
An analysis of the undergraduate alcohol culture at the University of Gloucestershire with particular reference to traditional and non-traditional students.

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Abstract

This research project examines the alcohol culture of undergraduates at the University of Gloucestershire in light of the expansion of Higher Education. It seeks to ascertain whether students' demographic, social and academic attributes influence their alcohol consumption in terms of volume, speed, temporality and behaviour. Data was gathered via the lecture-based administration of a questionnaire, the design of which paid particular attention to identifying traditional and non-traditional students in light of the Widening Participation agenda of the University and Higher Education in general. Chi-Square analysis and linear regression of the data provided by the 902 respondents clearly indicated two distinct alcohol cultures, distinguished by their temporality, levels of consumption and bingeing, and social composition of their participants. The first culture consumed alcohol on a Monday and/or Wednesday, and was composed of young (under 21), white, unmarried, full-time students without children or disability, that lived in University housing or in a shared house in Gloucester or Cheltenham with other students. Levels of alcohol consumption and bingeing (6.5+/8.5+ units and a drinking rate of 2+ units/hour) were very high in this culture and were accompanied by such routines as 'pre-drinking', 'fancy dress', 'drinking games', 'shot-slamming' and 'torpedoes'¹. The other culture (who drank on Friday and/or Saturday) tended to consume and binge less, and participate less in drinking routines than the mid-week students. They were older and had more social connections to non-students. In terms of residence, they either lived with their parents or with a partner and/or children; many commuted to the University. All the indications suggest that student drinking on Friday/Saturday is part of the general weekend alcohol culture and not part of an explicit 'student drinking culture'. After ANOVA regression, variables measuring residence and sport were found to be the most significant in response to alcohol units consumed (both $p < 0.05$). Studying sport, playing on a sport team and living away from the parental home significantly increased consumption on a Monday/Wednesday, and decreased it on a Friday/Saturday. It was clear that traditional students were situated in the heart of the mid-week drinking culture. If non-traditional students drank, they were much more likely to do so at the weekend. The implications of the study are two-fold: on the one hand it facilitates the targeting of hazardous drinking in terms of temporality and demographics, on the other it depicts a distinct separation in university social culture based on residence and thus has implications for those students who cannot afford to or chose not to 'go away to University'.

¹ 'Pre-drinking' refers to the practice of consuming alcohol at home before visiting licensed establishments, 'fancy dress' to the wearing of themed costume, 'drinking games' to ludic group play designed to facilitate the consumption of alcohol via schemes of reward and punishment, 'shot-slamming' to the rapid oral ingestion of spirit measures and 'torpedoes' to the rapid oral ingestion of bottles of alcoholic drink by the positioning of a straw to act as an extra-oral air conduit.

I declare that the work in this dissertation was carried out in accordance with the regulations of the University of Gloucestershire and is original except where indicated by specific reference in the text. No part of the dissertation has been submitted as part of any other academic award. The dissertation has not been presented to any other education institution in the United Kingdom or overseas.

Any views expressed in this dissertation are those of the author and represent the University only as far as a single student can be considered representative of the whole.

Signed: X Matthew James Cheeseman

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List of Abbreviations

BBC	British Broadcasting Corporation
CAGE	Cut Down, Annoyed, Guilty and Eye Opener (acronym of four alcohol-related questions that test alcohol dependency (Buchsbaum <i>et al.</i> , 1992))
GHS	General Household Survey
HE	Higher Education
HEFCE	Higher Education Funding Council for England
HEI	Higher Education Institute
HESA	Higher Education Statistics Authority
NS-SEC	National Statistics Socio-Economic Classification
ONS	Office for National Statistics
POLAR2	Updated young participation area classification (Used by HEFCE)
SPSS	Statistical Package for the Social Sciences
SRHE	Society for Research into Higher Education
STD	Sexually Transmitted Disease
UCAS	Universities & Colleges Admissions Service
UK	United Kingdom
USA	United States of America
WP	Widening Participation

1 Introduction

This dissertation is situated within a larger project designed by Dr. Margarete Parrish to investigate alcohol use at the University of Gloucestershire, a project that holds the ultimate aim of improving the health, safety and wellbeing of students. The impetus for this is the death, in 2004, of a female student at the University following an alcohol-related fall after she consumed six pints of lager, a 'dirty pint'² of spirits and a punch containing vodka, cider and lager (BBC News, 2004). She fell in her own house, before going out to celebrate her own birthday. This incident, followed by observations of student drinking led Dr. Parrish to carry out a pilot study in February 2008. Students in the Faculty of Sport, Health and Social Care were asked to complete a questionnaire in lecture time. The results revealed that over 50% of students (n=144) had 'regularly' consumed five or more drinks in one sitting over the last month, just as a majority also believed that alcohol had interfered with their academic work. Furthermore, over 50% had experienced accidents, health problems and/or personal safety issues connected to the consumption of alcohol. Shortly after this, in May 2008, a male student at the University drowned in the River Avon. He had almost three times the legal driving limit of alcohol in his blood and had been drinking for over ten hours, celebrating both the end of his exams and his forthcoming 21st birthday (The Bath Chronicle, 2008). Both were students of the Faculty of Sport, Health and Social Care.

My involvement in the project began in October 2008, once funding had been secured, and some six months after the pilot study was carried out. The day after I started the University of Gloucestershire launched a formal inquiry into a student sport club prompted by the BBC footage of a 'bizarre initiation rite' comprising drinking, vomiting and the wearing of a 'Nazi-style' uniform (Courtney, 2008). According to subsequent news reports in a variety of media, the forced consumption of excessive amounts of alcohol by Level One³ students was a prominent feature of these initiations. This was echoed by research students at the University, who personally confirmed to me that they had undergone similar rituals.

In time the University and initiations fell from the headlines, though the consumption of alcohol retained its media profile throughout the progress of this research, sometimes in conjunction with students (BBC News, 2009b), but most often in relation to the proposed introduction of a 'price per unit', with the intent of curbing problematic drinking, including youthful 'binge drinking'

² A dirty pint is a mixture of alcoholic liquids in a pint glass, designed to facilitate intoxication with little regard to taste or flavour.

³ The undergraduate years of study are referred to as 'Level One', 'Level Two', and 'Final Year' at the University of Gloucestershire.

(BBC News, 2009a). This project is thus, in terms of its timing alone, squarely situated within the national discourse on young people and alcohol. This discourse has, since the mid-1990s, focussed on binge drinking, a topic that has received considerable attention in the United States of America (USA) for some time (Wechsler *et al.*, 1994), and has produced a plethora of studies in the United Kingdom (UK), many of which exhibit confusion about its definition and concern on its social implications (Herring *et al.*, 2008; Szmigin *et al.*, 2008).

There were three components to the project, as designed by Dr. Parrish:

1. Administer another questionnaire to a larger sample of undergraduates at the University, again via lectures.
2. Enter the data into SPSS.
3. Produce a dissertation discussing some of the data.

As I have made clear, this project was carried out in a period of heightened national and local interest over the consumption of alcohol in general, and by young people especially. The debate is moral and political, with vehement opinions frequently represented in the press, who typically take an overt stance against binge drinking, especially when indulged by young and female drinkers. At the same time the media often covertly represent the consumption of alcohol in a positive manner. This helps feed the cultural belief that undergraduate students 'should drink more than they should'. Many people, especially students, view university as a time in which one should partake in excessive alcohol consumption and the culture that surrounds it (Banister and Piacenitini, 2008).

These representations are recycled in the academy. There is a loose divide between public health and alcohol research that discusses the health implications of the current situation (Bewick *et al.*, 2008b; Murgraff *et al.*, 1999; Stock *et al.*, 2009) and literatures from human geography that believe the extent of concern over drinking contains elements of moral panic (Jayne *et al.*, 2006; Herring *et al.*, 2008; Szmigin *et al.*, 2008). Certainly, any visit to a student-orientated nightclub will confirm two things: that the night-time economy appears to be in rude health, and that there are an awful lot of people having what appears to be a lot of fun. While appearances can be deceptive, there are certainly quantifiable consequences to the alcohol culture, as the deaths of both University of Gloucestershire students simply and tragically attest. The situation is complicated and emotive, and for these reasons I have decided to orientate this research away from concerns about student health. Taking into account my longstanding interest in Education Research and the expansion of Higher Education (HE), I decided to focus on a comment made by Gill (2002) in her overview of undergraduate alcohol surveys: 'Other factors which might influence drinking behaviour, e.g. student demographics, require further investigation' (p. 115). This is

echoed by Jayne *et al.* (2006) in a paper on alcohol and urban spaces: 'the relationship between drinking and constructions of gender, class, ethnicity, age and so on is a fruitful topic' (p. 465).

In the context of the continuing expansion of HE in the UK, and its common characterisation of having moved from 'elite' to 'mass' provision over the last 20 years (Trow, 2005, p. 4), the student body is, in terms of demographics, more diverse than it has ever been. A dichotomy has been used to describe this diversity, framing students as either 'traditional' or 'non-traditional'. The former is used to apply to students beginning university soon after leaving school, from middle class backgrounds and families with a history of HE. The latter are defined as those students who do not fit this familiar pattern, possessing one or more of the following characteristics: mature, from families with little to no history of HE, from ethnic and religious minorities, from lower socio-economic groups, possessing disabilities or working part-time (Select Committee on Education and Employment, 2001; Laing and Robinson, 2003). This research project examines the demographics of undergraduate alcohol behaviours in light of this diversity, a suitable topic considering the University's commitment to widening participation in its student intake (University of Gloucestershire, 2006; 2009).

1.1 Structure

The dissertation is formatted in accordance with the University of Gloucestershire's *Research Degrees: A Handbook of Regulations* (2004b) and referenced according to the guidelines given specifically for Health and Social Care students by the Faculty of Sport, Health and Social Care (Learning & Information Services, 2007). The structure of the dissertation is conventional; following this introduction, I discuss the academic record in a Literature Review and formulate my research questions before detailing my methodology and ethical considerations in the third chapter. I then present my results with reference to my research questions and objectives, offer a discussion in the fifth chapter and a brief conclusion in the sixth chapter before finally listing my references and detailing my appendices. In writing, I have endeavoured to ensure that my research questions run through the dissertation. I hope that their careful exposition, in-depth discussion and logical resolution bear the weight of the text.

2 Literature Review

This chapter is intended as a critical discussion of the relevant issues arising from the literature. As in the Introduction, I have largely referenced academic, peer-reviewed material, in addition to reports (government or otherwise) and conference proceedings. When I use sources from the media, I do so for that purpose, to represent viewpoints from the media, pregnant as they may be with hidden suppositions and wanton opinion. That is not to say that academic writers lack such appetites, rather that they are better at keeping them under control.

2.1 The expansion of Higher Education in the United Kingdom

I will discuss the UK provision of HE in a general sense, in the belief that if one is to understand the University of Gloucestershire, its students, both traditional and non-traditional, and their alcohol consumption, then one must understand the forces that have shaped them, from the general to the specific. The University is part of a long history of HE expansion in the UK. As an amalgamation of teacher training colleges, an art school and technology schools, the institution has been awarding its own degrees since the 1992 Higher Education Act. Despite tracing its history back to 1834, it formally became a University in 2001 (University of Gloucestershire, 2004a). As a result of its development the University's facilities are split between four sites, each with their own disciplinary focus, accommodation blocks and distinct location. There is no 'centre' to the University, and it is unusual in respect to other Higher Education Institutions (HEIs) in that its campuses encompasses two distinct urban areas: Gloucester, a medieval town with a lower socio-economic profile, and Cheltenham, a Regency town that has invested heavily in the night-time economy. The University occupies three sites in Cheltenham: The Park (home to the Business School, five Halls of Residence and the main Students' Union building and bar), Francis Close Hall (Humanities, Education, Environment and Social Sciences, a Students' Union bar and Halls of Residence) and Pitville Studios (home to the Faculty of Media, Art and Communications, a Students' Union Bar and Halls of Residence). Oxstalls is based in Gloucester and is home to the Faculty of Sport, Health and Social Care, a Students' Union bar and Halls of Residence, in addition to sporting facilities. A bus network connects all sites with other Halls of Residence based elsewhere in Gloucester and Cheltenham.

Under Trow's (1973) three-fold modelling of HE systems as elite, mass and universal Gloucestershire became a university in the period in which the UK moved from a largely elite to a largely mass provision of HE. This process, often termed 'massification' has been rapid: HE enrolments grew from c. 130,000 in 1962 to 2.1 million in 2000 (Trow, 2005, p. 4), with most of

this growth occurring post-1988. This trend shows no sign of decelerating, especially with the present government aiming for a 50% participation rate of young adults in HE by 2010 and record numbers of University applications for the year 2009/10. Expansion is an enormous influence on many of the factors discussed in this dissertation, not least of all the University itself: without it, neither university nor, indeed, dissertation would exist.

Such extensive growth has not come without significant cost. With the decline in per capita student support from the government, the UK education system has moved towards the American model, which 'sustains internal diversity in costs and quality as well as in forms and functions' (Trow, 2005, p. 43). This shift has been accompanied by the entrenchment of a consumerist framework, heralded by the introduction of student fees and their relationship to value-for-money: 'Consumerism was introduced in order to address the perceived problems of translating an elite system into a mass system of higher education' (Naidoo and Jamieson, 2005, p. 279). This has had a number of effects. Education is now framed as a preparation for employment post graduation (Harvey, 2000) and on an academic level, the association of institutional funding with research and closer ties with industry and capitalism have led to a commercialisation of the academic culture (Willmott, 2003).

The effect of the larger economic and political climate on the student experience has been studied by Teresa Dale (2006). She concluded that the promotion of market forces and a market philosophy within education has transformed the attitudes of students, who were found to be increasingly isolated, calculating and consumer-orientated towards both their education and social lives. The introduction of markets to universities and their effect on the manner in which students and academics experience education is famously explored by Ronald Barnett (1999), who recognises that the super-complex university is an uncertain and emotionally challenging place to be.

Expansion has brought dramatic change to the composition of the student body. Simply put, the transition to a mass HE system has significantly broadened the type of people that experience university, and also the ways in which students experience it. This is a crucial justification for the continued expansion of HE in the first place (and has been since the Robbins Report in 1963) and, despite the problems associated with expansion outlined within this section, is consistently presented as a positive and worthwhile goal: 'We must make certain that the opportunities that higher education brings are available to all...' (Department for Education and Skills, 2003, p. 73). Academics tend to believe that there is more left to be done, in education and elsewhere: 'Overall, the literature on access to higher education sends the message that there is social inequality' (Vernon *et al.*, 2002, p. 6).

'Widening participation' (WP) has become the phrase by which this idea has been encouraged by the government as an item of policy, as first seen in Dearing Report (1997), the Higher Education Funding Council for England (HEFCE) reports on *The Participation of Non-Traditional Students in Higher Education* (1997) and *Supply and Demand in Higher Education* (2001), the Higher Education Act (2004) and the national Aimhigher initiative amongst others. The students that WP programmes seek to attract are often termed non-traditional students, in contrast to traditional students. This dichotomy is a notorious simplification: non-traditional can stand for many inequalities, as demonstrated by a 2006 report to HEFCE:

...time (and age), place, sex, ethnicity, first language, parental (and sibling) social class, parental education, type of school attended, housing tenure, health/disability, criminal activity, learning difficulties, family structure and religious background.

(Gorard *et al.*, 2006, p. 22)

Vernon *et al.* (2002) discuss how complicated and impenetrable the interplay of factors such as gender, ethnicity, social class and parents' level of education can be in determining young people's access to HE, highlighting the fact that it is hard to ascertain which factors are the most influential. A cohort of mature students could be, for example, from a spectrum of socio-economic backgrounds, traditional and non-traditional. Furthermore, as expansion has affected the middle class too, a student could be 'traditional' in terms of profile: parents, class, 'race', and yet would not have gone to university pre-expansion. As shorthand, however, the traditional/non-traditional dichotomy has its uses, for it neatly sums up the process of change that is occurring in UK HEIs, connecting the demographic effects of WP, and highlighting the work that remains. After all, the disparity between HE statistics and policy rhetoric remains a cause for concern when the 'most advantaged 20% of young people are up to six times more likely to enter HE than the most disadvantaged 20%' (Brennan and Osborne, 2008, p. 180). The last government report to address the issue commented:

People from lower socio-economic backgrounds make up around one half of the population of England, but represent just 29 per cent of young, full-time, first entrants to higher education.

(National Audit Office, 2008, p. 6)

The University's WP policy is a key element of its strategic plan for the 2009 – 2012 period, which aims to deliver a 'sustainable university' (University of Gloucestershire, 2009). As such, the University recognises its local role in the provision of education and in doing so differentiates itself from elite institutions that compete for students on a national and international level.

Research has indicated that students who are older, from a racial minority and/or from poorer backgrounds tend to go to less prestigious institutions than the middle class (Reay *et al.*, 2001; Brennan and Osborne, 2008). If this is so, an institution such as Gloucestershire, which ranks towards the lower half of the mid in most league tables (74 of 113 by The Complete University Guide (2009), 75 of 136 by Push (2008), 68 of 113 by The Times (2009)), might expect to receive a larger proportion of these students than more prestigious, older institutions. This is supported by Holdsworth (2009), whose research indicates that 'student mobility' is an elite practice. She states that the expansion of HE is concomitant with a trend for localised study. Indeed, in terms of locality, there is a growing body of evidence that indicates a direct relationship between low socio-economic status and local HE study (Gorard *et al.*, 2005; Holdsworth, 2006).

Since the advent of the HE consumer culture and the loans that pay for it, attending university has been accompanied by increasing debt. Acceptance of significant debt has become a cultural standard, with students becoming more debt tolerant through their university careers (Scott *et al.*, 2001). Research has consistently shown that mature students and students from lower socio-economic backgrounds entertain greater debt than traditional students (Gorard *et al.*, 2005), and that non-traditional students have suffered increased hardship since the introduction of fees, despite the availability of bursaries, which confuse many (Gorard *et al.*, 2006). Humphrey (2006) compared students from advantaged backgrounds with those from disadvantaged backgrounds and found that the latter were more likely to be in paid employment and have less time for socialising and non-academic activities. This was echoed by Cooke *et al.* (2004), especially in final year studies when 30% of advantaged students were employed compared to 50% from disadvantaged backgrounds. Universities & Colleges Admissions Service (UCAS) data (Papageorgiou, 2008) supports studies suggesting low-income students stay at home as a debt-avoidance strategy (Patiniotis and Holdsworth, 2005).

In terms of integration within the student group Forsyth and Furlong (2000) found a number of factors that restricted younger students from a lower socio-economic background: finance, social isolation, living at home (thus limiting social activities) and conflicts of identity, in that working class students did not feel the student identity was available to them. Such a belief is reminiscent of the distance between town and gown which David Whisnant characterised in 1972 as 'intellectual and psychological (and usually economic)' (p. 88). A comprehensive 2006 Report to HEFCE, *Review of Widening Participation Research: Addressing the Barriers to Participation in Higher Education* concludes that class 'should be the focus of future widening participation research' (Gorard *et al.*, 2006, p. 92). In its recommendations for future research, the same report suggests that 'local students... often live at home and experience specific problems with integrating socially' and would also merit particular attention (Gorard *et al.*, 2006, p. 118).

These goals recognise a challenge that is not insurmountable. The same sense is missing from the literature on the social integration of mature students. Christine Lusk (2008, p. 109), in her thesis on the social construction of the mature student accepts the possibility that,

'...the common experience of study offers a unifying culture post-arrival at the institution is one which is worthy of consideration, but one of age is a different matter... Mature students could be expected to be marginalised because their status, age, financial limitations or family commitments prohibits them from joining the "master"/mainstreamed group because of age.'

Such a finding, backed up by extensive qualitative research is key for this dissertation, for it suggests that mature students differ from the mainstream student body in a way that traditionally-aged but economically disadvantaged students and students from ethnic minorities and disabled students do not. Lusk categorises mature students as an 'out-group' or a deviant group in respect to mainstream students, possessing the challenges of age, family commitments and financial obligations. Other research indicates disabled students are similarly placed (Duquette, 2000). For both disabled and mature students, the latter usually with extensive external lives, full involvement in student life is simply 'not an option' (Lusk, 2008, p. 133). Even 'young' mature students, just over the age of 21, expressed difficulty in fitting in with the mainstream student culture, while 'mid-life' students felt a sense of alienation (Lusk, 2008, p. 222-223). Similarly, disabled students experience problems identifying with the wider student body (Gorard *et al.*, 2006). Despite university publicity describing student life as 'one great fun opportunity to live in a community of like-minded people, studying and socialising together' (Lusk, 2008, p. 223), mature students felt set apart from the younger student's social life.

Personal responsibilities, transport and lack of a residential base in town prevent participation in other non-alcohol based extra-curricular activities. This last point is key; 'geographical location was a clear structural restraint... [meaning] exclusion from residentially based socialising" (Lusk, 2008, p. 238-239). Commuting students found exhaustion a problem, and mature students, when they did live on campus, felt that they did not fit in: "...giggling partying people during the night don't make things any better." (Lusk, 2008, p. 239). Although Lusk supports her findings with fieldwork carried out at the University of St. Andrews, they are supported by more generalised research detailing the disparity between mature and traditional students (Reay *et al.*, 2002).

