven days how many

a) pints of beer, stout lager, ale or cider have you drunk
b) measures of spirits or liqueurs have you drunk
c) glasses of wine have you drunk
d) glasses of martini, vermouth, sherry or similar drinks have you drunk

The answers to these questions were then used to calculate the total number of units of alcohol the cohort member had drunk in the last week. A very similar set of questions were used in the face-to-face interview with BCS70 cohort members in 2004, at age 34. However, in addition to being asked about the four categories of alcoholic drinks listed above, cohort members were also asked about their consumption of alcopops and any other kinds of alcoholic drinks. It could be argued that the addition of these extra categories will inflate the measure of weekly alcohol consumption, thus making strict comparisons between the two cohorts problematic. This will be investigated in more detail in the analyses reported below.

For the age 46 survey of NCDS, a telephone interview was used for the first time. In order to reduce the length of this interview, cohort members were only asked about the usual frequency of drinking and then those drinking at least once a week were asked 'In an average week, how many units do you drink? By a unit I mean half a pint of beer, a glass of wine or a single measure of spirits or liqueur', while those who responded that they drank less frequently were asked: 'On the days when you do drink alcohol, on average how many units do you drink in a day? By a unit I mean, half a pint of beer, a glass of wine, or a single measure of spirit or liqueur'. As will be discussed in more detail below, preliminary analysis of the responses to these questions suggest that they provide a much less valid measure of alcohol consumption than the more detailed questions asked in the face-to-face interviews.

The standard 'CAGE' questionnaire items were also included in the interview with NCDS cohort members at age 33 and the BCS70 cohort members at age 34. This questionnaire uses a series of questions to identify those with a drink problem. These questions have been modified slightly for British use, but include the four which provide its name: 'Have you ever felt you should **cut** down on your drinking?' [C], 'Have people **annoyed** you by criticising your drinking?' [A] , 'Have you ever felt bad or **guilty** about your drinking?' [G], 'Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hang-over (**eye-opener**)?' [E]. In this paper, those with two or more positive responses to the CAGE questions are considered to have a drink problem. The instrument, used in this way, has been validated as an indicator of drinking problems (Liskow et al, 1995).

Previous research on alcohol consumption

There is already considerable research on alcohol consumption based on data from the 1958 and 1970 cohort studies. For example, in the 1980s a series of working papers focused on alcohol consumption among members of the 1958 cohort at ages 16 and 23 (Power, 1985; Ghodsian and Power 1985; Ghodsian, 1985). These papers showed that at age 23 heavy drinking was associated with being separated, divorced or widowed for both men and women, and was also more prevalent for those with no children. Drinking was also found to have a strong social class gradient for men so

that those in the manual social classes were much more likely to be heavy drinkers than those in the non-manual social classes.

Longitudinal analyses of the links between childhood and adolescent characteristics and drinking behaviour in early adulthood found that for women, heavy drinking at age 23 (defined as over 35 units per week) was associated with better housing and less financial hardship in childhood; having a smaller family of origin with a skilled manual father; going out more at age 16; smoking at age 16; and spending more money on entertainment and alcoholic drinks at 16 rather than on savings. Separate analyses were carried out for men, and the results were found to be rather different, with none of the social and family background variables distinguishing the heavy drinkers from the other groups. However, it was found that being a heavy drinker at age 23 for men (defined as over 50 units per week) was associated with more family conflicts and more extroverted leisure activities in adolescence as well as being a smoker at age 16 (Ghodsian, 1985).

Analysis of data from the 23 and 33 year surveys of the 1958 cohort (Power et al 1999) found that overall rates of heavy drinking declined substantially between ages 23 and 33 but persisted for never married men and women and increased significantly among individuals who divorced compared with those who remained married. Furthermore the levels of heavy drinking among these young adults in 1991 was not found to be due to selection effects and the authors concluded that marital separation had a pronounced short-term effect on heavy drinking.

More recently, research by Jefferis, Manor and Power has used data from the 1958 cohort to examine the social gradients in binge drinking and non-drinking at different points in the life course (Jefferis et al 2007). Their analyses demonstrate that the least educated men reported non-drinking or binge drinking more often than more educated men throughout adult life at ages 23, 33, and 42 years. For women the pattern of results was somewhat different. At age 23 it was the *better* educated women who were most likely to be binge drinkers, and by age 42 this trend had reversed so that in mid-adulthood the social pattern of binge drinking in women more closely resembled the results obtained for men.

Much of the research to date has focused on either the 1958 cohort study or the 1970 cohort study separately, with very little comparative analysis examining differences between the drinking patterns of these two cohorts. The data now available from the 2004 sweep of BCS70 at age 34 makes it possible for the first time to compare the drinking behaviour of individuals in their early thirties in the two cohorts.

Analysis

The analyses in this paper have focused primarily on the differences between the drinking behaviour of 33 year olds in 1991 (namely those from the 1958 cohort study) and the drinking behaviour of 34 year olds in 2004 (namely those from the 1970 cohort study). In particular the emphasis is on providing a detailed description of how drinking patterns vary by gender and social class for these two cohorts born twelve years apart.

Initially a set of descriptive bivariate analyses have been carried out. Where there appear to be substantial differences between the two cohorts, the data have been pooled to form a single dataset to enable multivariate analysis of data including interaction terms - for example, between cohort and gender - on the outcomes of interest.

Results

As can be seen from Table 1, the reported frequency of drinking alcohol of men in their early thirties is similar for the 1958 cohort and the 1970 cohort. In 1991 86.5 per cent of men reported drinking at least once a month, by 2004 this had only risen slightly so that 87.6 per cent of men reported drinking at least once a month. The increase was slightly more pronounced for women, rising from 71.1 per cent of women to 74.2 per cent of women. Table 2 shows that while just over a quarter of men reported that they drank between 0 to 3 units of alcohol each week, just over ten per cent of men in each cohort are heavy drinkers, consuming 36 or more units of alcohol per week. As we would expect, the results show that women tend to drink much less than men; however a comparison between the two cohorts shows women born in 1970 tend to drink more than their counterparts in the earlier cohort. For example, if we focus on moderate and heavy drinkers (defined as those drinking more than 9 units per week), among the 1958 cohort 19.4% of women were either moderate or heavy drinkers, compared with 25.1% of women in the 1970 cohort.

Table 1: Drinking behaviour at age 33/34: the 1958 and 1970 cohorts compared

	Men at age 33 or 34		Women at age 33 or 34	
Frequency of drinking	1991	2004	1991	2004
Most days	17.7	22.2	7.1	11.8
1, 2 or 3 times a week	53.7	55	40.2	48.5
1,2 or 3 times a month	15.1	10.4	23.8	13.9
Less often/special occasions	10.5	7.5	22.9	18
Never	3	4.9	5.9	7.9
	100%	100%	100%	100%
	N=5583	N=4609	N=5784	N=5026

Table 2: Weekly units of alcohol at age 33/34: the 1958 and 1970 cohorts compared

	Men at age 33 or 34		Women at age 33 or 34	
Alcohol units in a week	1991	2004	1991	2004
0-3 units	26.7	26.8	56.4	51.7
4-8 units	17	16.9	24.3	23.1
9-15 units	16.3	17.5	12.1	15.5
16-35 units	26.7	26.9	6.3	8.3
36 or more units	13.3	11.8	1	1.3
	100%	100%	100%	100%
	N=5607	N=4597	N=5800	N=5024

Focusing just on those cohort members who reported that they drink at least once a month, the mean units of alcohol consumed per week can be calculated separately for men and women. For the 1958 cohort the mean weekly alcohol consumption was found to be 19.6 units for men compared with 7.0 units for women, while for the 1970 cohort the figures were 18.5 units for men and 8.0 units for women. Whereas for men the alcohol consumption of the two cohorts is very similar and seems to have declined somewhat, for women there has been an increase. It should also be noted that the increase for women is relatively modest despite the fact that, as shown in Table 1, women aged 34 in 2004 are drinking more frequently than women in the same age group in 1991.