As one would expect then, the demographics of the local area affect the variety of students the local HEI takes in (HEFCE, 2005). The demographics of Gloucestershire and the surrounding region

are thus relevant to this project. Indeed, like all HEIs, the University of Gloucestershire has developed its own policy towards WP, last reviewed in March 2009. This states:

The University's commitment to widening participation will ensure that particular attention is paid to the following groups of low participation students at all stages of the student life cycle;

- students from socio-economic classifications 4, 5, 6 and 7⁴
- students from low participation neighbourhoods (POLAR2)⁵, and
- disabled students

(University of Gloucestershire, 2009, p. 3)

The University's outreach programme is focussed on schools, local areas and priority groups identified by the government initiative Aimhigher. Ethnic minorities are only a priority through the low participation neighbourhood scheme mentioned above, and not a specific growth target. This is because the local and regional population is predominantly white (Miller, 2009). 'Mature students' are not listed as a target, as they are in the 2006 policy (p. 2). In part this is due to significant problems in identifying 'mature' students.

The Higher Education Statistics Authority (HESA) still classify mature students as those aged 21 or over at the beginning of their undergraduate degree, as used to be the case within universities before age discrimination legislation dissolved any legal distinction in relation to HE (Department for Trade and Industry, 2006). Indeed, the term 'mature' is falling out of favour, and the University of Gloucestershire is considering using 'Qualified by experience', a term gaining currency elsewhere (Miller, 2009). From an admissions perspective the University cannot legally make any distinction in terms of age and thus has no WP age-related targets. There is, however, a financial differential that is tied to age: students who are 25 and above are classified as 'Independent', meaning that the student and not the parent is means-tested by the Local Authority in order to assess eligibility for financial support. Those students who are married, with children or able to prove they have supported themselves for 3+ years are also classified as Independent. Older students thus find themselves in the position of being financially and socially distinct from traditional students, but not legally or even institutionally distinct, a situation that is paradoxical.

⁴ Students from 'Small employers and own account workers', 'Lower supervisory and technical occupations', 'Semi-routine occupations' and 'Routine occupations' respectively, according to the National Statistics Socio-economic Classification scheme (NS-SEC). See 3.1.1.1.

⁵ An area-based classification scheme that measures participation rates of young people in HE. Produced by HEFCE from data taken from the period 2000 to 2004.

2.2 Traditional student life

There is an extensive literature on student pedagogies, but very little on the day-to-day life of students, especially when those aspects do not predominantly feature learning (Lusk, 2008; Silver *et al.*, 1997; Sparkes *et al.*, 2007). WP scholarship has introduced qualitative work on marginal groups such as mature students (Lusk, 2008) and students from lower socio-economic groups living at home (Holdsworth, 2006) but precious little material exists on 'traditional students', with the notable exceptions of Chatterton (1999), Kenyon (2000) and Sparkes *et al.* (2007). Chatterton discusses elite students at the University of Bristol in terms of their cultural, temporal and spatial interface with the city. Kenyon considers the temporal impact of students in Sunderland as they interface with their local community while Sparkes *et al.* have produced an ethnography of sports students that concentrates on alcohol. The work of these academics has been particularly influential on my own research into student life (Cheeseman, 2008), in which I have drawn on discourses of temporality, community and identity along with studies of the night-time economy, particularly that of Chatterton and Hollands (2003).

Earlier definitions of traditional students highlighted 'privileged social and economic backgrounds' and 'fee-paying, private schools' (Chatterton, 1999, p. 118). This has since changed; Lusk (2008, p. 349) defines traditional (or 'Mainstreamed') students as:

[T]he body of students who are not categorised as "Independent", "Mature", "Disabled" or registered with special needs. They will come to university as school-leavers, under the age of 21, and will have neither dependents nor spouses, instead relying on part of their funding to come from parental sources.

Lusk's definition effectively accommodates the acceptance of debt in the provision of HE amongst 'traditional students' (see 2.1) and tacitly acknowledges the expansion of the middle class in the last ten years, and the fact that being middle class (and a traditional student) does not necessitate attendance at fee-paying schools.

Despite methodological difficulties (and differences) the writers mentioned above have often referred to the same theoretical framework to describe the mentality of traditional student life: Pierre Bourdieu's work on *habitus* (Bourdieu and Nice, 1990; Bourdieu and Passeron, 1990). Bourdieu, though having written on students, discusses the term generally, using it to refer to an individual or group's accumulated social and cultural behaviours, the tastes and inclinations inherited, fashioned and adopted from other members of the group or those who have gone before. Within the UK HE scholarship that relies on Bourdieu's *habitus*, non-traditional students

are often cast as the 'other' against the traditional student *habitus*, as Lusk (2008) does for mature students, Chatterton (1999) for lower socio-economic students and Holdsworth (2006) for non-residential, non-traditional students. Of the three, only Chatterton considers the composition of the *habitus*, although Holdsworth comments on its heavily mediated nature.

Both Chatterton and Holdsworth identify the 'residential tradition' of HE in England in Wales as a framework for developing the spaces that support the *habitus* of student life. Indeed Chatterton (1999) believes that the English tradition of going away to University is the key pre-requisite for its development. Silver (2004) discusses the long history of HEI residential provision in the UK, and especially England, noting how that provision is tied to conceptions of what a university should be. Halls of Residence dominated twentieth century residential provision, and indeed the University of Gloucestershire has fifteen of them. The physical structure of these Halls form students into friendship group based on corridors or flats. In reference to this, it is noted that qualitative research has indicated that the small peer group forms the social context for binge drinking amongst young people (Engineer *et al.*, 2003).

Residential students typically spend their first year in Halls before living in rented accommodation in subsequent years, often going home to their parents outside of term time. The consequent patterns of student residence and migration within towns lie at the heart of Smith's influential concept of studentification, which explores the cultural, social, economic and physical impact of students upon areas (Smith and Holt, 2007). This is supported by Kenyon (2000) who emphasises the temporal qualities of the student pattern of residence, noting the seasonal rhythm based on term times and further discussed by Smith and Holt (2007), who clearly highlight the importance of residence: 'studentification is bound-up with the HE system of "young" adults moving away from their parental home to study in another location, and is tied to the supply-demand nexus which results in HE students often entering the private rented housing market' (p. 88). Chatterton (1999) agrees that the mental and social *habitus* is regulated by physical sites: the pathways of student venues and student places (residential and entertainment-centred) that 'weave distinctive time-space patterns through certain areas of the city' (p. 129). Such a network is formed to promote the habits, fashions and activities that students are interested in, whilst enhancing the safety of the network by eliminating potentially violent non-students (Winlow and Hall, 2006). This last point is pertinent because the consumption of alcohol is such a prominent feature of the student *habitus* that both nightclubs and pubs have developed their own provision for student entertainment, thus avoiding antagonism between students and 'locals' (note how the terms imply that students cannot be locals).

Referring to HE expansion, Chatterton (1999) comments, 'Many universities, then, offer a much weaker regulatory framework for student life' (p. 130). In the wake of expansion, he hypothesises:

[C]lass-based strategies will evolve to maintain the value of a university experience. Bourdieu and Passeron (1979) describe this process as 'creative redefinition' in which the middle- and upper-classes are likely to colonise the residential student experience at Britain's older universities as a strategy to distance themselves from a less socially valuable stay-at-home university experience. In this context, traditional student lifestyles are, to an even greater extent, identified by their physical mobility and will be based upon the 'finishing school' model at the old and elite universities compared to the less mobile non-traditional students whose experience of university life is more akin to the 'service-station' model at the new universities. The 'old' universities, then, will retain the legacy of a collegiate, residential student experience and post-in loco parentis structures which continue to isolate traditional students from the community.

(1999, p. 131)

This becomes a pertinent topic for investigation given the University of Gloucestershire's status as a 'new' university (indeed it did not exist at the time Chatterton was writing). How much has the student experience at the University of Gloucestershire developed along the non-traditional path suggested here? Does the University of Gloucestershire have a residential student experience? That alcohol may be a good way of investigating this is clear from Chatterton's emphasis that 'drinking, drugs and music' is a major draw of the modern city centre for traditional students. He quotes Hollands (1995, p. 1) that 'different forms of social interaction expressed in the night-time economy, including group drinking rituals, fashion, music, and dance and drug cultures are, in essence, modern equivalents of community' (Chatterton, 1999, p. 131). Considering this, Chatterton hypothesises a two-tier system of stay-at-home universities and traditional residential universities. This is supported by Smith who suggests that 'studentification' may be 'confined to university-towns with prestigious HEIs' (2007, p. 87).

However, the 2001 census data does not seem to suggest that they are correct in their assumptions and predications: St. Paul's in Cheltenham is listed as the 25th most 'studentified' ward in England and Wales with 266 of 2,285 (11.64%) households being occupied by more than one student (Hubbard, 2008, p. 326). To give some perspective, there are only 103 out of 8850 wards in the whole of England and Wales where the percentage of students is above 5%. Perhaps a more apt question would be, have the middle- and upper-classes 'colonised' the residential student experience at the University of Gloucestershire and distanced themselves from the stay-at-home students? Investigating the consumption of alcohol at the University may illuminate

aspects of this issue, especially if it demonstrates the existence of separate or distinct alcohol cultures amongst residential students, and 'local' students. If this is so, then one could assume that processes of studentification, already implied by the 2001 census results are occurring. Analysing the nature of the alcohol culture at the University, as per my research questions, may contribute towards understanding whether Chatterton and Smith are correct in their suppositions about the impact of HE expansion on towns, and may broaden their findings to 'new' universities.

Of course, the impression one gains from the majority, (even the entirety) of the literature, is that students consume, and are involved in the business of consuming alcohol, often to excess. There is very little, if any, reference in any of the above research that confirms a quantitative link between alcohol and students: it seems to be culturally assumed, or deduced from qualitative evidence. Such quantitative studies do exist, as detailed in the next section, but it is interesting to note that none of the academics discussed above feel a need to labour the presence of the link between students (especially traditional, mainstreamed students) and the consumption of alcohol. Holdsworth (2006) draws our attention to the mediated nature of this link, and questions whether the fun-loving, party going image of the student is, in fact, accurate, but the point remains: the common perception of the traditional student is that of a drinker. This is frequently confirmed by depictions of students in the media (for example Whipple (2009)).

Keane (2008) has related the consumption of alcohol to WP in Ireland by discussing students' dedication to academic work and their social life. She found that the relationship between academic commitment and social commitments is proportional. For example, WP students largely looked at HE as a privilege, consciously 'mainlining' their academic commitments and 'sidelining' their social ones. Wanting a good degree, and not friends and a good time, WP students effectively compartmentalised their lives and kept social activities away from university. Most traditional students equalled their commitment to their academic and social experiences, and a few mainlined the social and sidelined the academic. Chatterton (1999) also draws our attention to the relationship between work commitments, social commitments and alcohol intake.

Sparkes *et al.*'s (2007) ethnographic account of the culture of sports students at an HEI where sport has been and remains an academic focus presents the link between students and alcohol into sharp relief. Although he does not generalise or comment on the culture of non-sports students, the resultant observations are relevant to this study, not only because they explore some elements of student culture, but also because the University of Gloucestershire has a large and active sports culture. Again, the concept of *habitus* is much used by Sparkes *et al.*, indeed an 'in-crowd' is certainly identified, access to which is only via 'participation in a range of overtly hegemonic behaviours' (2007, p. 297). Many of these behaviours are 'twice behaved' (Denzin,

2003), they 'feel original to the novitiate but are an imitation of others who have gone before' (2007, p. 297). Initiations, hazing and other associated behaviours are all examples of these hegemonic activities, which the authors term 'structured and structuring' practices. One of these is simply, 'Excessive alcohol consumption and associated behaviours are obligatory' (2007, p. 308). This is the strongest qualitative link between alcohol and students in the literature, in terms of both consumption and the behaviours associated with that consumption, and is notable given the media outcry over the sports club initiations that heralded the beginning of this study.

As discussed by Kenyon (2000), within the *habitus*, the temporality of student life is highly regimented. This operates in relation to alcohol intake in several ways. Broadly speaking, consumption is typically higher in the first two years and drops by the third year (Chatterton, 1999). As a social experience, the first year is more unitary, the second year liberating (usually represented by moving out of student accommodation) and the final year work orientated. Within each year there are times of extraordinary drinking: from abstinence before the exams, to excess in Fresher's Week (the levels of consumption in Fresher's Week have been subject to national concern and were rumoured to be subject to imminent UK Government national regulation (Jennings, 2008)). These times of extraordinary consumption are mentioned with reference to alcohol surveys by Gill (2002). As indeed, are assignment 'hand-in' dates, or final exam days (Guise and Gill, 2007), which students celebrate, because they have 'worked for it'.

Alcohol enjoys a high status in student culture, attained due to its perceived function as an intoxicant and social lubricant (Banister and Piacenitini, 2008). This is demonstrated by the preponderance of personal experience narratives centred around the consumption of alcohol. These stories have been noticed by Health researchers (Szmigin *et al.*, 2008), most notably Guise and Gill (2007), in the process of carrying out discourse analysis on interviews. They point out how individual students will often use 'we' instead of 'I' when telling stories or discussing when they drink alcohol, demonstrating the importance of the social aspects of alcohol consumption. Of course, not all students drink, and a significant minority do not drink to excess. University is not three years of excess, at least not for most, but the experience of excess is engrained within the self-generated narratives of the student experience which, in turn, influence our mediated conceptualisations of 'students' and so on in a reciprocal process (Holdsworth, 2006). The work of Chatterton (1999) and Sparkes *et al.* (2007) confirm that much social capital can be gained through the excessive consumption of alcohol. Part of this is derived perhaps from its confidence giving attributes, often mentioned by young drinkers (Engineer *et al.*, 2003). Alcohol also has a cultural role as an aide or prelude to sexual activity. Indeed sex, or the promise of sex, is frequently encountered at nightclubs and pubs, and is one of the chief lures by way of which the night-time economy sells its chief product, alcohol (Chatterton and Hollands, 2003).

2.3 Alcohol

As I have been writing this literature review I have been listening to BBC Radio 4 in the background. Alcohol consumption and especially 'binge drinking' are regular topics of discussion. As I am writing this section, an announcer, introducing a programme has commented, 'The issue of binge drinking is rarely out of the headlines at the moment. It is something everyone has an opinion on'. A university student in that programme went on to say, 'You come to uni there's this whole idea, you work hard, you party hard'. She believed that suggestions that students should cut down on their binge drinking fail to understand who and what students are (Gerbeau, 2009). This comment is one of many broadcast by the media; a recent study counted 703 mentions of alcohol over a 12 hour period on six radio stations across England, 45% of which encouraged drinking (Daykin *et al.*, 2009). Such mediated discourses can be interpreted as representations of the alcohol business: an international, globalised concern dominated by a few, often collaborating corporations generating profits of billions of pounds from branded products embedded in the life, lifestyle and identity of consumers on the basis of innovative and pervasive marketing strategies that public health literature struggles to keep up with (Jernigan, 2009). Behind every sip of beer in the student bar, behind every comment on the radio, lies a complex network of capital, vested interest and research; data, claim and counterclaim, that would be impossible to summarise in the space afforded in this dissertation.

In 2000 the UK was placed in the second largest geographic group in terms of global consumption, after the Russian Federation and the Ukraine (Rehm *et al.*, 2003). Both the young and the adults of this group, the 'commonly intoxicated Northern Europeans' are 'far more likely to consume alcohol in relatively heavy sessions' (Plant and Miller, 2001, p. 514). Globalisation seems to be converging patterns of drinking towards these standards, and with that deteriorating healthy drinking habits, especially in Europe, where young people are most at risk because 'drinking is promoted as a lifestyle in association with recreation, fun and partying and other evening activities' (Rehm *et al.*, 2003, p. 154). As such alcohol has become the chief legal commodity of a thriving night-time economy reliant on young people as its consumers (Winlow and Hall, 2006). The health implications of these trends are considerable and wide-ranging, from increased risk of accidents to cardiovascular outcomes, and have generated a significant interdisciplinary response, often counselling that the global trend in alcohol consumption should be reversed (Rehm *et al.*, 2003). This, in turn, has provoked a response from the alcohol industry, a feature of which has been the formation of pro-alcohol pressure groups. Alcohol companies operating in the UK, along with supermarkets and the pub trade have formed Drinkaware, an organisation that lobbies the government and seeks to promote commerce-friendly alcohol policies.

In the history of alcohol and the alcohol business the UK has a long and well-documented involvement with the drug. Stories and anecdotes concerning the tradition of drinking continue to be published in popular histories of alcohol (Linnane, 2008). Appeals to the past are however, all about the present, and indicative of current concern over justifying drinking patterns. Public discourse (which is manipulated by the alcohol industry through advertising) links narratives of drinking with fun and having sex (Plant and Plant, 2006) which contribute to an already acculturated attitude towards consumption, which presents, in the face of research and lived experience on its negative consequences, an essential paradox, that 'concerns about youthful drinking appear to be at least modified, if not actually countered, by the prevailing positive view that young people have about drinking' (Plant and Miller, 2001, p. 515).

Less popular readings of drinking can be found in the wealth of statistics collated by the government and other bodies concerned with consumption. The General Household Survey (GHS) administered by the Office for National Statistics (ONS) has been measuring alcohol consumption since 1971 on a number of different rubrics. The last published survey on alcohol is for statistics collected for the year 2007, in which information on drinking in the previous seven days was taken. The survey collects information on those who drank up to 4 units a day, more than 4 and up to 8 and over 8 for men, and up to 3, more than 3 up to 6 units and more than 6 units for women. Young people are categorised as 16-24 years old in the surveys and students are not specifically accounted for. Given the national concern over alcohol and young people, it is surprising to see that for the last set of published statistics older people tended to drink more often than younger people, and married people tended to drink more than unmarried people. Those men and women of higher social class, higher income and higher economic activity all drank more, both in terms of frequency and consumption than those of lower class, income and economic activity. Men drank more than women in almost all cases and groups and over a third of adults (37%) exceeded the daily limits for regular drinking on at least one day during the week before interview. More young people (aged 16-24), male and female drank heavily (more than 8 units) than any other age group (Robinson and Lader, 2009).

The ONS Opinions (Omnibus) survey operating on behalf of the Department of Health also collates statistics on drinking, with a much smaller sample size than the GHS. Their most recent report (Lader, 2009) found that the total average alcohol consumption per week was 12.7 units. People typically drank on at least three days a week, while 10% drunk everyday, and 16% not at all. Overall 38% of men and 25% of women had exceeded recommended daily benchmarks of 4 units for men and 3 units for women. Young people (aged 16-24) were found to be far more likely to be drinking in groups than alone, while this pattern was reversed with old people (65+).

The Joseph Rowntree Foundation have collated the results of seven national cross-sectional primary studies repeated on a regular basis (including the GHS) to highlight trends in alcohol consumption over the last 20-30 years and 'describe how they vary according to age, sex, ethnicity, socio-economic status and geographic region' (Smith and Foxcroft, 2009, p. 2). Over this period there is a notable increase in drinking among middle and older age groups and a notable increase in drinking amongst women:

An examination of trends over the last 15 to 20 years indicates that it is generally the drinking behaviour of women that has increased towards that of men... This might be interpreted as one expression of the historically recent emancipation of women in Western society, the pressure of positive advertising and also the increased financial security and independence of women.

(Smith and Foxcroft, 2009, p. 2)

Interestingly, the authors discuss a possible recent decrease in drinking among 16-24 year olds (since 2000), and a fall of heavy drinking (twice the recommended daily limit in one session) among men aged 16-24, concomitant with a rise of 7% in women, (meaning that general rates for 'binge-drinking' were consistent between 1998 and 2006):

At first glance, this apparent recent downward trend may seem counterintuitive: this age group has the highest consumption if one compares prevalence or unit consumption across ages, so the often cited message is that drinking is highest in young adults. That message still holds, but in the past few years this age group may not have been drinking quite as much as in preceding years.

(Smith and Foxcroft, 2009, p. 3)

It should be noted that variability of consumption is highest in this age group, which explains the authors' reluctance to describe this as a 'convincing downward trend'. It is, though, 'consistent across different surveys and different consumption measures' (Smith and Foxcroft, 2009, p. 3).

2.3.1 Binge drinking

Just as very little alcohol research published in the UK over the last ten years has avoided the term 'binge drinking', very little alcohol research published in the UK over the last ten years has managed to agree on a single definition (Herring *et al.*, 2008). Binge drinking, or Heavy Episodic Alcohol Use (Wechsler *et al.*, 1998), or Risky Single Occasion Drinking (Murgraff *et al.*, 1999) has been used to refer to:

- ∩ Five consecutive drinks in one sitting for men, four for women (Wechsler *et al.*, 1998)
- ∩ 10 units per drinking session (Jefferis *et al.*, 2005)
- ∩ 8 units of alcohol for men, 6 for women (double the daily Department of Health recommended limits) (Measham and Brain, 2005).
- ∩ Drinking to get drunk (Prime Minister's Strategy Unit, 2004)
- ∩ Other subjective, qualitative definitions (Engineer *et al.*, 2003; Guise and Gill, 2007)

Despite the differences between these descriptions, it is clear that the term now refers to a single session of drinking, which has not always been the case (Plant and Plant, 2006). However due to the significant differences in definition and reporting (which will be discussed in 3.1) there has been some difficulty in comparing data, despite similar methodologies (McAlaney and McMahon, 2006). As Herring *et al.* (2008) comment, 'The "cut off" points for binge drinking... vary and this has profound implications as the number of people defined as "binge drinkers" will depend upon the cut off used' (p. 477). The authors make the point that definitions employed by government research are more important than those used by academic research, as the government research supplies the official figures. This is complicated by different definitions in government statistics (between the GHS, as mentioned above, and the Health Survey for England for example) and different definitions by government stakeholders (such as the Cabinet Office and the Department of Health) depending on institutional agenda. At time of writing, there are still no consistent academic or government criteria for defining binge drinking, although the term remains much used. This is a direct consequence of the great range of variables that can influence what could be referred to as a binge.

One variable often discussed is the period of time in which drinking occurs, which some academics emphasise more than others (Gill, 2002). Hammersley and Ditton (2005) frame this in terms of 'drinking rate', explaining that if the rate is below a certain threshold (which, in turn, will be dependent on other factors such as body mass and the amount of food consumed), the body metabolises enough of the alcohol consumed to ensure that drinkers are not, in fact, getting

progressively more drunk: 'In defining a binge, drinking rate needs to be considered. Quantity alone produces a threshold for an alcohol binge which is too low to make sense to some drinkers' (p. 498). Of Hammersley and Ditton's sample (n = 291) 13% were drinking at least 2 units per hour, enough to qualify as intoxicated. Other factors influencing the definition of a binge include food consumed, body mass, drinking environment, motivation and mood of drinker (as summarised in Van Wersch and Walker, 2009). In terms of body mass, Hammersley and Ditton (2005) found that 'Men drank more than women, but after adjusting crudely for body size and the recommended upper limits of intake for men and women, men and women's drinking did not differ' (p. 498). Health consequences of binges include accidents and violence (Winlow and Hall, 2006), risky sexual behaviour, Sexually Transmitted Diseases (STDs) and unplanned pregnancies (Standerwick *et al.*, 2007), although it is not always clear how often and at what intensity a drinker needs to binge to incur these consequences (Kuntsche *et al.*, 2008).

Despite all these risks, the key point is that however one chooses to define a binge, it is not, in itself, a novel way of drinking: 'It has been the pattern in the United Kingdom for centuries' (Plant, 2004, p. 905). The majority of the current literature certainly associate binge drinking with young people, even though studies suggest that bingeing is common throughout adulthood (Herring *et al.*, 2008). Recent research has focussed on outcomes, such as the social and health consequences of bingeing, as these avoid the measuring difficulties outlined above. There has also been qualitative research into binge drinking in the UK. An extensive government report issued in 2003 was composed of focus group interviews with 123 young people (Engineer *et al.*, 2003), and highlighted the fun young drinkers derive from engaging with episodes of disorder whilst drunk. Discourse analysis on Scottish drinkers (Guise and Gill, 2007) indicated the extent that binge drinking is positively presented and socially encouraged by young people, while a recent attempt at using grounded theory produced a 'conditional matrix' of binge-drinking (Van Wersch and Walker, 2009). A conclusion of all these studies is that people, especially young people, believe that binge-drinking is a highly enjoyable, largely positive, traditional activity that has long been acculturated into UK society. To quote Engineer *et al.*:

Young binge drinkers enjoy drinking alcohol and being drunk. Few feel that their drinking habits are something that they should change, even when they have been involved in various forms of risk or disorder as a consequence. Indeed, episodes of risk and disorder are often viewed as part of the excitement of getting drunk with friends.

(Engineer *et al.*, 2003, p. v)

The commonality of this belief prompted Van Wersch and Walker (2009) to emphasise that binge-drinking is '*the way to socialise and to have fun*' (p. 131) and ask, in the face of engrained belief in

its attractions and the acceptability of its consequences, 'Is there an alternative to binge-drinking as a form of fun and social enjoyment, and if yes, what is it?' (p. 132).

There is a strain of academic thought, summarised by Measham and Brain (2005) that interprets the literature on binge drinking as moral panic on youth and intoxication, a variation on the perennial 'binge and brawl' phenomenon that links 18th Century gin and debauchery to the 'lager louts' of the 1980s (see also Jayne *et al.*, 2006; Szmigin *et al.*, 2008). Measham and Brain argue that this interpretation is simplistic by identifying developments in the last 10-15 years that 'suggest a new culture of intoxication may be developing in the UK' (2005, p. 265). Of essential importance to this development is the hypothesis that,

'[T]he shift from alcohol to dance drugs and dance clubs for a significant minority of young people in the late 1980s and early 1990s concerned the alcohol industry enough for them to reconsider and re Commodify alcohol as a psychoactive product to appeal to young adults.

(Measham and Brain, 2005, p. 266)

Coupled with a process of normalisation towards illicit drugs occurring beyond the dance floor and changes to the demographics of drug use, Measham and Brain argue that altered states of intoxication have become a weekend leisure goal. This argument, that the UK has moved 'from an industrial to a post-industrial alcohol order' (p. 267) is especially pertinent as it relies on the same shift in society I commented on earlier in relation to HE: the processes of commodification and commercialisation. They demonstrate their convincing argument with four transformations:

1. The range of re Commodified high strength alcohol beverages introduced from the early 1990s on, such as high-strength beer, 'alcopops', 'shots and shooters'⁶.
2. The strength of beers and wines has increased by up to 50% in the last 10 years.
3. Alcohol products are advertised as lifestyle markers.
4. Drinking establishments have been transformed in the last 10 years through the creation of café bars, dance bars themed pubs.

(Adapted from Measham and Brain, 2005)

A fifth transformation, an extenuation of point 4. is taken from Chatterton and Hollands (2003):

5. the rebranding and remodelling of cities to include 'scripted' geographic areas in which the night-time economy operates.

⁶ 'Alcopops' (known as Ready To Drink (RTDs) in the alcohol industry) are premixed alcoholic drinks, 'shots and shooters' are alcoholic drinks intended to be rapidly ingested. A shot does not contain a non-alcoholic mixer whilst a shooter does.

These transformations map directly onto the discourse on the night-time economy already discussed (Chatterton and Hollands, 2003) and, in respect to temporality and the lifecourse, have led the media and government to describe some British urban areas as no-go zones for over 35s past 10 o'clock at night. Behind this new culture and economy of intoxication lies a key point often stressed by public health literature: the price of alcohol has steadily fallen in the UK since the 1970s and a decade of increased 'sessional consumption', as indicated by the GHO survey and others, has resulted in increased hospital admissions, disorder and disease (Chatterton and Hollands, 2003; Measham and Brain, 2005; Plant and Plant, 2006; Winlow and Hall, 2006). This cultural change has been recognised in recent Government alcohol strategies (Prime Minister's Strategy Unit, 2004; Department of Health *et al.*, 2007) and ultimately amounts to an apparent pursuit of 'determined drunkenness at both the individual and social level' (Measham and Brain, 2005, p. 269), ably facilitated by the night-time economy, which, in turn, has been encouraged by liberalisation of the licensing laws. That the government's response to closing-time violence was to stagger closing-time itself, gives an indication to the importance of the night-time economy (Plant and Plant, 2006), and the willingness of the government to allow alcohol-industry personnel (bouncers) to police the majority of it (Hobbs, 2003).

Measham and Brain's (2005) fieldwork suggest that the majority of social drinkers in city centres are binge drinkers, not 'anti-social' binge drinkers but binge drinkers (they have typically consumed over twice the daily recommended limit for alcohol). Certainly over 50% of a 351 total sample intended on getting drunk, with the aim of achieving a 'controlled loss of control', with no 'statistically significant gender, age or fieldwork location differences' (2005, p. 273). In relation to this, Szmigin *et al.* (2008) raises the point, often overlooked, that framing binge drinking as a negative habit is ultimately simplistic. Alcohol is pleasurable, and can be a form of cultural escape, facilitating social bonding and engendering mutual feelings of pleasure and excitement. In other words we should not take binge drinkers for fools; they binge for a purpose, and if analysed with this in mind, they could be said to binge in a planned and controlled manner, in what has been termed 'calculated hedonism'. For although alcohol consumption may appear excessive, it is controlled from the perspective of whom, with, when and where drinking occurs. Indeed, many so-called 'binge-drinkers' successfully limit its adverse consequences (chiefly hangovers) so that they interfere only at weekends. Given that young people 'do not necessarily look at the longer term effects of their drinking in relation to their health...[they] balance the physical risk of drinking and the impact on their social and cultural credibility of losing control in a drunken state with the desire to have fun and a good time with their friends' (Szmigin *et al.*, 2008, p. 365).

2.3.2 Alcohol and students

International, comparative studies of student drinking have not featured in the literature until recently, when a comparative study of alcohol consumption and attitudes towards banning alcohol on campus was published (Stock *et al.*, 2009). The UK was not, however, included in the research. It is, however, a member of ESPAD, the European School Survey Project on Alcohol and Other Drugs, which has collected data on adolescent alcohol use every four years since 1995. The last published report (Hibell *et al.*, 2009, p. 117) shows that:

A large majority (88%) of the students had consumed alcohol during the past 12 months and more than half (57%) had been drunk during the same period. The estimated consumption on the latest drinking day (6.2 cl alc. 100%) is well above the ESPAD mean.

The report suggests that while the extent and frequency of alcohol consumption amongst UK youth has slightly fallen since 1995, instances of bingeing (five drinks or more per occasion) have risen. This material is relevant as it suggests that university students will be familiar with alcohol even if they go straight from school into HE.

American studies of binge drinking have tended to preoccupy themselves with college students, but as Hammersley and Ditton (2005) have pointed out, in the USA, the 'focus of concern is different' (p. 494) in that the age of majority for alcohol consumption is 21 and so much undergraduate drinking occurs away from any legal regulation whatsoever, leading to increased cause for concern. As a result research from the USA is orientated towards reducing and eliminating alcohol 'misuse' or 'abuse', using such strategies as peer advocacy, positive modelling or the social norms approach (Turner *et al.*, 2008). The single American-British comparative study determined that Scottish students consumed and binged twice as much as students from the USA (Delk and Meilman, 1996).

Henry Wechsler is the preeminent academic looking at student alcohol use in the USA, having led several large-scale high profile surveys. In 1994 he found that students aged 17-23 had higher binge rates than older students (Wechsler *et al.*, 1994). A more recent study began with the observation that 'African American and Asian, female and older students have lower rates of binge drinking than do White, male, and younger students.' (2003, p. 1929). From this Wechsler *et al.* hypothesised that HEIs with greater proportions of these groups should have lower rates of bingeing in white, male students (a binge was defined as five drinks in a row for men or four drinks in a row for women in the two weeks preceding the questionnaire). The results showed that demographics had significant moderating effects from the large-scale presence of lower-risk

subgroups on the binge-drinking of higher-risk subgroups: 'Encouraging more older students to live on campus... may be one practical application of these findings; another may be decreasing the heavy concentration of young male, and White students in residential arrangements' (Wechsler and Kuo, 2003, p. 1931).

Literature on student alcohol 'misuse' and attendant interventions is rare in the UK. The first example of a web-based intervention was conducted by Bewick *et al.* (2008b) and was successful in significantly reducing the amount of alcohol consumed per occasion (though not amount of occasions); in other words, it reduced the extent of the binge. While the details of the intervention are not of interest here, the pre-intervention alcohol consumption survey is: 506 participants self-reported their alcohol consumption and CAGE scores (Buchsbbaum *et al.*, 1992)⁷; the mean number of units consumed during the last week was 13.83 (± 14.61), while the mean units per occasion was 10.47 (± 7.86). Recommended weekly limits (14 for women, 21 for men) were exceeded by 31% of both men and women, while 60% consumed alcohol 1-3 days a week, 14% 4-7 days a week and 26% less than once a week. The mean CAGE score pre-intervention was 1.69, 55% (279 participants) had scored 2+.

While this may be the latest survey of alcohol use in the published record, the most significant remains Jan Gill's aforementioned overview (2002) of 18 surveys collecting data on alcohol use by undergraduates at UK HEIs since 1974. The method and focus of all of these surveys vary, but the vast majority (17) presents alcohol use in terms of the UK unit (1 unit = 8 g of pure ethanol). All employed self-report questionnaires to assess alcohol consumption retrospectively, approximately half targeted medical or dental students. Although all 5 years of undergraduate study were investigated, there was generally a greater representation of earlier years. Quantity/frequency questionnaires were a favoured method of assessment, while there was some variance in the time frame, ranging through 1 year, 1 week, 'average weekly consumption', retrospective diaries for 1 week, 4 days, last week, and a 'typical week'. Many researchers distributed questionnaires at lecture times and obtained high completion rates as a result, although it was suggested that non-attendees might be heavy users of alcohol. Residence was provided by few surveys, as was age (Gill (2002) says 'Mature students may have greater family and economic commitments, which in turn may influence drinking behaviour' (p. 113)) and there was little consideration of brand of alcohol, the majority of studies going for 'standard drinks' which occlude the very real difference between strong and weak lagers, for example.

⁷ CAGE is an acronym of four alcohol-related questions (shortened to Cut Down, Annoyed, Guilty and Eye Opener) that test for alcohol dependency by producing a score from 0 – 4.

Gill (2002) comments that the pre-1989 studies recorded lower levels of abstention than later studies, but felt that abstention data was not complete because the ethnic origin of students was not always reported. Both the time of study and the academic year studied were cited as crucial factors, for some of the same reasons as I detailed in 2.2, 'File *et al.* (1994) reported that eleven of 66 medical students who were teetotal at matriculation were regular drinkers by the end of the first year' (2002, p. 113). Of the recent surveys, a mean of 52% ($\pm 8\%$) of males exceed 21 units a week and 43% ($\pm 7\%$) of women exceed 14 units a week. Comparison with GHS data suggests that male students are twice as likely as the general population to exceed weekly safe levels and women three times as likely, prompting the comment, 'these women appear more similar to their male cohort than do women in the general population' (2002, p. 118). Seven different definitions of binge drinking were adopted by the surveys. Gill says, 'It is also essential that the frequency of binge drinking be considered. Some studies did not specify a time frame. Binge drinking at least once is likely to be undertaken by many young people within the 18-24 year age group. It is much more important from a health perspective to know how regularly this form of drinking occurs.' (2002, p. 115). 'Heavy drinking' was defined within the 16-24 year old age group as more than 50 units a week for men and more than 35 for women units for women in some studies (as per the National Alcohol Strategy (Department of Health *et al.*, 2007)). Gill also considers the consequences of excessive drinking, as reported by many of the surveys, such as 'secondary binge effects', sexual health, behavioural consequences and decreased academic performance.

Aside from Bewick's work mentioned above, four quantitative surveys of university students' alcohol intake have been published since Gill completed her survey in 2002. One of these is by Gill *et al.* (2007), and is concerned with highlighting methodological issues of self-reporting alcohol consumption: this will be discussed in the next chapter. Faulkner *et al.*'s (2006) study of 'hazardous' drinking in a university in South Wales had 261 in their sample, all living in a Hall of Residence. The researchers did not use UK units, relying instead on the AUDIT WHO⁸ method. Consequently their results, which found '65% of males regularly drinking 12 or more drinks, and 60% of females regularly drinking eight or more drinks on one occasion' (p. 163) are not directly comparable to the majority of UK research in this area. Another survey, also by Bewick *et al.* (2008a) collected data from 5895 students over three years, (225 of these students qualified as longitudinal). They found that consumption declined over the period of undergraduate studies though levels were persistently high when compared to the general population. No difference was found between the intake of male and female students, once the Royal College of Physicians' guidelines for intake was used. The longitudinal survey found that in Level One, 53% exceeded the 21/14 units per week guideline, in Level Two, 38% and in Level Three, 30%.

⁸ The Alcohol Use Disorders Identification Test developed by the World Health Organisation tests hazardous and harmful drinking and measures dependence.

Cooke *et al.*'s (2004) study into the affect that social class might have on students' experience of university has a section on alcohol use. Using student identification numbers and thus UCAS data, class was determined based on NS–SEC guidelines into six classifications, from professional, through intermediate, skilled non-manual, skilled manual, partly skilled and unskilled, each referring to the principal earner in the family home. The students were asked 'On average, how many units of alcohol (if any) do you drink per week?', and the results were presented in terms of social class and year group. Although the study was not longitudinal, the year group results confirm those of Bewick *et al.* (2008a) above. Interestingly they found that students from a 'Partly Skilled' social background, the lowest background of participants in their study, were consistently consuming more alcohol in units per week than all other students, across all year groups.

Finally, there has also been some recent qualitative work on student binge drinking: a 'discourse analysis of accounts of female undergraduate drinking in Scotland' (Guise and Gill, 2007). This found that participants described their binge drinking in terms of its behavioural effects rather than quantities consumed, even when the question was worded in terms of the number of drinks consumed. This confirms the role that qualitative definitions/interpretations have in researching binge drinking, especially under the lack of consensus for quantitative definitions: 'it is indeed fruitful to broaden the focus of research beyond descriptions of quantities consumed' (2007, p. 903). Understandably considering a) the expansion of HE and b) the pervasiveness of youth culture, the students in Guise and Gill's study do not differ significantly in their opinions from other young binge drinkers discussed in the qualitative research mentioned in the previous section. They speak of binge drinking as an enjoyable activity that helps socialising, that 'lessens inhibitions and takes place within socially acceptable boundaries' (2007, p. 903). This research indicates that the qualitative material discussed in 2.3 and 2.3.1 is relevant to students.

2.4 Research questions and objectives

Taking into account the material above I have formulated three Research Questions, and designed three Research Objectives to answer them. The questions are:

1. What is the alcohol consumption of undergraduates at the University of Gloucestershire?
2. How does the alcohol consumption of students at the University of Gloucestershire relate to the students' demographic, social and academic properties?
3. How does the alcohol use of traditional students differ from that of non-traditional students?

As I have discussed in the Introduction, I have orientated this research away from health considerations and towards the relationship between social demographics and alcohol consumption. That does not preclude me from commenting on health-related issues as they relate to my main subject, social demographics. Indeed, since I will be examining demographics in some detail, it would be remiss of me not to consider some aspects of high-risk behaviour. One could also argue that it is impossible to meet my first research objective without looking at risky drinking behaviours. The objectives are:

1. Survey students' alcohol use at the University of Gloucestershire, along with their demographic, social and academic properties.
2. Analyse student alcohol use against students' demographic, social and academic properties via computer software (SPSS).
3. Comment from collected data on the alcohol culture of the University of Gloucestershire, and how this alcohol culture relates to the traditional/non-traditional student dichotomy.

This last objective provides the focus of the dissertation. The ultimate aim of doing so, and indeed the grounds on which I hope this dissertation will achieve its purpose (an 'independent contribution to knowledge' (University of Gloucestershire, 2004b, p. 1)), is by demonstrating how Health research can contribute in an imaginative, yet robust manner to Education Research, and *vice versa*. In the following sections I intend to sum up the literature review and relate the academic record to the potential of my research questions, repeated below as subdivisions to ease comprehension, not to suggest that the subjects are completely distinct from each other. The remainder of this chapter is intended to be a clarification of what issues, located in the literature, will be addressed under the auspices of each research question.

2.4.1 What is the alcohol consumption of undergraduates at the University of Gloucestershire?

Only one UK based study (Faulkner *et al.*, 2006) used a method of assessing alcohol intake that differed from the UK unit (where 1 unit = 8 g ethanol). This decision was unusual, and perhaps stemmed from a desire to reach an international audience and not a domestic one. Considering UK alcohol research and policy, it would be foolhardy to attempt or want to justify the use of anything other than UK units in measuring the consumption of undergraduates at the University. Most of the existing surveys in this field quantify consumption in units in terms of the last week. Although this survey keeps this time frame (the week), it diverges from the standard academic practice of asking students to assess their alcohol over the previous week, and instead ask

students to assess their alcohol intake over a typical week. There is recent precedence for this (Bewick *et al.*, 2008a), but not enough to warrant this decision without further justification, which is centred in the temporality of student drinking. Due to the lecture-based administration of this survey, and its large scale, data collection was necessarily spread out over a long period, as discussed in Chapter Three. Considering the relevance of temporality to drinking (see (Gill, 2002) and discussion in 2.2), periods of high consumption (such as Halloween, Christmas, post-exams) and periods of low consumption (pre-Easter, pre-exams) ran through the data collection period. Thus, by asking students to assess their alcohol intake over a typical week, it was hoped that this would counter the variability of periods of extraordinary consumption and orientate respondents towards longer periods of what might be termed 'typical' consumption.

Simply recording the volume of consumption in units over a week, is not enough (see Gill, 2002; Hammersley and Ditton, 2005). Frequency of drinking, drinking rate, daily levels of consumption were all taken account of, as discussed above, and as the literature has increasingly advised. In order to do so, students were asked to estimate their weekly consumption day-by-day. By determining levels of mid-week consumption was hoped that this survey would quantitatively confirm the qualitative work of Chatterton and Hollands (2003) and thus attempt to redress the majority of the literature (including the student surveys) that fails to recognise the temporal particulars of undergraduate alcohol consumption.