As can be seen from figure 1 and figure 2, the distribution of alcohol consumed at age 33 (for the 1958 cohort) and at age 34 (for the 1970 cohort) follows the characteristic positively skewed pattern with progressively fewer people reporting drinking large numbers of units in the past week. The median for women is substantially lower than for men in both cohorts and the interquartile range is also smaller for women than men. However there are a few women who report drinking very heavily.

Figure 1: NCDS alcohol consumption

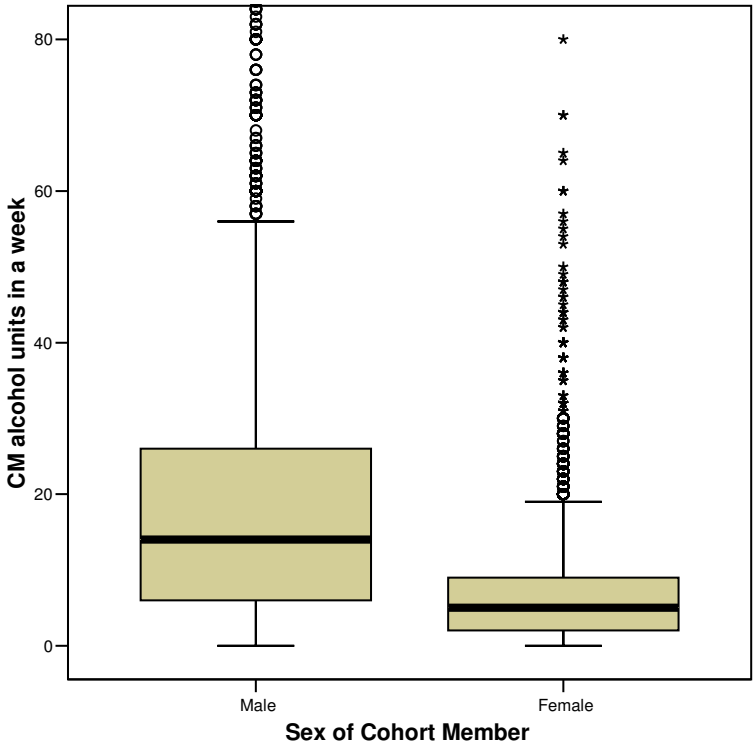
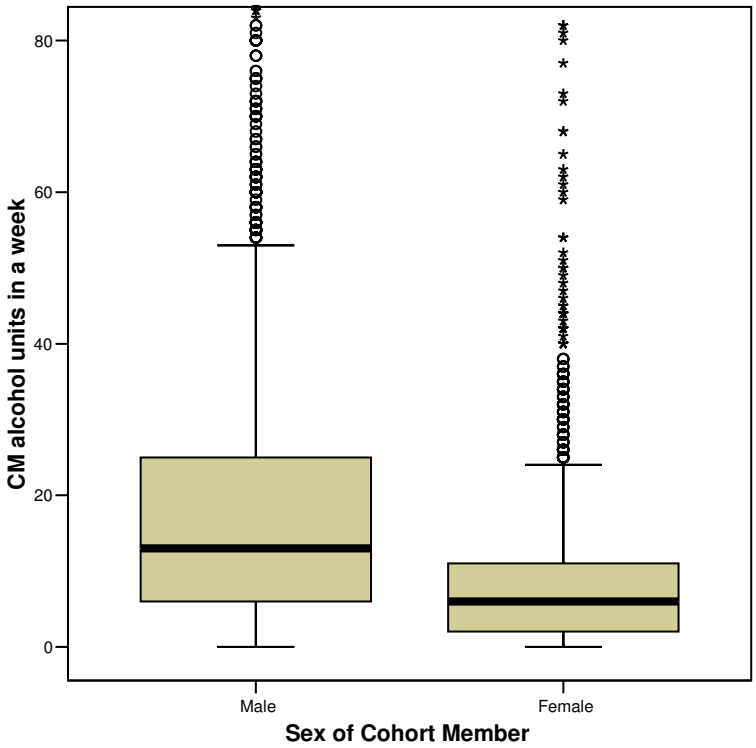


Figure 2: BCS70 alcohol consumption



Heavy drinking

Sensible drinking guidelines in the UK are now defined in terms of daily benchmarks, which are currently no more than 3-4 units per day for men and no more than 2-3 units per day for women. These benchmarks are the result of a UK Government Working Group report, published in 1995, called '*Sensible Drinking'*. However, prior to this, sensible drinking guidelines were based on weekly consumption, with recommended limits of 21 units per week for men and 14 units per week for women. Using the data from the cohort studies we can therefore create a dichotomous variable indicating heavy drinking which has a different threshold of weekly units for men and women. In 1991 there were 27.7% of men in the 1958 cohort who reported drinking more than 21 units of alcohol in the previous week, and there were 8.2% of women in the same cohort, who reported drinking more than 14 units of alcohol in the previous week. In 2004, for the 1970 cohort the comparable figures were 26.9% for men and 11.2% for women. This is further evidence that while men's alcohol consumption is relatively similar across the two cohorts, women's consumption is substantially higher in the younger cohort.

Frequency of drinking by number of units of alcohol consumed

As briefly discussed above, there has been considerable concern in recent years over the issue of binge drinking. This raises a question about the link between frequency of drinking and number of units drunk per week in the two cohorts. As shown in tables 3a and 3b below for both men and women in both cohorts, there is a very strong association between the mean number of units of alcohol drunk and the frequency with which the cohort member reports drinking alcohol. However, it is also interesting to note that the link is slightly less strong for the 1970 cohort than for the 1958 cohort. In particular, for both men and women the amount of alcohol drunk by those who report that they drink *on most days* is lower among the 1970 cohort than among the 1958 cohort. This suggests that although the later-born cohort is drinking more frequently than the 1958 cohort they may be drinking less on each occasion. Clearly these results are only applicable to individuals in their early thirties and therefore do not reveal anything about possible patterns of drinking among teenagers or those in their twenties. More detailed analysis of adolescent and adult binge drinking, using data from the 1958 cohort study, is provided by Jefferis, Power and Manor (2004).

Table 3.a Frequency of drinking by number of units of alcohol consumed

Men						
	1991 (NCDS cohort)			2004 (BCS70 cohort)		
Frequency of drinking alcohol	Mean	N	Std. Deviation	Mean	N	Std. Deviation
1 Most days	37.9	989	28.1	32.0	1025	25.6
2 1,2,or 3 times/week	17.5	2997	16.2	15.5	2536	15.0
3 1,2,or 3 times/month *	5.7	843	9.5	5.8	479	10.4

Table 3.b Frequency of drinking by number of units of alcohol consumed

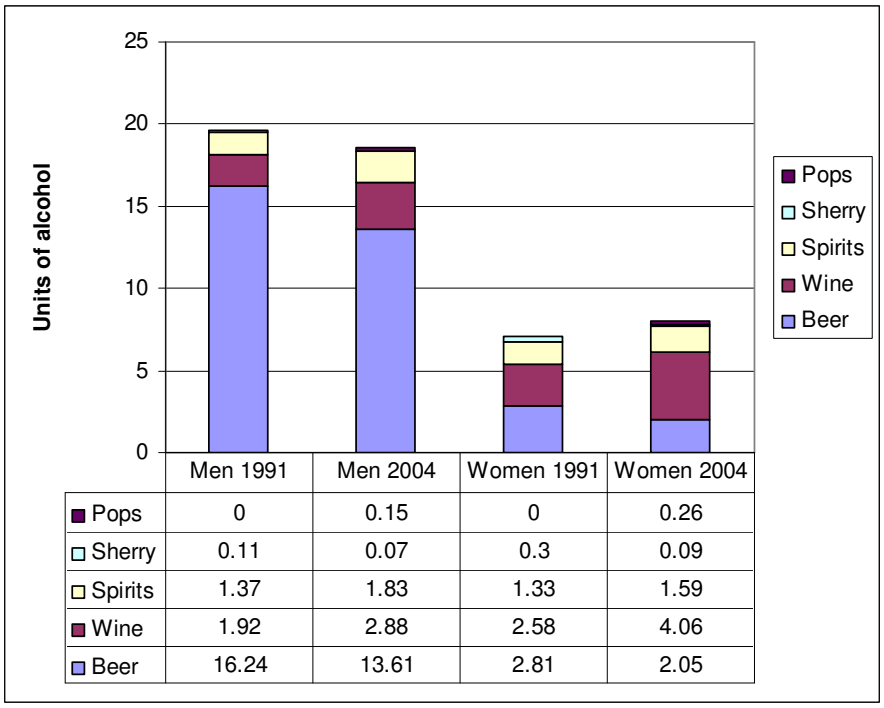
Women						
	1991 (NCDS cohort)			2004 (BCS70 cohort)		
Frequency of drinking alcohol	Mean	N	Std. Deviation	Mean	N	Std. Deviation
1 Most days	18.0	411	14.8	16.0	591	12.7
2 1,2,or 3 times/week	7.7	2325	7.5	7.7	2436	7.9
3 1,2,or 3 times/month *	2.7	1378	3.6	2.6	700	4.1

* Note that for BCS70 2004 this is '2-3 times/month'. Those drinking once a month or less frequently are excluded.

Type of alcohol drunk

As highlighted above, one of the advantages of the 1958 and 1970 cohort data is that it includes detailed information about the types of alcohol that cohort members are consuming. Figure 3 below shows the total number of units of alcohol consumed by members of the 1958 and 1970 cohorts, broken down by the types of drink recorded. As we might expect, whereas men's weekly alcohol consumption consists mainly of beer, women are more likely to drink wine. Figure 3 also shows that the consumption of wine is greater for the cohort born in 1970 than for the 1958 cohort and this is particularly marked for women.

Figure 3: Type of alcohol drunk by cohort and gender

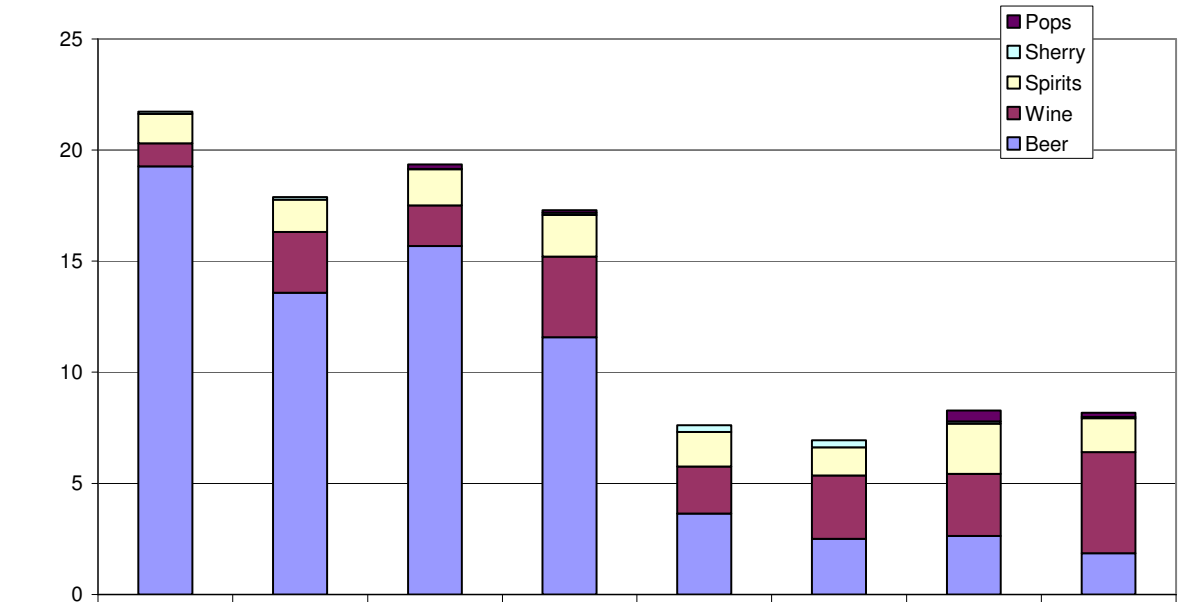


	Men 1991	Men 2004	Women 1991	Women 2004
Pops	0	0.15	0	0.26
Sherry	0.11	0.07	0.3	0.09
Spirits	1.37	1.83	1.33	1.59
Wine	1.92	2.88	2.58	4.06
Beer	16.24	13.61	2.81	2.05

Figure 4 illustrates the social class differences in the types of alcohol drunk by individuals in the 1958 and 1970 cohorts. It can be seen that for both the 1958 and the 1970 cohorts, men in non-manual occupations report that they drink approximately twice as much wine as men in manual occupations. However, beer still accounts for the majority of units of alcohol reported by men. It is also clear that the increase in alcohol consumption between the cohort born in 1970 and the cohort born in 1958 is most marked for women in non-manual occupations and that this is linked to a dramatic increase in the number of units of wine that women report they consumed in the previous week – from an average of 2.85 for non-manual women in the 1958 cohort to 4.55 for non-manual women in the 1970 cohort.

It can also be seen from Figure 4 that the mean quantity of 'alcopops' drunk by cohort members in 2004 is very low. This means that including this new category of alcoholic drink in the 2004 survey is unlikely to have a major impact on the measure of total alcohol consumed in the previous week.

Figure 4: Type of alcohol drunk by cohort, gender and manual/non-manual employment



	Men 1991 (Manual)	Men 1991 (Non-Man)	Men 2004 (Manual)	Men 2004 (Non-man)	Women 1991 (Manual)	Women 1991 (Non-Man)	Women 2004 (Manual)	Women 2004 (Non-man)
Pops	0	0	0.19	0.12	0	0	0.5	0.19
Sherry	0.1	0.12	0.03	0.1	0.3	0.32	0.09	0.07
Spirits	1.32	1.46	1.62	1.86	1.56	1.27	2.26	1.52
Wine	1.04	2.74	1.83	3.64	2.13	2.85	2.8	4.55
Beer	19.27	13.57	15.68	11.57	3.63	2.5	2.63	1.86

Drinking problems

As described above, both the 1991 sweep of the 1958 cohort study and the 2004 sweep of the 1970 cohort study included the 'CAGE' questions to ascertain whether cohort members had a drinking problem. The survey instruments in 1991 and 2004 both included two sets of four questions which ask about whether the cohort member has *ever* had a drinking problem and also whether they have had a drinking problem *in the last year*. Table 4, below, summarises the prevalence of reported drinking problems among men and women in the two different cohorts. It can be seen that men are more likely to report problem drinking than women and that the 1970 cohort are more likely to report problem drinking than the 1958 cohort.