The GHS 2007 data (Robinson and Lader, 2009) was used as a comparator for statistics. Accordingly, the same measures of heavy and moderate units a day was used (for men/women, 8+/6+, 4–8/3–6). Total average alcohol consumption per week was calculated in order to compare with the Omnibus data, and the recommended weekly benchmarks of 21 for men and 14 for women. Levels of drinking was also worked out as per the guidelines issued by the latest Government Alcohol Strategy (Department of Health *et al.*, 2007), and used in the last survey of undergraduate alcohol consumption in the literature (Bewick *et al.*, 2008a):

1. Drinking Levels

Weekly Level	Male units	Female units
Low	0 – 21	0 – 14
Medium	21.5 – 28	14.5 – 21
High	28.5 – 50	21.5 – 35
Very High	50.5+	35.5+

Daily Level	Male units	Female units
Light	0 – 4	0 – 3
Moderate	4.5 – 8	3.5 – 6
Heavy	8.5+	6.5+

As to the muddy concept of 'binge drinking', a practice associated with so many different measurement schemes, a definition was taken from Plant and Plant, 'a single drinking session intended to or actually leading to intoxication' (2006, p. ix). To assess student perusal of this two measurements were taken, firstly a qualitative assessment of 'drinking to get drunk', as supported by Guise *et al.* (2007) and the Cabinet Office (Prime Minister's Strategy Unit, 2004). Secondly, a quantitative measure was used as suggested by Gill in her dictum of, 'Amount and speed of alcohol consumption must be monitored, and time frame of measurement must be stated' (2002, p. 117) and made plain by Hammersley and Ditton (2005) who suggested a drinking rate of 2 units+/hour as a marker for intoxication. If this drinking rate was accompanied by double the Government's daily recommended limits for drinking (8+ for men and 6+ for women), then, for the purposes of this survey at least, 'determined drunkenness' will have been assessed.

'Alcohol consumption' of course can be measured in other ways, and the literature, as discussed, is replete with the who, what's, why's and wherefore's of drinking. The associated, obligatory behaviours mentioned by Sparkes *et al.* (2007) that accompany consumption provide a useful gauge when it comes to differentiating drinking behaviours between traditional and non-traditional students. Accordingly, questions on damaging property and causing violence (Engineer *et al.*, 2003) have been included, as have questions on fancy dress. Shots and 'torpedoing' drinks have been investigated as both demonstrate the post-industrial alcoholic order described by Measham and Brain (2005) and discussed in 2.3.1.

2.4.2 How does the alcohol consumption of students at the University of Gloucestershire relate to the students' demographic, social and academic properties?

Of the three variables most commented on in the literature in relation to the consumption of alcohol – sex, age and socio-economic status – only sex has no direct bearing on the WP literature. It is also relatively straightforward to measure, as, indeed, is age. Furthermore, since the GHS categorises 'young people' as those aged 16-24 and Local Authorities define Independent students as 25+, they effectively use the same age range. Taking a further cue from Lusk (2008) who divided mature students into three groups depending on their age, but still found distinct differences between the youngest group and traditionally-aged students, I have also used the old definition of a mature student (21+ at time of first degree). In any case, the literature suggests that older students' alcohol consumption will vary considerably from traditional students. Given the research discussed above in 2.1 it would be surprising indeed to see that it was comparable in any degree; in terms of quantity, frequency, drinking rate, temporality or behaviour.

The case of students with a lower socio-economic status is much more interesting however. Indeed it is by comparing the consumption of this group against traditional students that this dissertation contributes to knowledge in that it presents insights into a) the operation of class on the student experience and b) Chatterton's (1999) and Smith and Holt's (2007) debate on 'studentification' and traditional students, where it is asked whether middle class students have colonised the residential student experience and distanced themselves from 'less socially valuable stay-at-home students' (as discussed above in 2.2). If Keane's qualitative research is right, we might expect WP students to consume alcohol and maintain a social life that involves alcohol, but its consumption will be separate and at lower levels to that of non-WP students.

Such questions bleed closely into issues of residence, as is logical, as paying for somewhere to live is a great expense in the UK, whether one is a student or not. Indeed, residence is seemingly a significant factor in the student experience and the *habitus* of the 'traditional' alcohol culture described by Chatterton (1999), and also a factor that typically divides students with a lower socio-economic status from the majority, perceived or not (Holdsworth, 2006). The influence of residence on alcohol can be clearly assessed by asking students about their housing biographies. It is important to realise however, that having a residential experience of university, does not necessarily mean that one is a traditional student. To what extent a non-traditional, economically disadvantaged student can enjoy in this residential experience without incurring significant debt is a relevant question, and a thorough analysis of the alcohol culture and its links to residence contributes towards answering it.

Given the climate that this research was formed in, whether a student is a member or not of a sports team, or indeed a society, and whether this has any noticeable effect on consumption is a significant variable to measure, especially considering the sobering research of Sparkes *et al.* (2007). In relation to this, students' subject of study is a key variable. It will be interesting to determine whether the consumption of sports students are significantly different from those of other students. Indeed, subject of study is a traditional marker of alcohol intake; medical, arts and engineering students are traditionally attached to strong consumption values. So far, the majority of published surveys have been carried out on medical and dental students and so a broader disciplinary range would be beneficial (Gill, 2002). Of course, in the University of Gloucestershire, subject of study is directly related to which of the four campuses one is a member of, and is thus connected in some way to residence, as each campus has its own halls. Furthermore, the University cycle from first year, to second year, to third year and its relationship to consumption is examined (as commented on by Chatterton (1999)). Finally, alcohol consumption is related to part-time work, which is intended to contribute to understanding the student experience of students from lower socio-economic backgrounds.

2.4.3 How does the alcohol use of traditional students differ from that of non-traditional students?

If my second research question, 'How does the alcohol consumption of students at the University of Gloucestershire relate to the students' demographic, social and academic properties?' is adequately addressed then my third becomes more of a discussion of the distinctions between the variables that define traditional and non-traditional students already presented. It is worth outlining here though, exactly what I have taken to indicate a 'traditional' and a 'non-traditional' student, as there is no definitive or accepted demographic definition of either in the literature. Taking elements from both Lusk (2008) discussed in 2.1, I have used white, aged between 18 and 21, living away from home with no dependents or spouses, from a family with a history of HE, with some of their funding from parental sources and not categorised as 'Independent', 'Mature' or 'Disabled'. Of course, some students are more 'traditional' than others, but this is a problem of generalisation and not necessarily of definition.

Since there are a multiplicity of possible demographic qualifiers to describe a non-traditional student, each interacting in complicated, potentially impenetrable ways. As this is an institution-specific research project, definitions of non-traditional students are orientated towards the targets harboured by the University of Gloucestershire itself, as discussed in 2.1.

3 **Methodology**

The means of obtaining data are set within the boundaries of the larger project to which this thesis belongs: via anonymous questionnaire administered in undergraduate lectures. The advantage of this method is that it ensures a high student response rate (a captive population) and allows a large student sample. My supervisory team decided that I was to aim for between 800 and 1000 respondents, of varied subjects and years of study. These numbers were derived by comparing the participant rates of other alcohol surveys, as collected by Gill (2002) and since (Cooke *et al.*, 2004; Faulkner *et al.*, 2006; Bewick *et al.*, 2008a; Bewick *et al.*, 2008b). Administering the survey in lectures relied on the goodwill of lecturers in affording teaching time, and thus limits the questionnaire length. After testing the questionnaire, including time for introduction and questions, it was decided that 20 minutes should suffice for completion. A further disadvantage of lecture-based questionnaires lies in non-attendance of lectures by students, particularly as some students may miss lectures due to alcohol-related behaviours (Gill, 2002, p. 109). Registration details were taken as a means of comprehending what sort of attendance rate the lectures received, although it was decided that this statistic was not to be used as the response rate, which was calculated from the amount of students refusing the questionnaire in lectures.

3.1 **Questionnaire**

The questionnaire includes material not discussed in this thesis, specifically questions designed by Dr. Parrish and piloted in her study of February 2008, where 142 first year undergraduates based at Oxstalls were surveyed using the same method, as discussed in 1. Dr. Parrish's research is orientated towards the general health and well being of students, whilst the material I have included is relevant to my Research Questions and discussed above in 2.4 and below in 3.1. Where I have not explicitly described the derivation of questions they should be assumed to be original. Undergraduates, postgraduates and University staff were consulted in October 2008 to determine local details in addition to fieldwork of a minor, exploratory character. The questionnaire is reproduced in Appendix One.

3.1.1 Problems of measurement

Methodologically there are two problems with this research, both difficulties in measurement that are unassailable in that they are not 'resolvable' or at least have not yet been solved by researchers working in the field. Their discussion here is intended as a point of negotiation rather than a resolution and is recognition that aspects of this dissertation are bound into a reflexive, discussion with other work dealing with the same problematic issues.

3.1.1.1 **Socio-economic status**

Assessing socio-economic status is a complex task that encompasses a large amount of variables and has generated a huge literature. Within the field of Education Research the sociological 'old chestnut' of 'what class are students?' has become a policy-led issue of great national concern thanks to WP initiatives, which, of course, problematises this very issue. This dissertation is certainly not the place to resolve this, although it is recognised that a definition is needed to proceed. Socio-economic status is thus taken to mean the relationship between the *habitus* of a family and their material wealth. Krieger *et al.* (1997) writing in respect to Public Health defines social class as 'social groups arising from interdependent economic relationships among people' and socioeconomic position as 'an aggregate concept that includes both resource-based and prestige-based measures' (p. 344-345). It is noted that both these can be measured at three levels, individual, household and neighbourhood, and change as the lifecourse develops. The three single indicators most commonly used are occupation, education and income. In their comprehensive survey of methods used to assess these, Liberatos *et al.* (1988, p. 106) comment:

Despite the wide variety of outcome measures used in these studies, the results are fairly consistent. The three indicators of social class – occupation, education, and income – appear to be related to the outcome variables, at least to some extent, yet these three indicators are not highly inter-correlated.

Of these three indicators, education is relatively straightforward to measure (in years or levels). Some research however, indicates that parental levels of education have not been the most successful in identifying students from lower socio-economic backgrounds. Hatt *et al.* (2007) published a critique of Aimhigher in South West England, which itself uses parents' education level to assess students. Even though some students are unclear on their parents' level of education, and some do not differentiate between further and HE, Hatt *et al.*'s study found that the link between social class and 'no previous parental history of HE' was very low: only 35% of her participants, all in the Aimhigher programme in the South West (note, the region to which the

University of Gloucestershire belongs) were from the manual backgrounds to which the government expected Aimhigher to target. Hatt *et al.* (2007, p. 350) concludes that there are 'many young people from professional or managerial backgrounds whose parents did not progress to HE'. As a result of this HEFCE (2007, p. 5) issued guidance to HE institutions and Aimhigher partnerships to 'refine the definition of the target group for Aimhigher activity and outreach activity by HE providers' towards those from lower socio-economic groups and/or disadvantaged areas.

Assessing occupation is the most complex method by which social class is measured (Liberatos *et al.*, 1988). This is a method with an established pedigree, especially in the UK where the Registrar-General's Social Class schema has been used in some form by researchers (including health researchers) since 1913. The schema has been altered throughout the twentieth century and received its last major overhaul in 2001, when it became the National Statistics Socio-economic Classification (NS-SEC). Under this scheme students are officially 'Not classified', so one must assess either the students' parents occupation, or, in the case of older students, their previous occupations. I decided not to use the NS-SEC scheme due to several reasons. Firstly there may not be enough time to administer this method due to the limitations of the lecture-based approach, as discussed. Secondly, research has shown that mature students have a tendency not to answer questions on socioeconomic status, as they do not think the questions apply to them (Harrison, 2008). Furthermore, there are significant methodological problems with assessing socioeconomic status in adolescents, of which the traditionally-aged students can be compared to, as highlighted by Wardle *et al.* (2002). In many cases adolescents are not accurate, or do not adequately know their parents occupation. Also, as Hatt *et al.* (2005) comment, asking students or parents to self-report such data is problematic as respondents may aspire to upward social mobility, or make mistakes with terminology that is not clear. Indeed some academics (Harrison, 2008) have blamed the sheer quantity of missing or incorrectly coded data in UCAS application forms for occluding a mass of lower socio-economic students, who are in fact attending university. Harrison also notes that the older the applicant, the less reliable their socio-economic data is (2008). Finally I also feel uncomfortable asking questions about class using a system based on occupation in a world described in the literature on both alcohol and HE as 'post-industrial' and consumer orientated. Such an argument is commented upon in relation to an infrequent and incomplete decadal census in Gorard *et al.*'s (2006) review of WP literature.

The difficulties and frustrations of dealing with this form of measuring socio-economic status are born out by the data I received from HESA following a request for social class origin (i.e. parents/prior occupation) of students studying at the University of Gloucestershire⁹:

2. 2007/08 HESA Student Returns

Class		%
1 Higher managerial & professional occupations	860	10.1
2 Lower managerial & professional occupations	1415	16.6
3 Intermediate occupations	630	7.4
4 Small employers & own account workers	380	4.5
5 Lower supervisory & technical occupations	220	2.6
6 Semi-routine occupations	630	7.4
7 Routine occupations	240	2.8
8 Never worked & long-term unemployed	0	0
9 Not classified ^a .	2380	28.0
Unknown ^b .	1755	20.6
	8510	

- a. Code 9 'Not classified' includes the 3 categories: students, occupations not stated or inadequately described, not classifiable for other reasons.
- b. The students in the Unknown category are those that we have no data of regarding their socio-economic classification.

These statistics clearly demonstrate the pitfalls of relying on this form of socio-economic assessment. Of the total number of students (8505), close to half (48.6%) are either 'Not classified' or 'Unknown'. That these are official statistics with some bearing on policy is worrying.

As a consequence of these factors I decided not to use the NS-SEC scheme. This decision was not made lightly, as it weakens the transferability of the findings, but as Gorard *et al.* (2006) argue, other studies are already weakened by the inconsistencies in socio-economic data. One might argue that since the University of Gloucestershire uses the classification scheme in its WP policy as a target (see 2.1), then it made sense to utilise it in this report. Those responsible for Student Recruitment and Access at the University does not necessarily agree, as the literature does not seem to support any single method to any degree of accuracy (Miller, 2009).

I have used a number of approaches to socio-economic assessment. The first is income, one of the three classic methods, but one that is not without its problems: class and income do not

⁹ Table 2 is adapted from information contained in an email received on 12/08/09 from R. Hobbs, Information Analyst, HESA. Used by permission.

always coincide, and questions concerning earnings are not always answered, as commented on by Hatt *et al.* (2005). This last problem is diminished by the substitution of means-tested financial support for a student's HE over any self-report of a student's 'household income'. Via the questionnaire I will collect data on three funding options relevant to students' socio-economic status: 'university bursary' (awarded by the University of Gloucestershire to students from low income backgrounds following a Local Authority needs assessment), 'Full Maintenance Grant' (awarded by the student's Local Authority subject to a means test that assesses whether household income is £25,000 or less) and the 'Special Support Grant' (awarded on a similar rubric to the Full Maintenance Grant but for students in special circumstances such as on Income Support). All the other sources of financial support are not tied to means assessment, and only, perhaps indicative of it. Despite the research discussed in 2.1 on the greater debt and greater likelihood of being in paid employment of lower socio-economic students, students from other socio-economic backgrounds undeniably entertain debt and work in part-time jobs. It is noted that students who are funded by a 'parental contribution' are likely to be 'traditional students' (as per Lusk's (2008) criteria described above).

Secondly, following Wardle *et al.*'s (2002) successful use of material indicators, I have introduced the following questions in an attempt to do the same:

Do you own your own computer? Yes No

Do your parents own their own home?

N/A Yes No I own my own home

It is reasoned that computer ownership is likely to measure a student's material wealth, and that parental or self home ownership is a reasonable indicator of the family's wealth and status. These methods are both inexact and somewhat exploratory, and were included in the survey very much as a complementary measurement to the other strategies.

The final means of assessing socio-economic data is via postcode data, as HEFCE do to identify areas of low HE participation (Hatt *et al.*, 2005). Accordingly I have asked the following question:

What is the first part of your family home's postcode?

This method has the benefit of allowing comparison between mature and traditionally-aged students, but still has problems with its methodology, which relies on average background statistics and occludes potential disparities in means by masking sections of both the rural poor and inner-city rich. However, since the University of Gloucestershire has a list of postcodes to

target in its WP policy (University of Gloucestershire, 2009), it would be foolish not to assess students from these areas in terms of alcohol consumption.

In conclusion, socio-demographic data is hard to collect and assess, there are no agreed standards and the most common method, the NS-SEC scheme is (arguably) already outdated. I have instead decided to use three methods: an income based assessment according to financial support entitlements, a material indicator method that has proved successful with adolescents and a geographic information systems method. All three are designed to operate independently, although I have also decided to amalgamate them into a variable whereby students indicated as coming from lower socioeconomic backgrounds in more than one assessment test are distinguished from others who only qualify under one. In this way it is hoped that I will be able to reliably identify students from poorer backgrounds. One could argue that because of these different approaches, it becomes unclear what, in fact, I am measuring, to which I would counter that when it comes to socio-economic status it is never absolutely clear what is being measured, a point often made in the literature (Liberatos *et al.*, 1988, p. 90).

3.1.1.2 Self-reporting of alcohol consumption

The questionnaire must contend with problems endemic to all alcohol questionnaires, namely the uncertainty of reliable self-reporting of alcohol consumption (Gill, 2002; Robinson and Lader, 2009). There are many aspects to this. Firstly, although it is assumed that students are aware of the measurement of alcohol in terms of units (considering the public discourse detailed in 2.3 it would be hard to imagine that they are not), it is assumed that many students need guidance on assessing how many units are present in different varieties and strengths of alcoholic drinks. The problem in the case of this research was the length of time available in lectures to present this information. In the pilot, students were given a hand out with each questionnaire detailing healthy drinking advice and listing typical strengths in certain alcoholic beverages. It was recognised that many students did not read the hand out, so it was decided to verbally introduce how to assess alcohol consumption with the aid of an overhead transparency adapted from a unit guide used by the Kirkless Drug Action Team. The full transparency is reproduced in Appendix Two and contains the information displayed in Table 3 on the following page.

3. Unit information on transparency

1 unit	Half pint of regular beer/lager
	Single spirit shot
1.5 units	Small glass of wine
	Alcopop bottle
2 units	Half pint of strong beer/lager
	Large bottle/can of normal beer/lager
	Medium glass of wine
3 units	Large bottle/can of strong beer/lager
	Large glass of wine
9 units	Bottle of wine
30 units	Bottle of spirits

From this and my verbal introduction, students were asked to fill out a temporal plan of their typical week, with details of their consumption, as demonstrated by the following section (the full table is reproduced in Appendix One).

4. Section of questionnaire

	Mo	Tu	We	Th	Fri	Sat	Sun
Estimated alcohol units consumed	_____	_____	_____	_____	_____	_____	_____
Time spent drinking in hours	_____	_____	_____	_____	_____	_____	_____
Amount spent on alcohol in £	_____	_____	_____	_____	_____	_____	_____
Drink no alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stay in?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visit Hall/Union bar?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

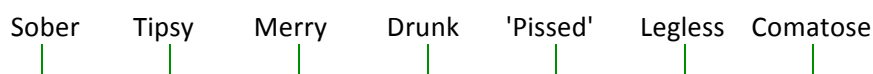
The decision taken to split the week into days was done for two reasons, to aid full estimation of a typical week's worth of alcohol consumption and to record binge data and associated behaviours for each day, as discussed in 2.4.2. While this thorough approach to recording consumption data is in some respects laudable, it increased the pressure on the ability of the student to complete

the questionnaire in the twenty minutes allotted time, in which students were a) introduced to the questionnaire, b) introduced to alcohol measurement and c) asked to estimate their typical consumption along with d) answering all the other questions. I encouraged silence and desk separation in the lectures in order to ensure privacy and limit the 'copying' of such estimations from others. Understandably, however, the results are necessarily approximate.

Self-reported alcohol consumption is a familiar problem to many questionnaires and to all alcohol researchers. Some find that their data is medically relevant and holds up in large-scale medical studies (Gleeson *et al.*, 2009), others caution against using self-reported data (Gill *et al.*, 2007). This latter study asked students to pour themselves 'units' of several types of alcohol and found that self-poured units were nearly double those purchased in licensed premises. Another problem is related to the increasing strength of alcoholic drinks over the last twenty years (Lader, 2009), the proliferation of many different brands and strengths of the same drink, and the habit of serving drinks such as wine in large, and it seems, larger glasses (see 2.3.2). To the consumer, and thus to the researcher, it makes it very hard to adequately report units. Not only is this a problem for this study, but it is a problem comparing this study to others. For example, the most recent undergraduate alcohol survey in the literature, Bewick *et al.* (2008a), gave their respondents the following information: 'Students were advised that one unit was approximately ½ pint of lager, 1 small glass of wine or 1 measure of spirits' (p. 163).

Compared to the measurements used in this study (see above), these are certainly inadequate. Such discussion of approximations and guesses leads one to the conclusion that self-reporting is at best a rough science. To counter this, alternative means of assessing alcohol use have also been employed, as suggested by Gill *et al.* (2007). One is the 'bluometer', a question which asks respondents to indicate their inebriation intention on a linear scale that employs qualitative markers:

Please mark how drunk you like to get on a typical night out:



This was adapted by Margarete Parrish from a training programme for Kirkless Drug Action Team. In a further attempt to qualitatively assess drinking intention, students were also asked:

When you drink, how often do you drink to get drunk?