Table 4: Drinking problems in the 1958 and the 1970 cohort

Comparison between NCDS and BCS70 drinking problems in early 30s				
	Men at age 33 or 34		Women at age 33 or 34	
Drinking problem	1991	2004	1991	2004
Ever had a drinking problem (CAGE 2 +)	6.0%	8.5%	2.3%	3.8%
Drinking problem in the last year (CAGE 2+)	3.6%	6.1%	1.4%	2.7%
Total sample sizes	N=5567	N=4515	N=5750	N=4871

Frequency of drinking alcohol

As seen in Table 1 above, there is a substantial increase between the 1958 and the 1970 cohort in the percentage of men and women who say that they drink alcohol on most days. This is particularly marked for women. To investigate this in more detail, logistic regression models were estimated that took whether an individual reported drinking on most days or not as the dichotomous dependent variable. By pooling data from the 1958 and 1970 cohorts it was possible to look at the associations between gender and social class and the frequency of drinking, and to see whether there were any interactions between cohort and these two explanatory variables. Table 5a below summarises the results of this analysis.

Table 5a : Social Class, Gender and Cohort as predictors of drinking on most days.

Variables in the Equation		Estimate	S.E.	Wald	df	Sig.	Exp(B)
Gender	Men	ref cat	ref cat				
	Women	-0.998	0.067	224.7	1	0.000	0.369
Social Class				166.7	6	0.000	
	Professional (1)	ref cat	ref cat	ref cat			
	Intermediate (2)	-0.084	0.116	0.5	1	0.471	0.919
	Skilled Non-Manual (3.1)	-0.674	0.132	25.9	1	0.000	0.510
	Skilled Manual (3.2)	-0.791	0.125	40.0	1	0.000	0.453
	Semi Skilled (4)	-0.926	0.141	42.9	1	0.000	0.396
	Unskilled (5)	-1.071	0.214	25.2	1	0.000	0.343
	No valid Social Class	-0.914	0.168	29.5	1	0.000	0.401
Cohort	1958	ref cat	ref cat				
	1970	0.070	0.149	0.2	1	0.639	1.072
Cohort by Gender	1970 and Female	0.331	0.090	13.5	1	0.000	1.393
Cohort by Social Class				20.7	6	0.002	
	1970 & Intermediate (2)	0.026	0.161	0.0	1	0.871	1.027
	1970 & Skilled Non-Manual (3.1)	0.100	0.185	0.3	1	0.588	1.105
	1970 & Skilled Manual (3.2)	0.399	0.175	5.2	1	0.023	1.490
	1970 & Semi Skilled (4)	0.335	0.202	2.8	1	0.097	1.399
	1970 & Unskilled (5)	0.847	0.306	7.7	1	0.006	2.333
	1970 & No valid Social Class	0.247	0.213	1.3	1	0.247	1.280
	Constant	-1.040	0.107			0.000	0.354

It can be seen that across the whole sample including both cohorts, women were less likely to report drinking on most days than men (with a coefficient of -0.998) and this confirms the bi-variate analysis shown above. However, the fact that there is a significant positive interaction between cohort and sex shows that the differences between men and women were more marked for the 1958 cohort than for the 1970 cohort. In other words, the magnitude of the negative coefficient for women (-0.998) is reduced by 0.331 for women in the 1970 cohort. In addition, there is a significant relationship between social class and frequency of drinking, such that those in the

professional class 1 are the most likely to report drinking on most days. Once again there is a significant interaction between cohort and social class such that, for the 1970 cohort, social class is less strongly associated with drinking frequency. A further model was estimated (but not shown here) including the three way interaction between gender, social class and cohort, but this higher-order interaction was not found to be significant. In summary, these results suggest that drinking behaviour is becoming less socially differentiated, so that for the 1970 cohort gender and social class are less strongly associated with frequency of drinking than for the 1958 cohort.

Heavy drinking

Using the definition of 'heavy drinking' defined above, i.e. more than 21 units of alcohol per week for men and more than 14 units of alcohol per week for women, a further set of logistic regression models were estimated to investigate the links between cohort, gender, social class and heavy drinking. As can be seen from Table 4b below, women are less likely to be heavy drinkers than men, (even when a lower weekly threshold is used for women). There is relatively little association between social class and heavy drinking although those with no social class assigned are significantly less likely to be heavy drinkers than other groups. In contrast to the model reported above, cohort is not significantly linked to heavy drinking ($p>0.3$). However, there is a significant interaction between gender and cohort such that women in the 1970 cohort have an elevated probability of being heavy drinkers. For comparison with the previous model, the interaction between cohort and social class is also included in the table below, however this was also not found to be significant.

Table 5b : Social Class, Gender and Cohort as predictors of 'heavy drinking' (14+ units per week for women and 21+ units per week for men)

Variables in the Equation		Estimate	S.E.	Wald	df	Sig.	Exp(B)
Gender	Men	ref cat	ref cat				
	Women	-1.389	0.060	528.59	1	0.000	0.249
Social Class				26.42	6	0.000	
	Professional (1)	ref cat	ref cat				
	Intermediate (2)	0.000	0.116	0.00	1	0.997	1.000
	Skilled Non-Manual (3.1)	-0.178	0.127	1.97	1	0.160	0.837
	Skilled Manual (3.2)	0.089	0.117	0.58	1	0.448	1.093
	Semi Skilled (4)	-0.063	0.127	0.24	1	0.621	0.939
	Unskilled (5)	0.153	0.164	0.88	1	0.348	1.166
	No valid Social Class	-0.442	0.153	8.32	1	0.004	0.643
Cohort	1958	ref cat	ref cat				
	1970	-0.154	0.153	1.01	1	0.316	0.858
Cohort by Gender	1970 and Female	0.416	0.085	23.78	1	0.000	1.516
Cohort by Social Class				2.48	6	0.871	
	1970 & Intermediate (2)	0.136	0.166	0.67	1	0.412	1.146
	1970 & Skilled Non-Manual (3.1)	0.127	0.183	0.48	1	0.488	1.135
	1970 & Skilled Manual (3.2)	0.051	0.171	0.09	1	0.767	1.052
	1970 & Semi Skilled (4)	0.123	0.191	0.42	1	0.517	1.131
	1970 & Unskilled (5)	0.146	0.266	0.30	1	0.585	1.157
	1970 & No valid Social Class	0.263	0.204	1.66	1	0.197	1.301
	Constant	-0.945	0.106	79.45	1	0.000	0.389

Alcohol Consumption across the Lifecourse

One of the strengths of the British Birth cohort studies is the ability to examine trajectories of drinking behaviour over the lifecourse. As Jefferis et al (2007) have shown the prevalence of non drinking remains similar throughout adulthood for both men and women, while the prevalence of binge drinking declines somewhat between early adulthood (age 23) and mid-adulthood (age 42). Whereas this previous paper focused only on non-drinking and binge drinking, here we present data on reported levels of weekly alcohol consumption from age 23 to age 46. The mean number of units of alcohol consumed by members of the 1958 cohort at age 23, 33, 42 and 46 are therefore shown in Table 6a below. This suggests that for both men and women alcohol consumption declines between age 23 and 33 but then increases at age 42 and declines again at age 46. However, these results should be interpreted with care. As was discussed above, in 2004 a telephone interview rather than a face-to-face interview was used for the first time to collect data on alcohol consumption from the 1958 birth cohort. In order to minimise the length of the telephone interview, cohort members were not asked separately about the amounts of different types of alcohol they had consumed in the previous week but were simply asked for an overall summary of their alcohol consumption. As the figures below suggest, this seems to have resulted in a sizeable under-reporting of the amount of alcohol consumed.