- I don't drink
- Never
- Rarely
- Sometimes
- Regularly
- Always

Given the uncertainty in the literature on what 'getting drunk' means (not least due to the variety of contributing factors – body size, food eaten etc.), it was hoped that these qualitative questions would complement the students' self-reported alcohol consumption rates.

3.2 Ethical considerations

Before my involvement with this project it was given funding after consideration by the Faculty Research Ethics Panel. The thesis plan itself was considered by the University of Gloucestershire's Research Degrees Committee and passed. The thesis contains ethically sensitive material in that it investigates student's private lives. Because of this students were informed during data collection that their participation was voluntary and that their identity would not be recorded. The physical questionnaire itself was prefaced by a preamble written by the project's director, Dr. Parrish, which makes these terms clear: participation is voluntary and anonymous. This was verbally emphasised when I introduced the questionnaire, where the aims, funding, reasons and possible outcomes was discussed in line with the University's policy on Research Ethics (2005, Section 3.1). The 'Procedures for Protecting Survey Respondents' (from the same volume) were followed (2005, Appendix 7), the British Psychological Society Code of Conduct adhered to (University of Gloucestershire, 2005, Appendix 5) and the British Educational Research Association (BERA) Ethical Guidelines considered (University of Gloucestershire, 2005, Appendix 6). Once my participation in this project ended, the scripts were passed into Dr. Parrish's stewardship.

3.3 Administration

The questionnaire was administered at 43 lectures over all four campus sites between 6/11/08 and 24/03/09. There was a mean of 18 students per lecture. Out of 922 students a total of 910 questionnaires were completed, 8 of which were mostly blank or completed in a parodic fashion, leaving 902 scripts and a response rate of 97.8%. However, the whim of lecturers affected the depth of the sample: 75 scripts (8%) were not completed due to time considerations. A number of strategies were attempted in securing lectures to administer at, each with differing results. By far the best approach was to deal directly with the lecturers who were largely happy to accommodate me (in one case I was invited to, and gave, a lecture on research methodology), Heads of Department and Course Leaders were frequently protective and dismissive whilst Faculty Secretaries were too overworked to engage. Although I attempted to administer to students in 'Category-A' compulsory, registration based lectures, this was certainly not always possible. In a perfect world, with full lecture enrolment, I would have had 1702 respondents, (my sample = 54% of this). But in a perfect world all academics would have seen the worth of the survey in the first place (a few were very dismissive of its subject and aims, believing it to be an

attempt to pry on their students). I attempted to assuage such fears in the students I did talk to, but one at least mentioned to me afterwards that she had not put accurate values on the questionnaire as she did not want her lecturer finding out how much she drank.

During the administration of the questionnaire one student thought that the temporal plan of the typical week would encourage students to exaggerate their alcohol use. Others questioned the existence of a 'typical week', one commenting, "It depends... what's typical... if it's someone's birthday, you know what I mean?" If students presented problems visualising a typical week I asked them to think of the previous week and whether that represented, in their view, an average week of consumption for them. Interestingly, Underwood and Fox (2000) tried both approaches, a typical and a last week and found that alcohol units consumed last week were consistently higher. While the authors did not use a temporal plan of the week, the observation remains relevant. In any case, given the difficulties presented by self-measurement, the most important point is that the students involved in the study were all given the same introductory talk, the same materials, and (just) enough time in which to make their self-assessments.

3.4 Analysis

During the process of entering the data into SPSS it became clear that the alcohol consumption table, while it allowed for abstainers, did not easily accommodate students who consumed alcohol less than once per week. This was indicated on the table by 26 of the respondents (3%), who typically wrote, 'this is every other week'. Such replies were, however, countered by other students who answered questions that indicated that their consumption was more than once a week but chose not to fill out the table giving units. It is assumed that one of the reasons why they may have done so is the effort involved in calculating them. Not including abstainers, 74 respondents (8.2%) chose to leave the table blank or did not have enough time to complete it. As a result of the poor quality of this data, I decided to present my results in terms of 'students who drank at least one unit in a typical week', to avoid the problem of those who drank less than once a week. Such a decision was not made lightly, as it means abstainers are not accommodated in the results. Since the temporality of drinking is one of the chief means by which I analysed the results, I do not feel that the research project suffered to any great extent (as the weekly temporality of abstinence is only remarkable when one 'falls off the wagon', or gets on it).

Some variables, such as binge rate, were calculated from the raw data (units drunk and time spent drinking alcohol). As discussed in 2.4.1, I have termed a binge the consumption of 6+ units (for women) and 8+ units (for men) over a period of time where the drinking rate is 2 or more units an hour. Once the data had been prepared, I carried out a comparison of the sample with

the population, using the data that had been provided to me by the University. This involved creating frequency tables and comparing the two on the page before then carrying out Pearson's Chi-Square Test to test the goodness-of-fit of the sample. The results are presented in 4.1.

I then created the charts and frequency tables in 4.2 in an attempt to answer my first research question, 'What is the alcohol consumption of undergraduates at the University of Gloucestershire?', using 38 general demographic, social and academic attributes and 73 measurements of alcohol intake. In order to answer my second research question, 'How does the alcohol consumption of students at the University of Gloucestershire relate to the students' demographic, social and academic properties?' I carried out Pearson's Chi-Square Test to investigate the associations between these 38 variables and each of the 73 measurements. Selective results from the 2,774 calculations are presented in 4.3.

Finally, six linear regressions were carried out using SPSS to determine whether a model could be built that ranks the general demographic, social and academic attributes in order of their significance for each drinking occasion. For each regression in turn, estimated alcohol units for Monday, Wednesday, Thursday, Friday, Saturday and aggregated weekly units were used as the response. Although the data was positively skewed (as is typical for alcohol consumption) I decided not to use a square root transformation as I believed that the size of the sample was sufficient in each case to make the assumption of normality, and I wanted to be able to use the resulting standard deviations in my analysis. Upon examination of the data's z-scores, two significant outliers were found on the weekly alcohol variable. Instead of removing these cases, I lowered them to the upper threshold so they dropped below 3.29. Daily alcohol scores in each case were adjusted in step.

All the variables from the list of socio-demographic variables discussed in 4.2.1 and listed in Appendix Three were entered apart from those that were derived from variables already in the model. In this way, for example, not all the education variables were entered, as I chose to use history of HE in the family, as that was the only education variable to return a result in chi-square analysis. For each regression I used the Stepwise method in order to isolate the specific variables that were relevant to each model from the 25 I entered. All of my results are presented in the next chapter.

4 Results

4.1 Sample comparison with the population

Thankfully I was allowed access to the University of Gloucestershire 08/09 dataset that was being prepared for HESA, which would not ordinarily be available to me until January, long after my deadline. Due to the preparatory nature of these statistics, I have been provided with two datasets, each assessing the student population at different times of the 08/09 year. One has n=7070, the other n=6860; a disparity of 210 students, assumedly due to student attrition. As a result the following two tables compare my sample to two different datasets, distinct in that they share no variables with each other. For both 'population' is defined as all the undergraduate students attending the University of Gloucestershire (Degree, Foundation Degree and HND/HNC).

5. Population to Sample comparison 1^a.

Variable	Value	Population freq.	Sample freq.	Difference in valid % of sample from valid % of population
Enrollment	Part-time	798	24	-10.2
	Full-time	6062	871	+10.2
Campus	Oxstalls	1457	401	+22.9
	Park	1789	91	-16.5
	FCH	2142	248	-4.3
	Pitville	1315	157	-2.1
Level	Level One	2773	404	+1.2
	Level Two	1845	321	+6.6
	Final Yr.	1750	176	-7.8
Income	-£25,000	1294	167	-0.2
	+£25,000	5566	728	+0.2

a. n =6860 for Population and n =902 for Sample. Marginal missing data not shown.

6. Population to Sample comparison 2^a.

Variable	Value	Population freq.	Sample freq.	Difference in valid % of sample from valid % of pop.
Gender	Male	2941	360	-1.5
	Female	4129	537	+1.5
Age	24 and less	5625	748	+4.9
	25 plus	1445	137	-4.9
	20 and less	3721	662	+22.1
	21 plus	3349	224	-22.1
Disability	Disabled	715	124	+4.3
	Not disabled	6348	740	-4.3
Ethnicity ^b .	Minority	624	56	-3.8
	Non-minority	6378	624	+3.8
Housing	With partner and/or children	1397	138	-4.4
	With parents/relative	1405	138	-4.5
	Shared house with other students	1354	333	+17.0
	University housing	1620	249	+4.8
	Other	1231	40	-12.9

a. n =7070 for Population and n =902 for Sample. Marginal missing data not shown.

b. The study sample is composed of 15 separate minorities, sorted into 'Minority' and 'Non-Minority' (effectively white and non-white) to facilitate interpretation.

As these tables demonstrate, my sample deviates from the population in four general areas: Enrolment, Campus, Age and Housing. The latter is not a major concern as the University's methods of assessing residence are different from my criteria and account for the large 'Other' figure. The difference in part-time students is a likely sampling error: the questionnaire was administered in lectures, which part-time students may well attend less than their full-time counterparts. This also accounts for the lower numbers of Level Three students who have less lectures. There is a disparity in Age, which suggests that a group of 22-24 year olds are missing from the sample. Finally, there are more students represented from Oxstalls and less from Park (and consequently more Sports students and less Business students). This is another sampling error, due to the research being based at Oxstalls. However, after analysis of the sample against the population using Pearson's Chi-Square test, none of these variables produced statistically significant results, all p-values being greater than 0.05 ($p > 0.05$), all of which will be taken account of in the discussion.

4.2 Descriptive statistics

4.2.1 General demographic, social and academic attributes

As the majority of the frequency tables for this data are of little interest or relevance without their application to the data on alcohol consumption, I have decided not to include them in the study. Much of the sample has, in any case, been described in relation to the population in 4.1. In short (valid percent rounded to the nearest whole number), my sample is:

7. Descriptive summary of sample^a

60% female	15% lived with partner and/or children
22 years old (± 7) mean age	15% lived with parents/relative
73% below 21 years old at enrollment	37% shared house with other students
82% below 25 years old at enrollment	27% University housing
94% white	5% lived in other
92% unmarried	58% lived in Cheltenham
93% without children	26% lived in Gloucester
86% without disability	14% commuted
50% in part-time work	59% current/prior resident Uni Accommodation
45% in Level One	24% in Sports team
36% in Level Two	10% in Society
18% in Level 3	7% came from WP target postcodes
20% studying Health/Social Work	Mother & father mean education is <u>GCSE</u>
23% studying Sports	Sibling mean education is <u>A-Level</u>
32% studying Arts/Humanities	49% had a history of HE in family
4% studying Sciences	19% had a household income of \leq £25,000
11% studying Business	30% of parents contributed to University
10% studying Education	97% owned a computer
97% full-time	23% had 2+ socio-economic variables
96% international	43% qualified as traditional students

a. n =902 for Sample. Valid percent shown. Marginal missing data not shown. Key below.

General demographic	Education	Residence	Associations	Socio-demographic
---------------------	-----------	-----------	--------------	-------------------

Two variables deserves further discussion here, the last two in the table above, 2+ socio-demographic variables and the 'traditional student qualification'. The first variable is an amalgamation of seven others, local postcode target, no HE in parents' education, means-tested household income, parents own home and student computer ownership. As discussed in 3.1.1.1, although my socio-economic methods operate independently, there is no reason why they cannot also be amalgamated. Any student who qualifies in two or more socio-economic categories is recorded by this measurement.

The last variable is also an amalgamation: it collects data from the variables I am using to designate a 'traditional student', namely: white, aged 18-21, living away from home, no dependants, no spouse, family with history of HE, with some funding from parental sources (for discussion of this, see 2.4.3). I have used a generous criteria (6-7 variables from the list) as a strict one produced very few results (108 of n=884). Given the problems with self-assessment already discussed, this should not be surprising; both parental contribution to funding university and own parents' experience of HE may be liable to misrepresentation. Furthermore, in respect to criteria, it may be commented that there are no, or at least should be no, absolutes.

4.2.2 Alcohol use

Whenever applicable I have presented my results in terms of gender, in that I have split the data into 'Male' and 'Female'. While I recognize that this binary division does not always reflect reality, I have maintained and propagated it because the literature consistently discusses alcohol in terms of male and female consumption. The full list of measured variables relating to undergraduate alcohol is presented in Appendix Four. I have given each variable its own identifier (e.g. vU, as should be clear in Appendix Four) which are referred to when presenting Chi-Square analysis (4.3). Rather than reproduce frequency tables for all 73 measures of alcohol intake, charts have been used wherever possible to convey information graphically. The most important results, such as daily and weekly units, have been reproduced in frequency tables. Because I have decided to present my weekly alcohol levels in terms of 'students who drink at least one unit in a typical week' (see 3.4) I am marking the abstainers (n=67) along with those who supplied missing data or typically drink less than one unit a week (n=74), thus focusing the study on regular drinkers. My method does, however, allow for students who do not drink alcohol on a certain day, so counts of zero on individual days are valid. The full sample size is 902, the sample size of weekly student drinkers, minus abstainers and missing data is 760. I have commented on the results whenever relevant.

In general, the results clearly describe a culture that wholeheartedly embraces the use of alcohol. The vast majority of students (65.9% of males and 68.7% of females) describe themselves as social drinkers (see Table 9 below). On a typical night out 58.1% of male students and 47.8% of female students like to intoxicate themselves until they are, in their own opinion, Drunk, 'Pissed', or Legless (Table 10). A sense of intentionality is apparent in this process, with 63.8% of males and 56.9% of females 'drinking to get drunk' Sometimes, Regularly and Always (Table 11). To achieve their desired state of drunkenness 68.6% of both male and female students begin drinking at home (Table 12). Even including the abstainers and the missing data, attending the University of Gloucestershire has had a noticeable increase on the drinking patterns of a majority of males (54.8%) and 44.3% of female students (Table 13). In 36.6% of cases for males and 31.6% of cases for females, peers and flatmates have been an important factor in this increase (Table 14).

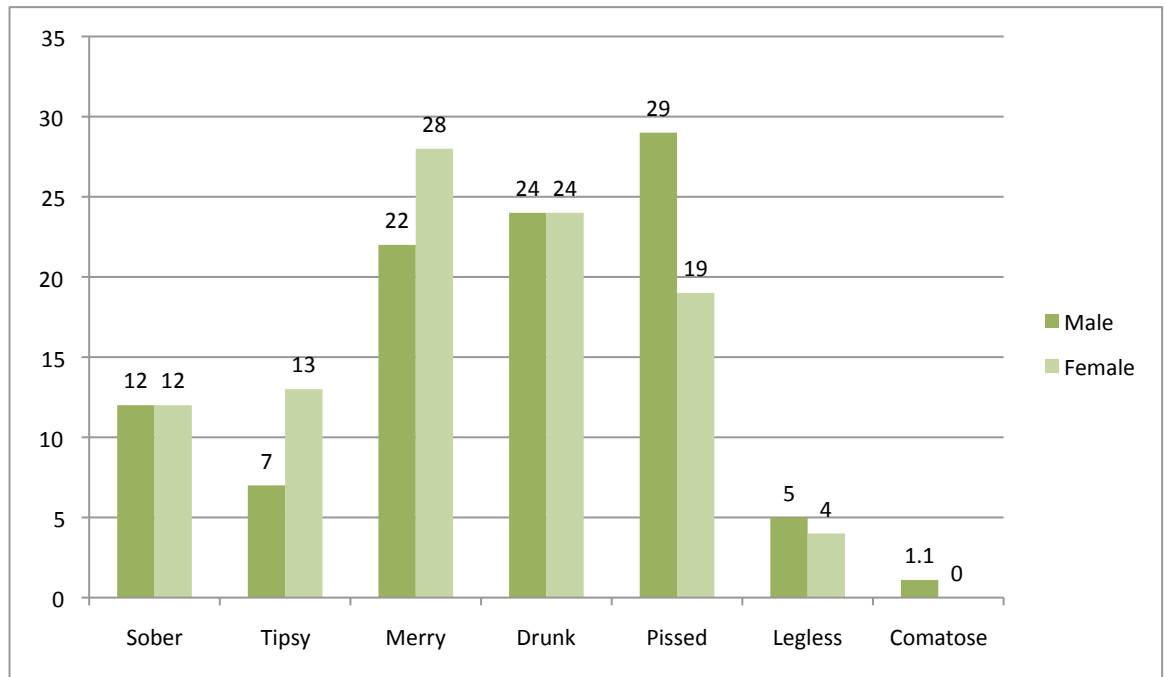
8. Describe your drinking habits (ivA)^a.

	Total		Male		Female	
	Freq.	Valid %	Freq.	Valid %	Freq.	Valid %
Non-drinker	65	7.2	27	7.5	36	6.7
Rarely drink	173	19.2	59	16.5	113	21.0
Social Drinker	607	67.4	236	65.9	369	68.7
Heavy Drinker	55	6.1	36	10.1	19	3.5
Total	900		358		537	

a. n =902 for Sample. Marginal missing data not shown.

Note the reluctance of both male and female to describe themselves as Heavy Drinkers.

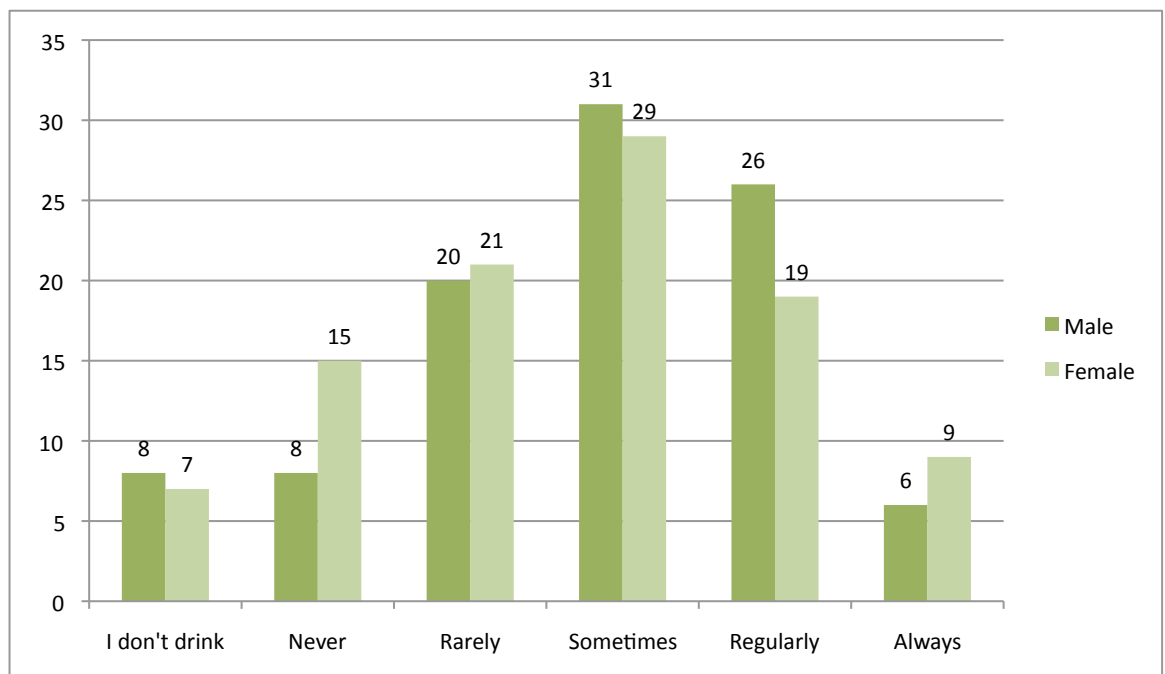
9. How drunk do you like to get on a typical night out? (ivB)^a.



a. n =902 for Sample. Valid percent shown. Marginal missing data not shown.

Going on a 'typical night out' implies intentional intoxication. Note how similar female behaviour is to male.

10. When you drink, how often do you drink to get drunk? (ivC)^a.



a. n =902 for Sample. Valid percent shown. Marginal missing data not shown.

This indicates that approximately equal amounts of students drink without intoxication as a goal to those who do. Note how female behaviour matches male.