In addition, the figures for average weekly levels of reported alcohol consumption appear surprisingly high at age 42 in 2000, particularly for men. Further investigation suggested that there was a strong possibility that beer consumption had been recorded inconsistently by interviewers in the 2000 survey. This was due to some ambiguity in the instructions in the computer aided personal Interview schedule. This is likely to have resulted in some interviewers recording beer consumption in pints of beer and the majority recording consumption in terms of units of beer (i.e. half-pints). (The data is labelled as measured in pints of beer and this figure is therefore doubled before adding it to reported consumption of other types of alcohol).This would have a greater impact on men's reported alcohol consumption than on women's alcohol consumption as we have seen above that a much greater proportion of men's alcohol consumption is beer whereas women are more likely to report drinking wine. In order to investigate this further, Table 6b provides the data on *non-beer* alcohol consumption at age 23, 33 and 42 and Table 6c and 6d provide data on reported alcohol consumption for the separate sweeps of the 1970 cohort. The data for the 1970 cohort in particular is suggestive of a problem with recording beer drinking in the 2000 sweep (and note that exactly the same interview protocol was used for both the 1958 and 1970 cohort in 2000). Appendix B presents the frequencies of beer drinking for men in the 1958 cohort at age 33 and 42 and for men in the 1970 cohort at age 30 and 34, which provides further evidence that beer drinking in 2000 has been inflated due to an ambiguity in the interview protocol. Further work is being carried out to discover whether specific interviewers can be identified who have recorded beer consumption in units rather than pints so that the data can be corrected or the values which are most likely to be incorrect can be flagged.

Table 6a: Mean alcohol consumption across the lifecourse (1958 cohort): Focusing just on those cohort members who reported that they drink at least once a month

	Men			Women		
Age (year)	Mean	St dev	N	Mean	St dev	N
23 (1981)+	25.7	25.5	5625	8.7	10.3	4484
33 (1991)	19.7	21.1	4829	7.0	8.7	4114
42 (2000)*	26.0	29.3	4880	9.8	12.0	4389
46 (2004)*	15.8	15.8	3728	8.8	8.1	3220

+ Includes those drinking 'less often than once a week', but not including those drinking 'only on special occasions'
* Those drinking 2-3 times/month or more

Table 6b: Mean non-beer alcohol consumption across the lifecourse (1958 cohort): Focusing just on those cohort members who reported that they drink at least once a month

	Men			Women		
Age (year)	Mean	St dev	N	Mean	St dev	N
23 (1981)	3.6	7.7	5625	5.3	7.6	4484
33 (1991)	3.4	6.9	4829	4.2	5.8	4114
42 (2000)	5.1	8.5	4880	5.9	7.3	4389
46 (2004)	N/A			N/A		

Table 6c: Mean alcohol consumption across the lifecourse (1970 cohort): Focusing just on those cohort members who reported that they drink at least 2-3 times/month

	Men			Women		
Age (year)	Mean	St dev	N	Mean	St dev	N
26 (1996)+	22.3	20.3	3374	9.4	9.0	3308
30 (2000)*	29.4	32.9	4755	10.0	12.9	4236
34 (2004)*	18.5	19.8	4040	8.1	9.2	3727

+ Includes those drinking 'less often than once a week', but not including those drinking 'only on special occasions'
* Those drinking 2-3 times/month or more

Table 6d: Mean non-beer alcohol consumption across the lifecourse (1970 cohort): Focusing just on those cohort members who reported that they drink at least 2-3 times/month

	Men			Women		
Age (year)	Mean	St dev	N	Mean	St dev	N
26 (1996)	4.0	6.4	3374	5.3	5.9	3308
30 (2000)	4.9	8.9	4755	5.6	8.0	4236
34 (2004)	4.9	9.3	4040	6.0	7.4	3727

Further analysis of the data collected at age 42 in 2000 and age 46 in 2004 is shown in Tables 7a and 7b. It can be seen that, for both men and women, the mean units of alcohol drunk each week by those who report drinking on most days appears to have declined dramatically. This is further evidence that the question in the telephone interview has failed to measure accurately the amount of alcohol that individuals are consuming.

Table 7a The mean number of alcohol units consumed by the reported frequency of drinking: NCDS 2000 and 2004 surveys

Men						
	2000 (NCDS cohort)			2004 (NCDS cohort)		
Frequency of drinking alcohol	Mean	N	Std. Deviation	Mean	N	Std. Deviation
Most days	44.4	1380	38.8	24.3	1316	18.7
1,2,or 3 times/week	20.6	3003	20.7	11.1	2412	11.6
2 or 3 times/month	7.3	492	13.0	-	-	-

Table 7b The mean number of alcohol units consumed by the reported frequency of drinking : NCDS 2000 and 2004 surveys

Women						
	2000 (NCDS cohort)			2004 (NCDS cohort)		
Frequency of drinking alcohol	Mean	N	Std. Deviation	Mean	N	Std. Deviation
Most days	19.8	860	17.9	15.2	914	10.7
1,2,or 3 times/week	8.4	2810	9.0	6.2	2306	4.8
2,or 3 times/month	2.9	719	3.9	-	-	-

Note: Compared with tables 3a and 3b, the coding differed in two respects: for the 2000 survey, the drinking frequency '1,2 or 3 times/month' was split into 2 categories, and the amount consumed was only asked if the frequency was 2 or 3 times/month. At the 2004 survey, the amount drunk was only asked if the frequency was '1,2 or 3 times a week' or 'most days'.

Impact of missing data on reported alcohol consumption

As was indicated in the background information about the 1958 and 1970 cohort studies above, there has been some loss to the cohort samples over time. In part this is due to the death or emigration of cohort members but there is also attrition due to loss of contact and refusals. As Plewis et al (2004) have highlighted, the cohort samples do not decline monotonically over time but rather some cohort members rejoin the sample having not been included in a previous sweep. The following tables therefore provide a summary of the mean weekly alcohol consumption, reported by cohort members, disaggregated by sex and by whether the cohort member was successfully interviewed in the *next* sweep of the study. This provides an initial indication of the extent to which estimates of mean alcohol consumption may be biased due to any association between levels of reported alcohol consumption and the probability of not being successfully interviewed. It can be seen, for example, that

whereas men in the 1958 cohort study who were interviewed at age 33 reported drinking an average of 25.1 units of alcohol at age 23, those who were not subsequently included in the age 33 sweep reported drinking an average of 27.3 units of alcohol.