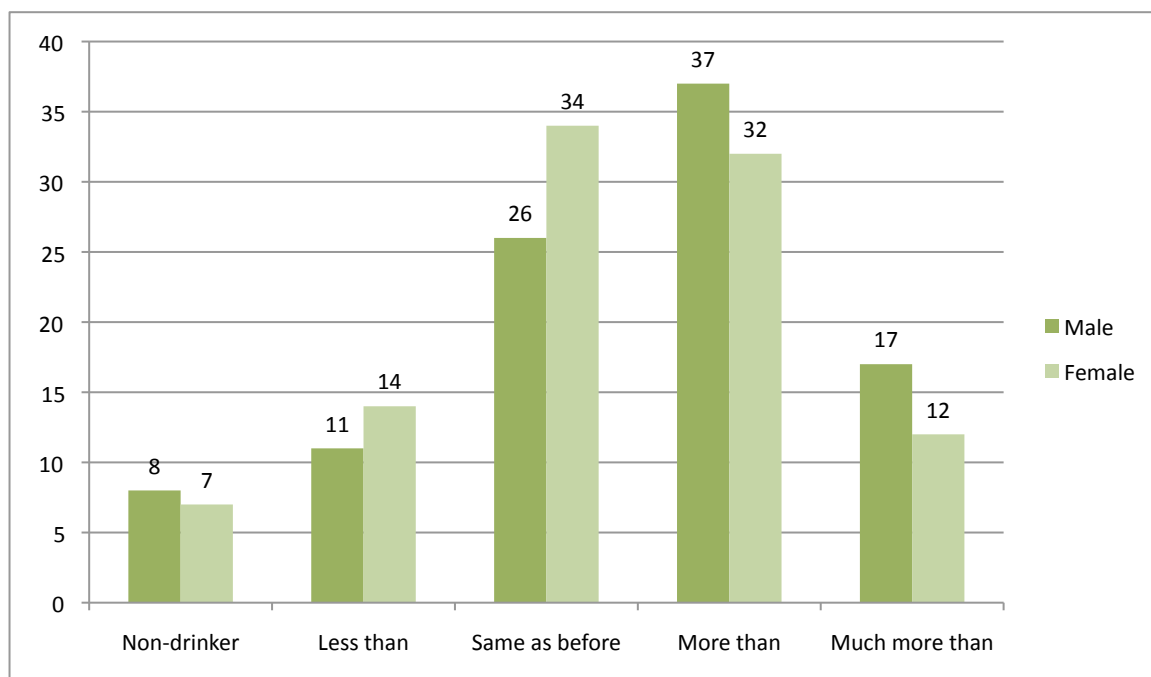
11. Do you begin drinking before going out? (ivF)^a

	Total		Male		Female	
	Freq.	Valid %	Freq.	Valid %	Freq.	Valid %
N/A	82	9.3	33	9.4	47	8.9
No	197	22.3	77	22.0	119	22.5
Yes	605	68.4	240	68.6	363	68.6
Total	884		350		529	

a. n =902 for Sample. Marginal missing data not shown.

This data clearly demonstrates the ubiquity of 'pre-drinking', with no gendered variation.

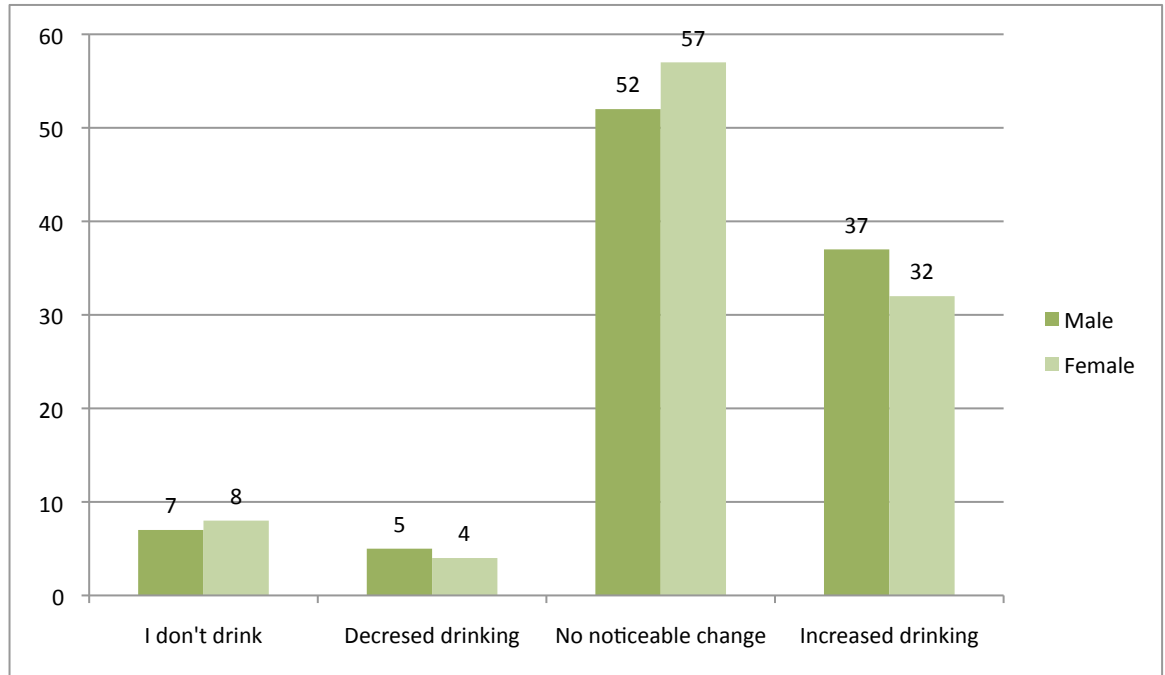
12. How would you describe your drinking patterns since arriving at university, compared with before coming to university? (ivD)^a



a. n =902 for Sample. Valid percent shown. Marginal missing data not shown.

Again female results match male. Students generally believe that attending University has increased their alcohol use.

13. Since arriving at university, how would you describe the influence of your peers or flatmates upon your drinking? (ivE)^a



a. n =902 for Sample. Valid percent shown. Marginal missing data not shown.

14. Since arriving at University, has drinking caused you or your friends to damage any property? (ivG and ivH)^a

	Total		Male		Female	
	Freq.	Valid %	Freq.	Valid %	Freq.	Valid %
No	548	61.2	177	49.4	366	68.8
I have	6	0.7	3	0.8	3	0.6
My friends have	256	28.4	122	34.1	134	25.2
We both have	85	9.4	56	15.6	29	5.5
Total	895		360		537	

a. n =902 for Sample. Marginal missing data not shown.

Note again the similarity between male and females, and that very few students are damagers of property without their friends also being so.

The culture of intoxication suggested by the qualitative questions displayed above is confirmed by the quantitative data described below. Of the 305 males who drank on a typical week, 49.2% reported consuming more than 35 units. Very high consumption (50.5+ units a week) was reported by one in five males (20.3%). Females drank proportionately less, with 34.4% of the 453 females drinking at High (21.5+ units) and Very High (35.5+ units) levels.

15. Weekly drinking levels (iH)^a.

	Total		Male		Female	
	Freq.	Valid %	Freq.	Valid %	Freq.	Valid %
Low (0.5 – 21)	343	45.3	123	40.3	220	48.6
Medium (21.5 – 35)	109	14.4	32	10.5	77	17.0
High (35.5 – 50)	175	23.1	88	28.9	87	19.2
Very high (50.5+)	131	17.3	62	20.3	69	15.2
Total	758		305		453	

a. n =902 for Sample. Valid =758, Abstainer =65, Missing =74, Gender missing = 5.

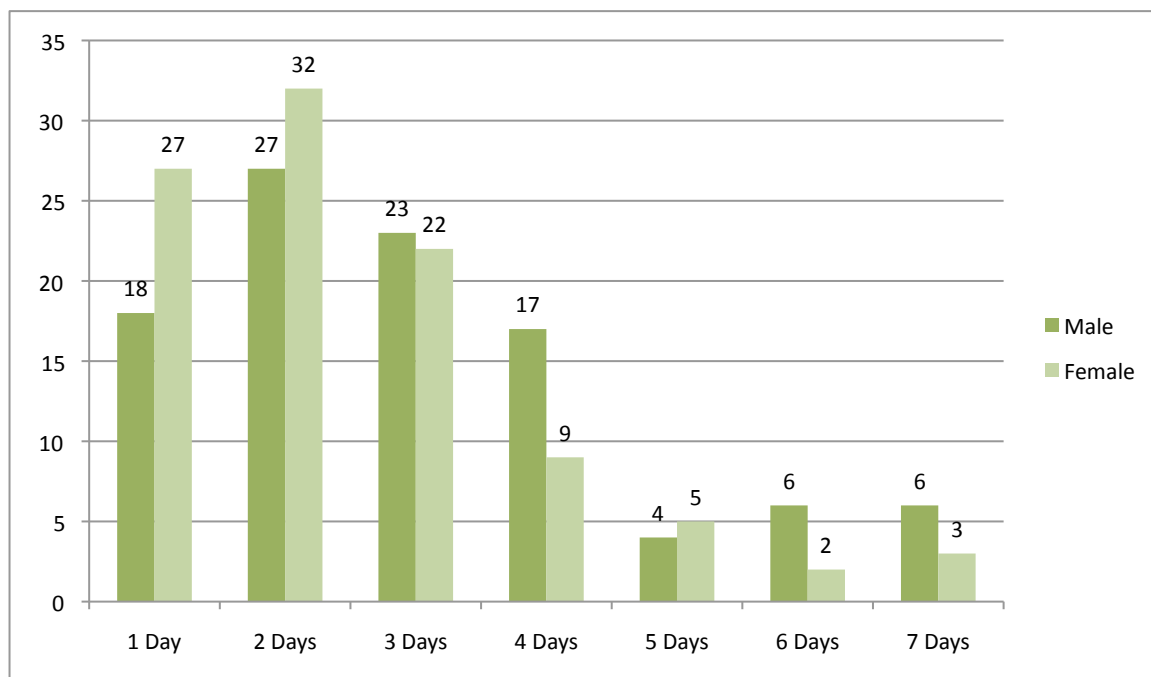
16. Over 14 units a week (for women), 21 units a week (for men) (il)^a.

	Total		Male		Female	
	Freq.	Valid %	Freq.	Valid %	Freq.	Valid %
Under limit	348	45.6	123	40.3	220	48.6
Over limit	415	54.4	182	59.7	233	51.4
Total	763		305		453	

a. n =902 for Sample. Valid =763, Abstainer =65, Missing =74, Gender missing = 5.

Over half of both male and female weekly drinkers (n=758) reported consuming more than the UK Government's recommended weekly limits of 14 units for women and 21 for men.

17. Drinking days a week (iJ)^a



a. n =902 for Sample. Valid =758, Abstainer =65, Missing =74, Gender missing = 5. Valid percent shown. The mean amount of drinking days a week was three (3.04, ±1.68).

There is little difference between the genders, certainly for the majority of results (between 1-3 days), after which males are represented more. For both genders the mean amount of drinking days a week is three (mean=3.04, ±1.68).

18. Units per occasion (iK) (daily and weekly mean, scores of zero included)^a

		Monday	Tuesday	Wed.	Thurs.	Friday	Sat.	Sunday	Weekly
Total	Mean	6.7	0.7	7.1	1.8	3.2	4.8	0.9	25.0
	Std. Dev.	8.9	2.1	9.0	4.3	5.7	6.5	2.5	21.2
Male	Mean	9	1.1	9.4	2.7	3.7	5.8	1.3	33.1
	Std. Dev.	10.6	2.9	10.8	5.4	6.6	7.7	3.1	24.8
Female	Mean	5.1	0.4	5.5	1.1	2.8	3.9	0.6	19.5
	Std. Dev.	7.0	1.2	7.2	3.2	5.0	5.4	2.0	16.3

a. n =902 for Sample. Valid n=758, Male n =305, Female n =453, Abstainer =65, Missing =75, Gender missing = 5.

19. Units per drinking occasion (iK) (daily and weekly mean, scores of zero omitted)^a.

Gender		Monday	Tuesday	Wed.	Thurs.	Friday	Sat.	Sunday	Weekly mean
Total	Frequency	401	111	430	184	336	452	151	295
	Mean	12.6	4.5	12.5	7.3	7.2	8.0	4.7	8.1
	Std. Dev.	8.6	3.6	8.8	6.0	6.6	6.7	3.8	6.3
Male	Frequency	179	59	183	98	143	192	76	133
	Mean	15.4	5.9	15.6	8.5	7.9	9.3	5.4	9.7
	Std. Dev.	9.8	4.1	9.9	6.5	7.7	7.8	4.1	7.1
Female	Frequency	221	52	246	86	193	258	74	161
	Mean	10.3	3	10.2	6	6.7	6.9	3.9	6.7
	Std. Dev.	6.7	2.2	7	4.9	5.7	5.4	3.4	5.8

a. n =902 for Sample. Valid n=758, Male n =305, Female n =453, Abstainer =65, Missing =75, Gender missing = 5.

As can be seen from Tables 19 and 20, the units per occasion are at their highest amongst men and women on a Monday and Wednesday, followed by Thursday, Friday and Saturday. Drinking on Tuesday and Sunday is low. Participation in drinking alcohol (on each individual day) can be seen in Table 20, where it is clear that Saturday night is the most popular in terms of drinkers, closely followed by Wednesday and Monday, and then Friday. Mean levels of alcohol are much higher midweek, on Monday and Wednesday than they are at the weekend. Across the week, for every single unit a female Gloucestershire student drinks, their male counterpart, on average, consumes 1.65 units.

20. Heavy drinking on Monday and/or Wednesday (iiiA)^a.

	Total		Male		Female	
	Freq.	Valid %	Freq.	Valid %	Freq.	Valid %
Does not drink Heavily ^b on Mon. or Wed.	367	48.3	133	43.6	232	51.3
Drinks Heavily ^b Mon.	99	13.0	42	13.8	56	12.4
Drinks Heavily ^b Wed.	101	13.3	38	12.5	63	13.9
Drinks Heavily ^b on Mon. and Wed.	193	25.4	92	30.2	101	22.3
Total	760		305		452	

a. n =902 for Sample. Valid n=760, Male n =305, Female n =452, Abstainer =67, Missing =75, Gender missing = 5.

b. 'Drinks Heavily' = 6.5 units+ for a woman, 8.5 units+ for a man.

Heavy drinking characterises consumption on Mondays and Wednesdays. The table above demonstrates that over half of male drinkers (56.5%) and almost half of female drinkers (48.6%) and approximately one in two of all students (51.7% of total drinkers) are engaging in heavy drinking (6.5/8.5 units+) on these days. A quarter (25.4% of total drinkers) drink heavily on both Mondays and Wednesdays.

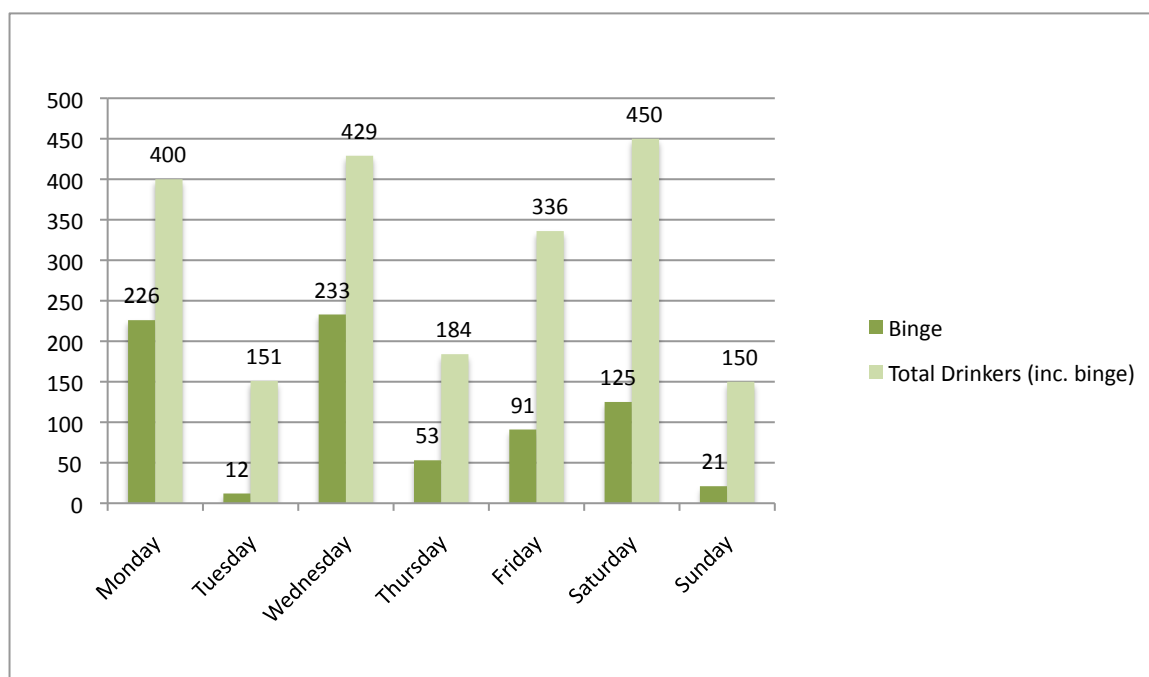
The bingeing data (heavy drinking at 2+ units/hour) displayed in Tables 21 and 22 on the following page is high: of 930 male drinking occasions a week, 377 or 40.5% are binges. For females the figure is not much lower, 34%, or 384 of 1130 drinking occasions. For male drinkers 60.7% of these binges fall on Monday and Wednesday, for women, the proportion is remarkably similar: 59.9%. Even though the total number of drinkers is higher for both men and women on a Saturday (192 for males and 258 for females), the proportion of bingers (male 30.2% and female 26%) is half that for Monday and Wednesday. Note that females binge proportionally less than males on all days apart from Friday.

21. Temporal bingeing plan (iiA – iiH)^a.

Gender		Monday	Tuesday	Wed.	Thurs.	Friday	Sat.	Sunday	Weekly Total
Total	Drinkers	401	111	430	184	336	452	151	2065
	Bingers	227	12	234	53	91	126	21	764
	% Dri. Oc. ^b	56.6	10.8	54.4	28.8	27.1	27.9	13.9	37.0
Male	Drinkers	179	59	183	98	143	192	76	930
	Bingers	115	10	114	32	35	58	13	377
	% Dri. Oc. ^b	64.3	17	62.3	32.7	24.5	30.2	17.1	40.5
Female	Drinkers	221	52	246	86	193	258	74	1,130
	Bingers	111	2	119	21	56	67	8	384
	% Dri. Oc. ^b	50.2	3.9	48.4	24.4	29	26	10.8	34

- a. n =902 for Sample. Valid n=758, Male n =305, Female n =453, Abstainer =65, Missing =75, Gender missing = 5.
 b. '% Dri. Occ.' = Percentage of drinking occasions that are binges.

22. Temporal bingeing plan (iiA – iiH) (Chart)^a.



- a. n =902 for Sample. Valid n=758, Male n =305, Female n =453, Abstainer =65, Missing =75, Gender missing = 5

This chart shows the same data as that presented in Table 21.

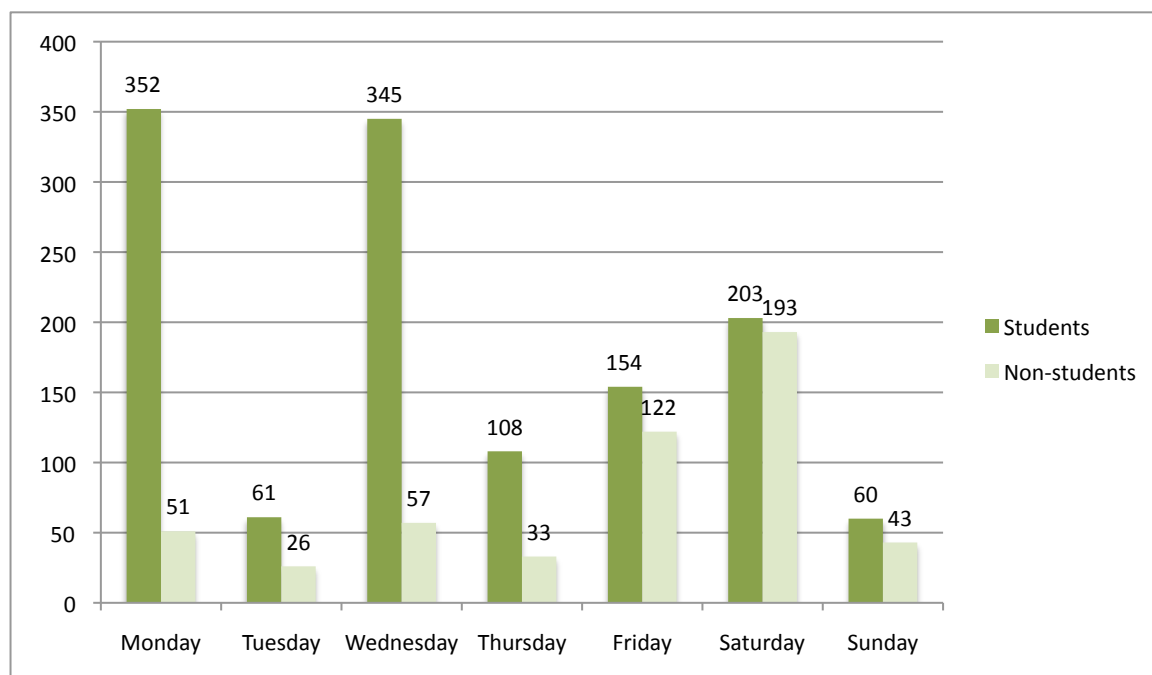
23. Weekly binges (iiH)^a

	Total		Male		Female	
	Freq.	Valid %	Freq.	Valid %	Freq.	Valid %
No binge	318	42.6	105	34.9	212	48.0
1 binge	187	25.1	68	22.6	118	26.7
2 binges	168	22.5	89	29.6	78	17.6
3 binges	57	7.6	30	10.0	27	6.1
4 binges	12	1.6	6	2.0	6	1.4
5 binges	3	0.4	2	0.7	1	.2
6 binges	0	0.0	0	0.0	0	0.0
7 binges	1	0.1	1	0.3	0	0.0

a. n =902 for Sample. Valid n=746, Male n =301, Female n =442, Abstainer =67, Missing =89, Gender missing = 5.