A T-test was used to analyse data from each sweep to ascertain whether there are significant differences between the group of individuals successfully interviewed at the next sweep and the group missing at the next sweep. Figures in Table 8a and Table 8b have been highlighted in bold where the differences reach the 0.05 level of significance. In summary, it can be seen that for men in both the 1958 and 1970 cohorts there is a tendency for heavy drinkers to be less likely to be successfully interviewed at the next sweep. The only difference which does not reach significance for male cohort members is for the data collected from the postal survey at age 26. In all other cases, those who are successfully interviewed at the next sweep report drinking approximately two units less on average than those missing from the next sweep. The results for women are less clear cut. There is a tendency for those successfully interviewed at the next sweep to report drinking fewer units of alcohol per week than those missing at the next sweep. However, this only reaches significance for the data collected from the 1958 cohort at age 42.

Table 8a: Reported mean number of alcohol units consumed per week (1958 cohort) disaggregated by whether the cohort member is interviewed in the next sweep

	Men						**Women**					
	Present at next sweep			**Missing at next sweep [1]**			**Present at next sweep**			**Missing at next sweep [1]**		
Age (year)	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev	N
23 (1981)	**25.1**	**24.9**	**4304**	**27.3**	**27.4**	**1321**	8.6	10.0	3659	9.0	11.9	825
33 (1991)	**19.2**	**20.1**	**4111**	**22.0**	**25.9**	**718**	6.9	8.2	3626	7.7	11.9	468
42 (2000)	**25.4**	**28.6**	**3862**	**28.1**	**31.6**	**1018**	**9.4**	**10.8**	**3617**	**11.1**	**16.6**	**772**

Table 8b: Reported mean number of alcohol units consumed per week (1970cohort) disaggregated by whether the cohort member is interviewed in the next sweep

	Men						**Women**					
	Present at next sweep			**Missing at next sweep [1]**			**Present at next sweep**			**Missing at next sweep ([1]**		
Age (year)	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev	N
26 (1996)	22.0	19.7	2813	23.8	23.4	561	9.4	8.8	2890	9.4	10.4	418
30 (2000)	**28.21**	**30.1**	**3736**	**33.55**	**41.0**	**1019**	9.9	12.7	3519	10.4	13.7	717

(1) Note that this will include cases missing at the next sweep due to death, immigration, non-contact and refusal

Comparison of data from the Cohort Studies and the General Household Survey

Given the difficulties of obtaining accurate self-report measures of alcohol consumption and the specific difficulties encountered with the 2000 survey and the 2004 telephone survey with members of the 1958 cohort described above, it is helpful to compare the data on alcohol consumption from the cohort studies with data from other national surveys. In 2002/2003 the General Household Survey included a very detailed set of questions on alcohol consumption (45 questions in all). The methodology used to obtain an estimate of alcohol drunk over the past seven days was somewhat different from the methodology that has been used in the cohort studies. In the 2002/2003 GHS respondents were asked a series of questions in the form: 'How often have you had a drink of (beer/strong beer/wine/sherry/spirits/alcohopops) in the last twelve months' and were then asked how much they usually drank of that specific type of alcohol on any one day. The weekly estimated total was then calculated by multiplying the frequency of drinking by the usual quantity drunk for each type of alcohol, and summing the totals to provide an overall total for units of alcohol. For example, an individual who reported that over the past twelve months they had drunk wine 'once or twice a week', but never drank any other kind of alcohol and that on any one day they normally drank four glasses of wine would be calculated to drink an estimated average of six units of alcohol per week. In addition, whereas the cohort studies only ask about consumption of beer, the GHS in 2002/3 asked separately about the consumption of normal strength beer and strong beer. This is likely to provide a higher and more accurate measure of the number of units of alcohol drunk than the more general question included in the cohort studies.

In contrast to the cohort studies the GHS is a cross sectional survey of adults in Great Britain and therefore collects information on alcohol consumption across the whole age range. A summary of estimated weekly units of alcohol, disaggregated by age group and sex, is presented in Table 9a and 9b.

Table 9a Estimated weekly alcohol consumption for men: General Household Survey 2002-2003

Age group	Mean	N	Std. Deviation
16-19	22.7	263	25.8
20-24	28.3	366	26.9
25-29	25.9	386	29.5
30-34	22.7	521	26.6
35-39	20.0	578	22.2
40-44	18.7	553	18.0
45-49	23.6	486	32.2
50-54	20.3	534	19.5
55-59	19.6	522	28.2
60-64	18.6	386	21.6
65-69	16.8	359	19.1
70-74	14.5	289	15.7
75+	12.6	388	14.8
Total	20.4	5631	24.1

Table 9b Estimated weekly alcohol consumption by age group for women: General Household Survey 2002-2003

Age group	Mean	N	Std. Deviation
16-19	19.9	266	27.3
20-24	18.2	398	18.9
25-29	11.7	416	13.9
30-34	10.8	559	13.4
35-39	10.0	590	11.2
40-44	11.2	558	12.8
45-49	10.3	538	9.9
50-54	9.6	492	9.8
55-59	9.3	464	10.5
60-64	7.8	346	8.3
65-69	7.7	308	9.4
70-74	6.6	213	9.1
75+	6.4	418	8.5
Total	10.7	5566	13.4

It can be seen that in comparison with men in the BCS70 cohort (aged 34 in 2004), who reported drinking 18.5 units of alcohol per week the figures from the general Household Survey are somewhat higher at 22.7 units of alcohol per week for men in the 30-34 age group. Similarly for women the figures are 8.1 units per week for those in the BCS70 cohort compared with 10.8 units per week for 30-34 year-olds in the General Household Survey. This suggests that the methodology for collecting data on alcohol consumption in the GHS may result in slightly higher estimates than the questions used with the cohort studies. However it should also be noted that the numbers of individuals in each age group of the GHS is substantially smaller than the sample sizes in the cohort studies and this results in relatively large standard errors for the mean values in Table 9a and 9b.

Summary and Discussion

This paper has presented a detailed descriptive analysis of reported patterns of alcohol consumption for men and women in the 1958 and 1970 British Birth Cohort Studies. For the first time it has been possible to make a direct comparison of the reported drinking behaviour of individuals in their early thirties from two cohorts born twelve years apart. The results show that although there has been a modest increase in reported levels of alcohol consumption for the later cohort this is due to an increase in reported alcohol consumption for women rather than men.

The preliminary findings reported in this paper raise a question about whether all women are drinking more, or whether the characteristics of the 1970 cohort women differ from the 1958 cohort at the same age, and this is resulting in different drinking patterns.

For example, previous research has shown that those women with children tend to drink less than women without children (Power, 1985). If women are delaying childbirth and therefore fewer women at age 34 have children than did in the early 1990s this might partially explain the increase in alcohol consumption. Further multivariate research is therefore needed to investigate the extent to which women in

the 1970 cohort have a tendency to drink more than women in the 1958 cohort or whether it is the demographic circumstances of the 1970 cohort compared with the 1958 cohort (i.e. parental and marital status) that help to explain the differences in alcohol consumption.

The paper has also shown that the association between social class and frequency of drinking has declined between the two cohorts and that for both men and women beer drinking has declined between the two cohorts for those with manual occupations, while wine drinking has increased. These results are both suggestive that social class differences in patterns of drinking behaviour are diminishing over time.

Preliminary analysis of the association between reported alcohol consumption and cohort members' continued participation in the study suggests that men reporting high levels of alcohol consumption in a particular sweep are less likely to participate in the next sweep of the study. Similar patterns were found for women but the results did not reach significance at the 0.05 level. This suggests that any decline in reported alcohol consumption over the lifecourse may partly be due to differential attrition and any further longitudinal analyses should therefore be designed to take this into account.