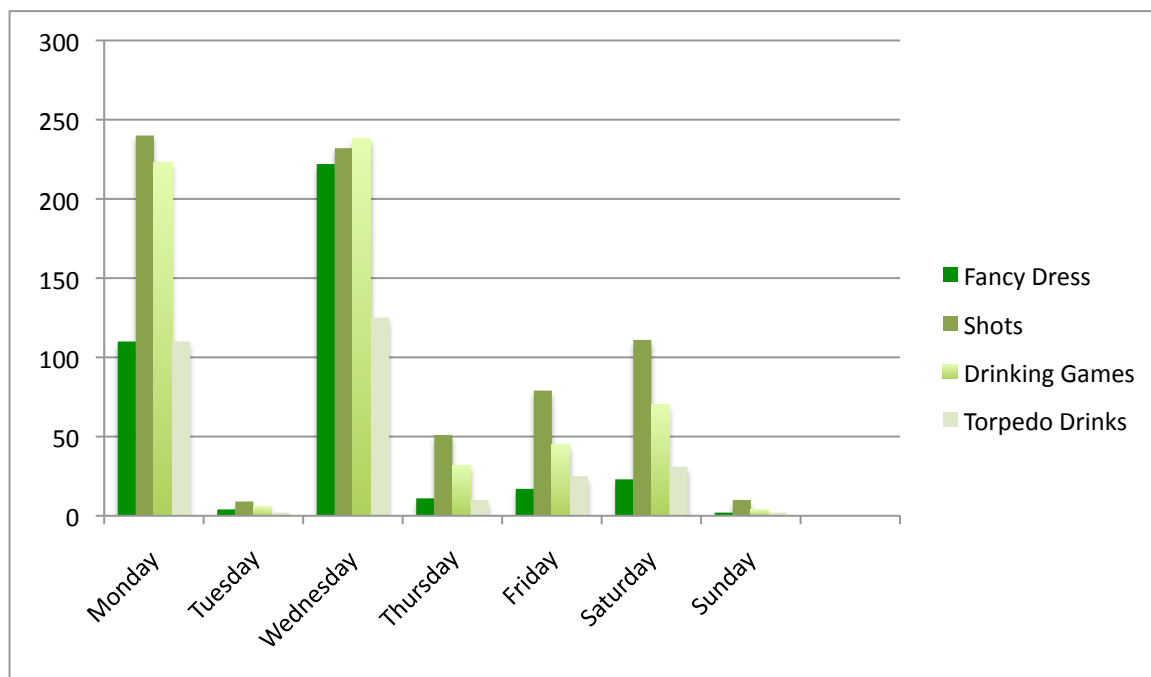
Note the similarity between the male and female data.

24. Do you drink with students or non-students? (vA – vH, vJ – vQ)^a



a. n =902 for Sample. Valid n=760, Male n =305, Female n =452, Abstainer =67, Missing =75, Gender missing = 5.

25. Fancy dress, shots, drinking games and torpedoes through the week (viA – viX)^a.



a. n =902 for Sample. Valid n=760, Male n =305, Female n =452, Abstainer =67, Missing =75, Gender missing = 5.

From a temporal perspective it is evident that there are at least two alcohol cultures operating amongst this respondent group. As demonstrated by the three charts (23, 25, 26), there is a clear student-only drinking culture on Mondays and Wednesdays, and a second, potentially mixed student and non-student culture that develops in size through Thursday, Friday and Saturday. The extent of the Monday and Wednesday culture is not matched anywhere else in the week, and is accompanied by a range of behaviours demonstrated by Table 26: drinking games, torpedoes, shots and fancy dress, the latter especially on a Wednesday. Participation in these activities may account for the proportionally larger amount of drinkers who binge on these days.

In order to test the possibility that there may be two separate drinking cultures amongst the student sample, it was decided to compare those who drink on a Monday and/or Wednesday against those who drink on a Friday and Saturday (and who do not drink on Monday and/or Wednesday). Two other variables were also created, one that measured Heavy Drinking on Monday and/or Wednesday against any drink on Friday and/or Saturday, and a last that measures Heavy Drinking on both Monday/Wednesday against Heavy Drinking on Friday/Saturday. Each produced similar results, so it was decided to reproduce the simplest of the three in the results (Table 26 on the following page). This data demonstrates that the weekend drinking culture is slightly more female, with 23.7% of male drinkers (n=295) drinking exclusively at the weekend and not Monday and/or Wednesday, compared to 30.6% of female drinkers (n=447).

26. Any drink on Monday and/or Wednesday vs. any drink on Friday and/or Saturday without a drink on Monday and/or Wednesday (iiiD)^a

	Total		Male		Female	
	Freq.	Valid %	Freq.	Valid %	Freq.	Valid %
Mon. and/or Wed.	536	71.9	225	76.3	310	69.4
Fri. and/or Sat. & not Mon. and/or Wed.	209	28.1	70	23.7	137	30.6
Total	745		295		447	

a. n =902 for Sample. Valid n=745, Male n =295, Female n =447, Abstainer =67, Missing =75, Gender missing = 5, Drinking but missing because does not fit into categories = 15.

Finally, students who exclusively drink with other students were measured against students who never drink with other students, of which there were 11.6%, as shown in Table 27.

27. Exclusively drink with students or non-students in the week? (vI and vR)^a

	Total		Male		Female	
	Freq.	Valid %	Freq.	Valid %	Freq.	Valid %
Exclusive students	343	45.1	145	47.5	197	43.6
Excl. non-students	88	11.6	25	8.2	62	13.7
No Answer	329	43.3	135	44.3	193	42.7
Total	760		305		452	

a. n =902 for Sample. Valid n=760, Male n =305, Female n =452, Abstainer =67, Missing =75, Gender missing = 5.

In the next section, this and the other measures of alcohol consumption are tested against the demographic, social and academic variables described in 4.2.1.

4.3 Chi-Square analysis

Due to the large amount of calculations (2,774 between 38 demographic, social and academic variables (see Appendix Three) against 73 measurements of alcohol consumption (see Appendix Four)) it has not been possible to present full cross-tabulation tables here, even selecting for significant results. Instead, I have decided to describe the results in order of the measurements used to assess alcohol use, discussing the 38 demographic, social and academic variables as and when they interact. Drinking and bingeing levels for Tuesday and Sunday were not included as they were found to be too low to ensure reliable analysis using the Chi-Square method. When drinking is termed as Light, Moderate, Heavy or Low, Medium, High, Very High (with capitalisation) it refers to the drinking levels described in table 2 in 2.4.1.

i. Drinking levels

- A. Monday drinking levels
- ~~B. Tuesday drinking levels~~
- C. Wednesday drinking levels
- D. Thursday drinking levels
- E. Friday drinking levels
- F. Saturday drinking levels
- ~~G. Sunday drinking levels~~
- H. Weekly drinking levels
- I. Over 14/21 units a week
- J. Drinking days a week

ii. Binge levels

- A. Monday binge
- ~~B. Tuesday binge~~
- C. Wednesday binge
- D. Thursday binge
- E. Friday binge
- F. Saturday binge
- ~~G. Sunday binge~~
- H. Weekly binges

For all tested variables, aside from Friday and Saturday drinking and binge levels, gender significantly contributed to intake ($p < 0.05$), with males consuming more alcohol, as the literature prepares us to expect. For example, on Mondays being male increased the likelihood of drinking Heavily by 14%, being female decreased it by 10%. Over the week being male increased the likelihood of High drinking by 25% and Very High drinking by 18%; being female decreased High drinking by 17% and Very High by 12%. The two age variables, Under 24 year olds/25 year olds+ and Under 21/21+ are particularly interesting, significantly contributing on Mondays and Wednesdays ($p << 0.05$) when the younger students drank heavily and binged, and for Friday and Saturday drink and binge ($p << 0.05$) when the older students consumed more alcohol. It was clear though, that the younger students consumed so much on Mondays and Wednesdays that their overall weekly levels were much higher than their elders (iH and iiH $p << 0.05$). It is worth noting that there was very little difference between the two age values, with both 25+ year olds and 21+ year olds drinking comparably.

Level of study significantly contributed to Wednesday drinking and bingeing levels ($p \ll 0.05$), where it is clear from the cross-tabulation that Level One students consumed more than Level Two and Final Year students. In terms of weekly consumption, Level One consumed more again ($p \leq 0.03$ for iH and iL, $p \leq 0.01$ for iiH). There was some indication that Level Two students drank more than Final Year students, but the real difference was between Level One and Levels Two/Final Year students. In general, the higher the level, the less alcohol consumed.

Field of study is more complicated, having a p value far smaller than 0.05 ($p \ll 0.05$) for Monday, Wednesday and Thursday and smaller than 0.033 and 0.006 for Friday and Saturday respectively. In terms of subject the cross tabulation indications are summarised in the table below.

28. Field of study temporal drinking tendencies

Monday	Health & Social Work do not drink Heavily while Sports students do, Arts students drink less than expected.
Wednesday	Health & Social Work drinking is low while Sports is extremely Heavy. This demonstrates low social cohesion within the Faculty of Sport, Health and Social Care at the University.
Thursday	Arts students are much more likely ($p \ll 0.05$) to consume alcohol.
Friday	Health & Social Work, Business and Education students drink more, Sports less.
Saturday	Health & Social Work students drink considerably more than other fields.

When one analyses Sports students vs. other subjects, it is clear that Sports students drink and binge more on Monday and Wednesday and very little on Thursday and Friday. Analysis with the variable 'Member of a University Sports Club' produces similar results, identical in terms of temporality, but even more pronounced, especially in terms of Weekly Drinking Levels ($p \ll 0.05$), where it is clear that sports players consume and binge overall much more than non-sports players. Similarly membership of a society increases drinking levels on Monday ($p < 0.001$), Wednesday ($p < 0.004$) and Thursday ($p < 0.001$), though not to the extent playing sports does. Bingeing is not affected by Society membership. To summarise, students involved in sports tend to consume much more alcohol than students who do not; students involved in societies also consume more than students who do not, though not as much as the students involved in sports.

There was no change in consumption for being a part-time student or coming from an minority (aside from non-whites bingeing less on Mondays ($p < 0.033$) and Saturdays ($p < 0.045$), although it is noted that, for reasons discussed above, I did not include abstainers in this analysis. There was some indication that students with disabilities kept to the 14/21 limits ($p < 0.018$), and stronger indications that disabled students bingeed less on Mondays ($p < 0.001$), Wednesdays ($p < 0.003$) and over the week ($p < 0.001$). Having a part-time job had no effect on drinking levels but increased bingeing on Fridays ($p < 0.028$).

Of the socio-economic measures, coming from a target postcode in Gloucestershire decreased drinking and bingeing on Mondays ($p < 0.05$) and had no other effects with these measurements. None of the variables that measured family education levels had any effect on drinking or bingeing, save for whether there was any history of HE in the family, which increased the chance of Very High drinking on Saturdays (50.5 units+) ($p < 0.037$). Coming from a household with an income of £25,000+ increased drinking and bingeing on a Wednesdays ($p < 0.017$ for both), and bingeing on Mondays ($p < 0.029$). Having 2+ indicators of lower socio-economic status also decreased bingeing on Wednesdays ($p < 0.031$) and lowered drinking levels on Mondays ($p < 0.042$) and Wednesdays ($p < 0.015$).

Residence had a much more pronounced effect on drinking than socio-economic status. Monday and Wednesday drinking and binge levels were pronounced ($p < 0.05$), and analysis of the cross-tabulation tables indicated that over 50% of those living in shared and University housing were drinking heavily (6.5/8.5 units+). On Wednesdays the p-value was also far smaller than 0.05 ($p < 0.05$) and analysis indicated that 44.3% of shared houses were drinking heavily while an incredible 64% of university-owned residences were drinking heavily and 54.3% were bingeing. This means, effectively, that on Wednesday night in Halls, one in every two people would be intoxicated.

On Saturdays and Sundays, however, the picture reverses ($p < 0.05$): over 50% of residents of shared student houses and University residences drank nothing on Saturdays, while double the expected values of those students who live at home with their parents drank heavily. Only 16% of students who live with their partner and 13.8% of students who live with their parents drank nothing. Compared with a typical Wednesday, when 73% of students living with their partner and 71.6% of students living with their parents drank nothing, it becomes clear that the mid-week student alcohol culture can be defined by its association with residence. The location of that residence also significantly contributes to consumption with students living away from Cheltenham and Gloucester tending to drink and binge on the weekends ($p < 0.05$ for Monday,

Wednesday and Saturday drinking levels, $p \ll 0.05$ for Monday and Wednesday binge levels and $p < 0.001$ for Saturday bingeing).

iii. Temporal measures

- A. Heavy drinking on Monday and/or Wednesday
- B. Heavy drinking on Monday and/or Wednesday vs. any drink on Friday and/or Saturday and no drinking Monday and/or Wednesday
- C. Heavy drinking on Monday and/or Wednesday vs. heavy drinking on Friday and/or Saturday and no drinking Monday and/or Wednesday
- D. Any drink on Monday and/or Wednesday vs. any drink on Friday and/or Saturday and no drinking Monday and/or Wednesday

These four variables were designed to measure how distinct the heavy drinking mid-week and general weekend alcohol cultures are from each other. The sense of temporality described by iiiB, C and D all attempt to identify those who are not involved in the mid-week student drinking culture. Being male made a student more likely to be a member on three of these variables (iiiA $p < 0.037$, iiiB $p < 0.046$ and iiiD $p < 0.040$). This tendency was far more pronounced with the age variables, with both 25 year olds+ and 21 year olds+ being more likely to drink Friday/Saturday and not drink at all Monday and/or Wednesday for each of the four variables (p values all $\ll .05$).

As already noted, Level One students were more likely to be involved in heavy drinking on Mondays and/or Wednesdays, with Level Two having no effect. Final Year students were slightly more likely to drink at the weekend, but the general trend remained towards mid-week drinking. Field of study reports p values of $\ll 0.05$ for each of the above variables iiiA – iiiD. From the cross tabulations however, it was apparent that the key difference was between the Health & Social Work students and the Sports students; Health & Social Work drinking at the weekend not mid-week and *vice versa*.

To explain this Chi-Square analysis between Field of Study and Age reveals a relationship with a p value of $\ll 0.05$. Cross-tabulation indicates that Sports students have over 50% less older students than expected, while Health & Social Work students have over 50% more older students. That is not to say, of course, that age is the reason Health & Social Work students drink at the weekend, but it is an indication that there is more than one variable aside from their subject of study that separates them from Sports students and suggests that each culture has markedly separate identities. Again, being a member of a Sports team has an influence on the temporality of one's heavy drinking and bingeing, ($p \ll 0.05$ on all four variables) pushing it towards the mid-week and away from the weekend. Joining a Society would not however make you more likely to

drink heavily on a Monday or Wednesday, but it would definitely place you in the midweek general drinking culture ($p < 0.05$ for iiiD).

Part-time students are more likely to belong to the weekend culture ($p < 0.045$ for iiiC and < 0.031 for iiiD), as are those whose Local Authority's have means-tested their household income below £25,000 ($p < 0.032$ for iiiB) or have 2+ low socio-economic indicators ($p < 0.008$ for iiiB and < 0.034 for iiiC). Coming from a target postcode, living with your parent, never having lived in University Housing and living outside of Gloucester and Cheltenham all significantly effect the temporality of drinking (p values are $\ll 0.05$ for all four variables iiiA – iiiD), implying that the student would not drink on a Monday or Wednesday. Ethnic origin, disability and the majority of household education indicators did not significantly affect temporality.

iv. Qualitative measures

- A. Describe your drinking habits
- B. How drunk do you like to get on a typical night out?
- C. When you drink, how often do you drink to get drunk?
- D. How would you describe your drinking patterns since arriving at university, compared with before coming to university?
- E. Since arriving at university, how would you describe the influence of your peers or flatmates upon your drinking?
- F. Do you begin drinking before going out?
- G. Since arriving at university, has drinking caused you to damage any property?
- H. Since arriving at university, has drinking ever caused a friend, roommate, or partner to damage any property?

Gender and (both ways of assessing) age significantly contribute to all of the above qualitative measures (all $p < 0.010$). Essentially these results suggest that being male increases one's involvement with alcohol, one's perceived desire to get drunk, one's susceptibility to influence from University and from peers on one's drinking, of drinking before going out, of drinking to get drunk, of damaging property and of knowing people who damage property when drunk. Being younger than 21 has the same effect, as does living in University housing or in a shared house with students (p values for all variables A – H $\ll 0.05$), living in Cheltenham or Gloucester (p values for all variables A – H < 0.005) and playing Sport (p values for all variables A – H $\ll 0.05$). Being in Level One makes one more likely to pre-drink ($p < 0.032$), but otherwise Level of Study has no effect, and neither does being a member of a Society, except for believing that attending University increases drinking levels ($p \ll 0.05$). Studying Health & Social Work applies in the opposite fashion (p values for all variables A – H < 0.005), as does coming from an ethnic minority

(p values for all variables save ivH \ll 0.05) and having a disability, but only for ivA ($p < 0.020$) and ivB ($p < 0.001$). Coming from a target postcode makes one less likely to drink to get drunk ($p < 0.028$) but has no other relationships. Working part-time, having a means-tested income, and 2+ socio-economic factors have no effect.

v. Social influences

- | | |
|--|--|
| A. Drink with students on a Monday | J. Drink with non-students on a Monday |
| B. Drink with students on a Tuesday | K. Drink with non-students on a Tuesday |
| C. Drink with students on a Wednesday | L. Drink with non-students on Wed. |
| D. Drink with students on a Thursday | M. Drink with non-students on a Thursday |
| E. Drink with students on a Friday | N. Drink with non-students on a Friday |
| F. Drink with students on a Saturday | O. Drink with non-students on a Saturday |
| G. Drink with students on a Sunday | P. Drink with non-students on a Sunday |
| H. Drink with students in the week? | Q. Drink with non-students in the week? |
| I. Exclusively drink w/ students in week? | R. Exclusively drink w/ non-stud. in week |

There is little difference between the sexes in these results, except a tendency for males to drink with students on Thursdays ($p < 0.021$) and women to drink with non-students on Fridays and Saturdays ($p < 0.006$ and < 0.002 respectively). Older students were more likely to drink with non-students throughout the week, and younger students more likely to drink with students (24 and below/25+ $p < 0.004$ for all variables, under 21/21+ $p < 0.033$ for all variables). Level of study had a relationship with Mondays and Wednesdays (vA and vC p values < 0.005) which implies that final year students were less likely to drink with students, and for Fridays (vN $p < 0.05$) when third year students were more likely to drink with non-students. Sports students were more likely to drink with students than non-students throughout the week, while membership of a sports team made it very unlikely for the student to drink with non-students (vR p value \ll 0.05).

Health & Social Work students proved less likely to drink with students throughout the week than other students ($p < 0.002$ throughout); vR indicates that they were four times more likely to drink exclusively with non-students than other subject areas ($p \ll 0.05$). Similarly, part-time students were more likely to exclusively drink with non-students throughout the week (vR $p < 0.039$). Residence had a huge influence on whether students drank with other students or non-students, p values are all \ll 0.05 for vA – vI, except for vJ and vL which have no relationship. If one lived in a student house or in University accommodation then one was much more likely to drink with students throughout the week, if one lived with parents or with one's partner, the reverse was true. Coming from an ethnic minority made a student less likely to drink with students on

Mondays ($p < 0.007$) in particular and in the week in general ($p < 0.009$). Having a disability made a students less likely to drink with students on Mondays or Wednesdays ($p < 0.034$) and less likely to drink exclusively with students throughout the week ($p < 0.016$). Working part-time had no interactions for drinking with students or non-students, aside from making it more likely for students to drink with non-students on a Friday ($p < 0.028$), potentially with work colleagues.

vi. Associated behaviours

- | | |
|-------------------------------------|---------------------------------------|
| A. Wear fancy dress on a Monday? | M. Play drinking games on a Monday? |
| B. Wear fancy dress on a Wednesday? | N. Play drinking games on a Wed.? |
| C. Wear fancy dress on a Thursday? | O. Play drinking games on a Thursday? |
| D. Wear fancy dress on a Friday? | P. Play drinking games on a Friday? |
| E. Wear fancy dress on a Saturday? | Q. Play drinking games on a Saturday? |
| F. Wear fancy dress in the Week? | R. Play drinking games in the Week? |
| G. Drink shots on a Monday? | S. Drink torpedoes on a Monday? |
| H. Drink shots on a Wednesday? | T. Drink torpedoes on a Wednesday? |
| I. Drink shots on a Thursday? | U. Drink torpedoes on a Thursday? |
| J. Drink shots on a Friday? | V. Drink torpedoes on a Friday? |
| K. Drink shots on a Saturday? | W. Drink torpedoes on a Saturday? |
| L. Drink shots in the Week? | X. Drink torpedoes in the Week? |

Gender had no significant relationship to fancy dress, drinking games or shots (save for Saturday night (viK $p < 0.010$) where women were more likely to drink shots). Torpedoes, however were more a male practice; viS, T, W and X all have $p \ll 0.05$. Both measures of Age indicated that the older the student is the less they participated in fancy dress, shots, drinking games and torpedoes throughout the week (viF, L, R and X $p \ll 0.05$) and especially on Mondays and Wednesdays ($p \ll 0.05$ for both). Level of study clearly revealed that Level One students participated in Wednesday fancy dress, shots, drinking games and torpedoes more than Level Two and Final Year students ($p < 0.003$).