In addition this paper has highlighted problems with the data on reported beer consumption collected in 2000, when members of the 1958 cohort were aged 42 and members of the 1970 cohort were aged 30. Further work will be undertaken to try and correct this problem but analyses should be aware of the limitations of this data. These data problems do not impact on the main findings reported in this paper, which focuses on the data collected in 1991 for the 1958 cohort and 2004 for the 1970 cohort.

Notes

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Appendix A

Drinking frequency categories in NCDS and BCS70

NCDS age 23 (variable n5920)
Question wording: 'How often do you usually have an alcoholic drink of any kind?'
1 Most days
2 1-2 times/week
3 Less often
4 Special occasion
5 Never drink

NCDS age 33 (variable n504273)
Question wording: 'How often do you have an alcoholic drink of any kind?'

1 Most days
2 1, 2 or 3 times/week
3 1, 2 or 3 times/month
4 Less often
5 Never

NCDS age 42 and age 46 (variable DRINKS and N7DRINKS)
Question wording 'How often do you have an alcoholic drink of any kind. Would you say you have a drink…

1 On most days
2 2-3 days/week
3 Once a week
4 2-3 times/month
5 Less often/only on special occasions
6 Never nowadays
7 Never had an alcoholic drink

BCS70 age 30 and age 34 (variable DRINKS and B7DRINKS)
Question wording 'How often do you have an alcoholic drink of any kind. Would you say you have a drink…

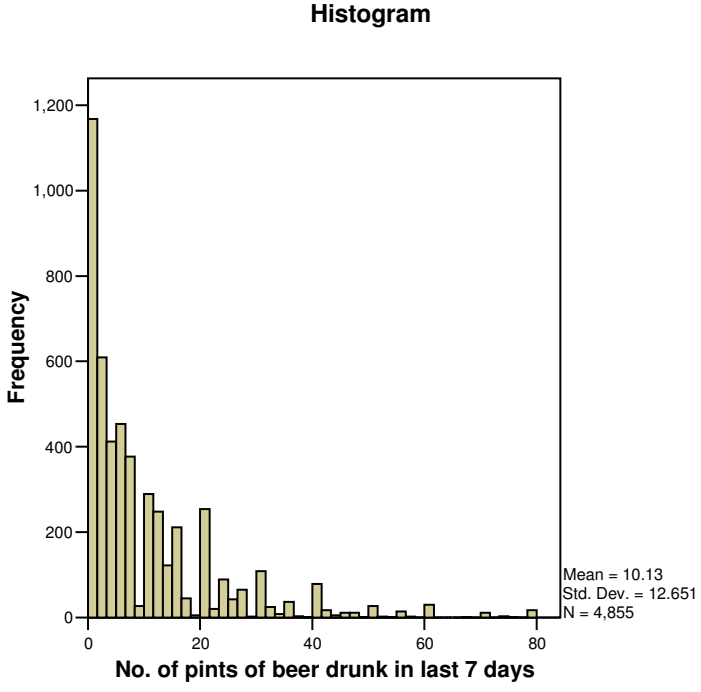
1 On most days
2 2-3 days/week
3 Once a week
4 2-3 times/month
5 Less often/only on special occasions
6 Never nowadays
7 Never had an alcoholic drink

Appendix B

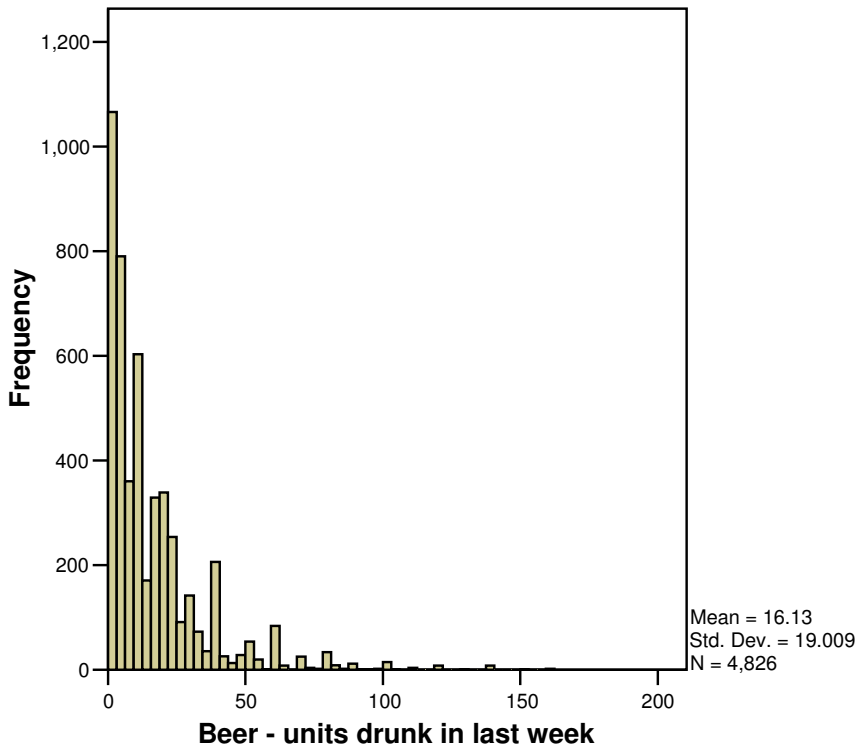
Reported beer consumption in NCDS and BCS70 2000 survey

A histogram and frequency table is displayed below to show the data for men on reported beer consumption from the 1958 cohort in the 2000 survey. It can be seen that although the data is labelled as the number of *pints* of beer drunk in the last seven days there is a tendency for even integers (2,4,6,8,10,12 etc) to appear much more commonly than odd integers (2002 men are recorded as having reported drinking an even number of pints of beer between 1 and 14 pints and only 835 men are recorded has having reported drinking an odd number of pints of beer between 1 and 14 pints). This is probably indicative of a proportion of interviewers misunderstanding the CAPI instructions, which were somewhat ambiguous, and rounding consumption to the nearest pint but then recording the data in units of alcohol and not, as intended, in pints of beer. For purposes of comparison the histogram and frequency table for reported beer drinking at age 33 in 1991 is also reproduced below.

Any problem with the recording of beer consumption in the 2000 NCDS survey is also likely to be replicated in the 2000 BCS70 survey as the CAPI protocols were identical for the questions on alcohol consumption. The frequency tables for reported beer consumption in the previous week for the 2000 BCS70 survey and the 2004 BCS70 survey are therefore also shown below. These also demonstrate that there appears to have been a mis-recording of units of beer instead of pints of beer in the 2000 survey. For example in the 2000 survey 292 (6.1%) men report drinking eight pints of beer whereas only 101 (2.1%) report drinking seven pints and 47 (1.0%) report drinking nine pints.



Men's reported beer consumption, 1958 cohort age 42, Survey 2000.



Men's reported beer consumption, 1958 cohort age 33, Survey 1991.

Men's reported beer consumption, 1958 cohort age 42, Survey 2000.

beerr No. of pints of beer drunk in last 7 days

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	868	15.4	17.8	17.8
	1	300	5.3	6.1	23.9
	2	397	7.1	8.1	32.1
	3	212	3.8	4.3	36.4
	4	412	7.3	8.4	44.9
	5	177	3.1	3.6	48.5
	6	276	4.9	5.7	54.1
	7	98	1.7	2.0	56.1
	8	279	5.0	5.7	61.9
	9	27	.5	.6	62.4
	10	278	4.9	5.7	68.1
	11	11	.2	.2	68.3
	12	238	4.2	4.9	73.2
	13	10	.2	.2	73.4
	14	122	2.2	2.5	75.9
	15	94	1.7	1.9	77.8
	16	117	2.1	2.4	80.2
	17	7	.1	.1	80.4
	18	38	.7	.8	81.2
	19	5	.1	.1	81.3
	20	237	4.2	4.9	86.1
	21	17	.3	.3	86.5
	22	16	.3	.3	86.8
	23	4	.1	.1	86.9
	24	89	1.6	1.8	88.7
	25	33	.6	.7	89.4
	26	10	.2	.2	89.6
	27	3	.1	.1	89.7
	28	62	1.1	1.3	90.9
	29	2	.0	.0	91.0
	30	103	1.8	2.1	93.1
	31	6	.1	.1	93.2
	32	25	.4	.5	93.7
	34	8	.1	.2	93.9
	35	20	.4	.4	94.3
	36	17	.3	.3	94.6
	38	3	.1	.1	94.7
	39	1	.0	.0	94.7
	40	79	1.4	1.6	96.3
	42	17	.3	.3	96.7
	44	5	.1	.1	96.8
	45	7	.1	.1	96.9
	46	4	.1	.1	97.0
	47	1	.0	.0	97.0
	48	10	.2	.2	97.2
	49	1	.0	.0	97.3
	50	27	.5	.6	97.8
	51 51 pints +	107	1.9	2.2	100.0
	Total	4880	86.7	100.0	
Missing	System	746	13.3		
Total		5626	100.0		

Men's reported beer consumption, 1958 cohort age 33, Survey 1991.

n5beer Beer - units drunk in last week

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	694	14.5	14.5	14.5
	2	372	7.8	7.8	22.3
	4	438	9.2	9.2	31.5
	6	352	7.4	7.4	38.8
	8	360	7.5	7.5	46.3
	10	320	6.7	6.7	53.0
	12	283	5.9	5.9	59.0
	14	171	3.6	3.6	62.5
	16	263	5.5	5.5	68.0
	18	66	1.4	1.4	69.4
	20	339	7.1	7.1	76.5
	22	27	.6	.6	77.1
	24	227	4.7	4.7	81.8
	26	15	.3	.3	82.1
	28	76	1.6	1.6	83.7
	30	142	3.0	3.0	86.7
	32	55	1.2	1.2	87.8
	34	18	.4	.4	88.2
	36	36	.8	.8	89.0
	38	8	.2	.2	89.1
	40	198	4.1	4.1	93.3
	42	26	.5	.5	93.8
	44	10	.2	.2	94.0
	46	3	.1	.1	94.1
	48	28	.6	.6	94.7
	50	46	1.0	1.0	95.6
	52	8	.2	.2	95.8
	54	1	.0	.0	95.8
	56	19	.4	.4	96.2
	58	1	.0	.0	96.2
	60	83	1.7	1.7	98.0
	62	1	.0	.0	98.0
	64	8	.2	.2	98.2
	70	25	.5	.5	98.7
	72	4	.1	.1	98.8
	76	1	.0	.0	98.8
	78	1	.0	.0	98.8
	80	34	.7	.7	99.5
	82	1	.0	.0	99.5
	84	8	.2	.2	99.7
	86	2	.0	.0	99.7
	88	2	.0	.0	99.8
	90	10	.2	.2	100.0
	Total	4782	100.0	100.0	

Men's reported beer consumption, 1970 cohort age 30, 2000 survey

beerr No. of pints of beer drunk in last 7 days

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	722	13.2	15.2	15.2
	1	183	3.3	3.8	19.0
	2	331	6.1	7.0	26.0
	3	159	2.9	3.3	29.3
	4	341	6.2	7.2	36.5
	5	177	3.2	3.7	40.2
	6	295	5.4	6.2	46.4
	7	101	1.8	2.1	48.6
	8	292	5.3	6.1	54.7
	9	47	.9	1.0	55.7
	10	329	6.0	6.9	62.6
	11	20	.4	.4	63.0
	12	220	4.0	4.6	67.7
	13	13	.2	.3	67.9
	14	129	2.4	2.7	70.6
	15	112	2.0	2.4	73.0
	16	152	2.8	3.2	76.2
	17	12	.2	.3	76.4
	18	43	.8	.9	77.4
	19	1	.0	.0	77.4
	20	300	5.5	6.3	83.7
	21	9	.2	.2	83.9
	22	15	.3	.3	84.2
	23	3	.1	.1	84.2
	24	106	1.9	2.2	86.5
	25	39	.7	.8	87.3
	26	19	.3	.4	87.7
	27	3	.1	.1	87.8
	28	48	.9	1.0	88.8
	30	141	2.6	3.0	91.7
	32	38	.7	.8	92.5
	34	11	.2	.2	92.8
	35	10	.2	.2	93.0
	36	24	.4	.5	93.5
	38	2	.0	.0	93.5
	40	114	2.1	2.4	95.9
	42	10	.2	.2	96.1
	44	3	.1	.1	96.2
	45	4	.1	.1	96.3
	48	12	.2	.3	96.5
	49	1	.0	.0	96.6
	50	39	.7	.8	97.4
	51 51 pints +	125	2.3	2.6	100.0
	Total	4755	86.9	100.0	
Missing	System	716	13.1		
Total		5471	100.0		

Men's reported beer consumption, 1970 cohort age 34, Survey 2004.

b7beerr Number of units of beer within the last seven days

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	733	15.8	18.2	18.2
	1	114	2.5	2.8	21.0
	2	222	4.8	5.5	26.5
	3	92	2.0	2.3	28.8
	4	297	6.4	7.4	36.1
	5	68	1.5	1.7	37.8
	6	251	5.4	6.2	44.0
	7	44	1.0	1.1	45.1
	8	261	5.6	6.5	51.6
	9	16	.3	.4	52.0
	10	266	5.8	6.6	58.6
	11	7	.2	.2	58.8
	12	195	4.2	4.8	63.6
	13	8	.2	.2	63.8
	14	124	2.7	3.1	66.9
	15	54	1.2	1.3	68.2
	16	150	3.2	3.7	71.9
	17	9	.2	.2	72.1
	18	55	1.2	1.4	73.5
	19	3	.1	.1	73.6
	20	271	5.9	6.7	80.3
	21	8	.2	.2	80.5
	22	22	.5	.5	81.0
	23	1	.0	.0	81.1
	24	98	2.1	2.4	83.5
	25	29	.6	.7	84.2
	26	14	.3	.3	84.6
	27	1	.0	.0	84.6
	28	53	1.1	1.3	85.9
	29	1	.0	.0	85.9
	30	143	3.1	3.5	89.5
	32	31	.7	.8	90.2
	33	2	.0	.0	90.3
	34	6	.1	.1	90.4
	35	15	.3	.4	90.8
	36	20	.4	.5	91.3
	38	1	.0	.0	91.3
	40	118	2.6	2.9	94.3
	41	2	.0	.0	94.3
	42	14	.3	.3	94.6
	44	8	.2	.2	94.8
	45	4	.1	.1	94.9
	46	4	.1	.1	95.0
	48	22	.5	.5	95.6
	50	44	1.0	1.1	96.7
	51 51 units +	134	2.9	3.3	100.0
	Total	4035	87.2	100.0	
Missing	-9	1	.0		
	-8	4	.1		
	-1	586	12.7		
	Total	591	12.8		
Total		4626	100.0		

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