Education students engaged in fancy dress on Mondays ($p \ll 0.05$), Sports students on Wednesdays ($p \ll 0.05$), Arts students on Thursdays ($p < 0.020$), Health & Social Work students were unlikely to wear fancy dress throughout the week (viF $p \ll 0.05$). This pattern is repeated for drinking games (all $p < 0.031$). Sport students drank shots on Mondays and Wednesdays, Arts students on Thursdays and Health & Social Work students on Saturdays (all $p < 0.003$). Only Sports students were shown to be more likely to consume torpedoes, and specifically on Mondays and Wednesdays ($p \ll 0.05$). Again, there was very little to distinguish members of sports teams

from students of Sport, but members of Societies, were more likely to wear fancy dress on Mondays ($p \ll 0.05$) and drink shots on Mondays, Wednesdays and Thursdays ($p < 0.049$).

Part-time students reported no interactions with these behaviours, apart from a tendency to play less drinking games in the week ($p < 0.035$). Living in Halls and shared houses made the likelihood of engaging with all these behaviours on Mondays and Wednesday stronger ($p \ll 0.05$ for each case) and, in relation to shots and drinking games, weaker for Fridays and Saturdays ($p < 0.040$). For students living with their parents or partner and/or children, the relationship was reversed. The same pattern was observed for students living outside Gloucester and Cheltenham, who did not engage in fancy dress, drinking games or torpedoes, but drank shots on Saturdays ($p < 0.013$).

Coming from a target postcode made students more likely to wear fancy dress on Fridays ($p < 0.010$) and Saturdays ($p < 0.048$), less likely to drink shots and play drinking games on Mondays specifically ($p < 0.004$) and through the week in general ($p < 0.038$). Being from a target postcode did not effect Torpedo consumption until Saturdays, when it increased ($p < 0.014$). A student's family's education had little effect on these behaviours, but coming from a home with an income means-tested to below £25,000 lowered engagement in drinking shots and wearing fancy dress throughout the week ($p < 0.011$), as it did with drinking games ($p < 0.002$). Having 2+ lower socio-economic indicators decreased fancy dress through the week ($p < 0.006$), along with weekly drinking games ($p \ll 0.05$). Ethnic origin and part-time employment had no influence on these behaviours, and having a disability had very moderate influence: less fancy dress on Wednesdays ($p < 0.039$) and less engagement with drinking games on Mondays ($p < 0.004$) and through the week ($p < 0.006$).

The results of the Linear regression are displayed on the next page, in 4.4.

4.4 Linear regression

Below are the results from six Stepwise linear regressions using alcohol units as the response and the attributes listed in Appendix Three as the independent variables (see 3.4 for more detail).

29. Monday (ANOVA followed by Coefficients)^a

	Sum of Squares	df	Mean Square	F	Sig.
Regression	7107.306	4	1776.826	26.872	.000
Residual	27638.454	418	66.121		
Total	34745.760	422			

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.967	1.527		3.908	.000
Member of a University sports team	-4.780	1.140	-.200	-4.193	.000
Lives away from parental home	5.859	1.132	.229	5.177	.000
Sports student	7.051	1.776	.187	3.971	.000
21+ mature student	-3.312	1.043	-.140	-3.177	.002

a. Dependent Variable: Estimated alcohol units consumed on a Monday

Even on the Monday, the less sports-orientated of the mid-week drinking days, sport is the single most significant variable in relation to alcohol intake. Studying sport had a 7.1 unit (s.e. = 1.776) increase on Monday's intake whilst playing sport increases ones consumption by 4.8 units (s.e. = 1.140). As predicted by Chi-Square analysis, residence is a key factor, living away from the parental home increased intake by almost 6 units. The measure of age was also significant, younger students drinking more.

30. Wednesday (ANOVA followed by Coefficients)^a

	Sum of Squares	df	Mean Square	F	Sig.
Regression	5541.155	4	1385.289	24.945	.000
Residual	23268.448	419	55.533		
Total	28809.603	423			

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	14.146	1.336		10.585	.000
Member of a University sports team	-4.251	1.042	-.196	-4.079	.000
Sports student	8.416	1.633	.245	5.154	.000
Where is your housing?	-1.738	.485	-.162	-3.581	.000
Member of a University society	-3.260	1.049	-.139	-3.106	.002

a. Dependent Variable: Estimated alcohol units consumed on a Wednesday

Playing and studying sport were the most significant variables on Wednesdays, studying sport adding a massive 8.4 units (s.e. = 1.633) to average consumption (a binge in itself). Location of housing is a factor, presumably because living in Gloucester or Cheltenham facilitated, amongst other things, the ability to go out on a Wednesday without worrying about getting home and having to get into Cheltenham or Gloucester the next day. Interestingly, membership of a Society also factored, with membership adding a considerable 3.3 units (s.e. = 1.049) to consumption.

31. Thursday (ANOVA followed by Coefficients)^a.

	Sum of Squares	df	Mean Square	F	Sig.
Regression	860.238	3	286.746	11.564	.000
Residual	10389.730	419	24.796		
Total	11249.968	422			

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.442	.734		1.964	.050
Gender	-1.863	.499	-.180	-3.731	.000
Arts & Humanities student	1.490	.498	.144	2.991	.003
Lives away from parental home	1.552	.685	.106	2.264	.024

b. Dependent Variable: Estimated alcohol units consumed on a Thursday

It is surprising that gender was not a significant factor on either Mondays or Wednesdays, and that in itself demonstrates the high levels of alcohol that women were consuming on these days, and may also indicate a level of cultural cohesion. As predicted by the cross-tabulation tables, being male and studying the Arts & Humanities increased consumption on Thursdays, in line with the provision of 'artistic orientated events' on a Thursday night. Residence is again a factor.

32. Friday (ANOVA followed by Coefficients)^a

	Sum of Squares	df	Mean Square	F	Sig.
Regression	634.372	2	317.186	8.904	.000
Residual	14997.685	421	35.624		
Total	15632.057	423			

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.895	.328		8.815	.000
21+ mature student	2.826	.760	.178	3.719	.000
Comes from a local WP target postcode	2.478	1.208	.098	2.050	.041

a. Dependent Variable: Estimated alcohol units consumed on a Friday

On a Friday older students were more likely to have increased consumption. This demonstrates a clear division between the mid-week and weekend cultures, and suggests a degree of distinctiveness in the social make up of Monday night and Friday night drinkers. Note that the B values (all between 2 and 3 units) are not as large as they were for Friday or Saturday, as expected from the frequency tables for the drinking levels on these nights. The postcode variable is an indication that the lower socio-economic students were not members of the student-centred mid-week culture.

33. Saturday (ANOVA followed by Coefficients)^a

	Sum of Squares	df	Mean Square	F	Sig.
Regression	2496.356	6	416.059	11.424	.000
Residual	15186.648	417	36.419		
Total	17683.004	423			

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.358	1.342		2.503	.013
21+ mature student	2.824	.785	.167	3.596	.000
Lives away from parental home	-2.817	.832	-.154	-3.386	.001
Gender	-2.429	.600	-.187	-4.047	.000
What year are you in?	1.500	.442	.155	3.396	.001
Health & Social Work student	3.254	1.283	.119	2.537	.012
Household income above £25,000 a year	1.570	.747	.096	2.102	.036

a. Dependent Variable: Estimated alcohol units consumed on a Saturday

As the diversity of these variables suggest, the composition of alcohol consumers on a Saturday was complex. Older students drank more, as did those that lived with their parents, males, Health & Social work students (who were predominantly older and female), students at Higher Levels and those students from houses means-tested above £25,000. Note that these variables are distinctly different from those that influence mid-week drinking.

34. Weekly (ANOVA followed by Coefficients)^a

	Sum of Squares	df	Mean Square	F	Sig.
Regression	26827.203	4	6706.801	17.038	.000
Residual	164934.967	419	393.640		
Total	191762.170	423			

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	28.553	3.769		7.576	.000
Gender	-9.603	1.973	-.225	-4.868	.000
Member of a University sports team	-7.651	2.800	-.137	-2.733	.007
Lives away from parents home	8.859	2.764	.147	3.205	.001
Sports student	10.284	4.339	.116	2.370	.018

a. Dependent Variable: Total estimated weekly consumption of alcohol

According to these results a male student who lived away from home, studied and played sport was likely to be drinking 36.397 units above the weekly mean of 33.1 units. Of these variables, only living away from home featured in the individual regressions for Friday and Saturday drinking. This illustrates, perhaps, the extent of the mid-week heavy drinking and binge culture, which outweighs the distinct features of the weekend when calculating the overall most important variables for weekly consumption. These results for weekly drinking end the chapter in a marked fashion. A discussion follows in Chapter Five.

5 Discussion

University students are cursed by measurement and analysis: a wealth of statistics is produced to record and by extension, predict their movements, opinions and achievements. This is a reflection of the marketisation of HE, where students are both consumer and commodity, resources to be measured, investors to be seduced. The statistics I have already presented are, in their own way, an offering to this culture. This Discussion, however, is my attempt to gloss them into what the rules refer to as 'knowledge' (University of Gloucestershire, 2004b, p. 1).

5.1 Comparison with other survey data

Although the data presented in Chapter Four suggests levels of alcohol consumption at Gloucestershire are very high, the published record does contain research that describes similar or higher levels. For example, Leavy and Alexander (1992) discuss a (converted) average male weekly mean of 56 units (± 52), while Webb *et al.* (1996) report Very High (50 units+) drinking in 15.6% of all males. Newbury-Birch *et al.* (2000) record 16% of all males in the same category, whilst in Gloucestershire the figure is 18.56% of all males.

Typically though, the published record reports consumption at lower levels to the present sample. In the most recent survey in the literature, Bewick *et al.* (2008b) report a weekly mean of 13.83 units (± 14.61) (n=506) amongst University of Leeds students, almost half the 25.00 of Gloucestershire students. Bewick's *et al.*'s units per occasion are similar, 10.4 (± 7.9) compared to 8.2 (± 6.4) for Gloucestershire. The majority of Bewick's students consumed alcohol 1–3 days a week (n=305, 60%), 14% (n=70) did so on 4-7 days a week and 26% (n=131) once a week, much less than the Gloucestershire figures (see table 18). In Bewick *et al.*'s other survey of the year (2008a), also based on the University of Leeds, data was collected from a larger sample. Some of the results are closer to the Gloucestershire figures, as the following table demonstrates:

35. Level by level comparison of over 14/21 thresholds with Leeds^a.

	Level One		Level Two		Final Year	
	Leeds (n=1297)	Glos (n=355)	Leeds (n=804)	Glos (n=264)	Leeds (n=502)	Glos (n=143)
14/21 units a week +	50	52.7	42	41.4	32	39.2

a. Comparative data taken from Bewick *et al.* (2008a). Valid percent shown. Marginal missing data not shown.

While these results are similar, especially for Levels One and Two, the mean weekly alcohol units are in fact much less in Leeds's case:

36. Level by level comparison of mean weekly alcohol with Leeds^a.

Level		Total		Male		Female	
		Mean week	SD	Mean week	SD	Mean week	SD
1	Leeds (n=1297)	18.94	14.45	24.04	16.16	15.49	11.89
	Glos (n=404)	25.99	19.87	33.21	22.67	20.15	14.93
2	Leeds (n=804)	16.06	13.36	21.09	15.60	12.65	10.09
	Glos (n=321)	24.88	23.60	36.14	30.56	19.18	16.65
3	Leeds (n=502)	13.89	12.52	18.42	14.17	10.71	9.79
	Glos (n=176)	22.72	19.69	28.42	20.02	18.83	18.58

a. University of Leeds figures taken from Bewick *et al.* (2008a)

The latest ONS Opinions (Omnibus) survey to focus on drink was published in 2009 and contains data covering the period 1997–2008. Male mean weekly consumption was calculated as 18 units a week in 2008, female was 7.7, giving a ratio of 1 female unit to 2.33 male. Males aged 16-24 had a weekly consumption of 23.4 units, while females consumed 8.2 units (a ratio of 1:2.85 units) (Lader, 2009). The mean for weekly alcohol consumed at Gloucestershire was 25.0 units (33.1 for males and 19.5 for females). By these measurements, female students at the University are drinking 2.5 times the national average for young females.

Gill (2002) discusses the proportion of students whose weekly alcohol levels are above the 21/14 guidelines. Across seven studies, the mean of those over the limit was 52% ($\pm 8\%$) for men and 43% ($\pm 8\%$) for women. In Gloucestershire, 59.7% of men were over the weekly limit, compared to 51.4% of women. It is noted that while the Gloucestershire figures are not the highest recorded for male students, they are the highest that I have found for female students. As predicted by the literature on students, mean weekly alcohol consumption was much higher for Gloucestershire than the data recorded in the national GHS, as demonstrated by the table on the following page.

37. GHS mean weekly alcohol consumption^a.

		1994	1996	1998	2000	2001	2002	2005	2006
All age groups	Men	15.4	16.0	17.1	17.4	17.2	17.2	15.8	18.7
	Women	5.4	6.3	6.5	7.1	7.5	7.6	6.5	9.0
16-24 yr. olds	Men	17.4	20.3	25.5	25.9	24.8	21.5	18.2	18.6
	Women	7.7	9.5	11.0	12.6	14.1	14.1	10.9	10.8

a. Data taken from Goddard (2008).

In comparison with the statistics above, students at the University of Gloucestershire typically consumed approximately twice the mean national weekly alcohol consumption of 2006, for all age groups, including young people.

The proportion of consumption between males and females is closer in the present data than it is in the GHS (as it is typically for students (Gill, 2002)). For every unit a female Gloucestershire student drinks in the week, their male counterpart consumes 1.65 units. For 2006 the GHS had a female to male ratio of 1:2.07 units for all age groups, and 1:1.72 for 16 – 24 year olds. This latter figure is close to the University of Gloucestershire data, which, remains at 1:1.64 when calculated for 18-24 year olds.

The GHS also collects data on the maximum drunk on any one day in the previous week. As values are given for 8+ and 6+ units (the level of consumption I have used for bingeing), some comparison can be made. 32% of male 16–24 year olds drank 8+ units on at least one day in the week, for women the figure drinking over 6 units was 24%. At the University of Gloucestershire, the results were more than double that for both men (65%) and women (52%).

The precise method I have used for calculating bingeing is taken from Hammersley and Ditton (2005). Their study found that 13.2% of their sample (n=287) were drinking at a rate of 2 units/hour+, thus leading to intoxication. On Monday night at the University of Gloucestershire 34.5% of all students are drinking at a rate of 2+ units an hour, and on a Wednesday that figure is 38.6%, close to three times the figure that Hammersley and Ditton were concerned about. These authors also give pre-drinking figures of 60% compared to Gloucestershire's 68.4%.

5.2 Limitations

As should be clear from 5.1, surveys that report levels of consumption greater than those featured in the present data are not as common as surveys that report less, necessitating consideration that this research project has encouraged the over-estimation of alcohol intake. As discussed in 4.1 there is the potential for sampling errors: although the goodness-of-fit Chi-Square tests did not show a significant relationship between sample and population, there remains proportionately more Oxstalls students in the study than those of any other campus. Since Oxstalls houses the Faculty for Sport, Health and Social Care, and since students involved in sport have been shown to consume more alcohol than any other student, this may well elevate the overall results.

I am not, however, concerned that this is the case. Oxstalls also houses Health & Social Work students whose consumption is the lowest from any subject group. As there are proportionately more Oxstalls students in the sample, there are proportionately more Health & Social Work students in the sample too. Additionally, there are actually more Arts & Humanities students in the sample than either Sports or Health & Social Work students (289 Arts & Humanities students, 209 Sports students and 176 Health & Social Care students). To suggest that Sports students dominate the sample would be inaccurate. However, if I were to repeat the survey, I would aim to achieve higher participation from Business and Hospitality students on the Park campus.

Another reason for potentially inflated consumption values lies in the design of the table that measures alcohol intake, which, as explained in 4.2.2, does not easily account for students who do not drink alcohol every week. Consequently, I have not been able to differentiate between those students who left the table blank because they ran out of time (or chose not to fill it out) and those students for whom it was not applicable because they drank less than once a week. As a result of this error I made the decision not to include abstainers in the results, as this facilitated their interpretation. Moreover there is the possibility that some students might, as a result, overestimate their weekly alcohol consumption. Again this problem can be contextualised and contained: not only were the number of students who did not complete the table small ($n=75$), but Bewick *et al.*'s (2008a) study, which reports lower levels of consumption, found that 90% of their sample consumed at least 1 unit a week. Considering that 84.4% of Gloucestershire students reported drinking at least 1 unit a week (less than Bewick's *et al.* figure) this issue does not seem as problematic as it first appeared.

Why then were the weekly alcohol means for Gloucestershire students a third or a double that of Leeds? Aside from the obvious conclusion, (that Gloucestershire students drink a third to double that of Leeds students), one might call into question Bewick *et al.*'s (2008a) aides to self-

assessment: 'Students were advised that one unit was approximately ½ pint of lager, 1 small glass of wine or 1 measure of spirits' (p. 163). Taking into account the discussion on self-assessment in 3.1.1.2, Bewick *et al.*'s method leaves something to be desired, especially considering Gill's (2002) comment, 'One half pint will contain, not one, but 1.1 – 2.4 units of alcohol' (p. 113). This disparity illustrates the dangers of comparing studies when the vagaries of self-assessment are so apparent. The aides to assessment employed in this study, (an introductory talk with reference to visual information that considered different strengths of alcoholic drinks (see Appendix Two)) are arguably more robust than the measures used in the Leeds survey. To ensure that these measures do not bedevil future comparative projects, more research is required into qualitative assessments of bingeing and drinking, and a series of standard questions that could be inserted in a variety of projects both with student drinkers and non-student drinkers.

In terms of this study the self-assessment process could be improved on in several ways. First, by securing institutional support, thus improving access to students in lectures and increasing survey time, allowing, perhaps, the showing of a film to explain the self-assessment process. This would ensure that any variation between introductory administration was diminished. Institutional support would also ensure access to compulsory lectures (non-attendance of which diminishes a student's marks) thus increasing the reach of the survey to those who do not typically attend lectures, who have been identified as potential high-consumers of alcohol (Gill, 2002).

Finally, I do not regret discarding the NS-SEC schema, as I am convinced by Harrison's (2008) findings on its unsuitability for use with students. It is hard to assess the methods I have used to profile students from lower socio-economic backgrounds, but the data returned from measuring family education levels has not interacted with any of the other variables, indicating that it has not been successful. Considering the consistent expansion of HE over the last twenty years this does not seem surprising. The material indicators I employed were also not particularly effective in terms of interactions, but assessing income via Local Authority maintenance grants and University bursaries was of some worth. The most effective approach was identifying students from the target postcodes listed in the University's WP policy. This method worked well with the data and even gave results that featured in the regressions. If I were to repeat the study again I would certainly broaden this method of assessing socio-economic status and investigate the socio-economic profile of all participants' postcodes.

5.3 Some implications of the data

I have maintained throughout this dissertation that the expansion of UK HE has changed what a university is; WP and its effect on the social composition of the student body is one example of this and any attempt to address the alcohol culture at the University of Gloucestershire must first take into account the processes of expansion. In other words, knowledge of the HEI and the demographic profile of its students is essential to any investigation of student behaviour. Because of the nature of WP and expansion, conceiving of a singular or contiguous alcohol culture is, in itself, a mistake. Analysis has revealed a number of consumption patterns, and socio-demographic information can play a large part in determining who drinks when, how much and with whom. That the majority of student alcohol studies do not take into account the nature of the HEI and the students that attend it is a serious oversight, and an important finding of this study. So, in order to answer my first research question (What is the alcohol consumption of undergraduates at the University of Gloucestershire?) one must also take my second into account (How does the alcohol consumption of students at the University of Gloucestershire relate to the students' demographic, social and academic properties?).

5.3.1 Overview

As shown by the data presented in 4.2.2, there were in the main, two distinct drinking patterns amongst students of the University, a mid-week culture of Heavy drinking and bingeing on Monday and Wednesday, and a weekend drinking pattern with equal to greater participation but less Heavy drinking and bingeing. As far as I am aware, this is the first time the extent of student mid-week drinking has been quantitatively assessed in the literature. In so doing it confirms the qualitative work of Chatterton and Hollands (2003) and goes some way towards redressing the assumptions implicit in the majority of the literature that assumes student alcohol intake is highest at the weekend.

Although membership of the mid-week culture does not necessarily forbid membership of the weekend culture, in general the analysis has demonstrated a strong level of separation between the two. The students who drink mid-week do not tend to drink with non-students, while the students who drink exclusively at the weekend tend to drink with both students and non-students. Chi-square analysis indicates that drinking exclusively with students throughout the week almost doubles the likelihood of a student drinking heavily on Monday and/or Wednesday ($p < 0.05$). Likewise drinking exclusively with non-students in the week eliminates the likelihood of the student drinking heavily on Monday and/or Wednesday ($p < 0.05$). Both chi-square analysis and linear regression suggest that the higher the student's Level the more likely they are

to consume alcohol at the weekend. This loosely echoes Chatterton's (1999) observation that as a student passes through their degree they gradually disengage from the drinking culture.

Of the socio-demographic variables, it was clear that a certain set distinguished the mid-week culture. The students who drank on Mondays and Wednesdays were young (under 21), white, unmarried, without children, not disabled, who studied anything but Health & Social Work, played Sports, were members of Societies, full-time students, lived in either Gloucester or Cheltenham in a shared house with other students or in University housing. If they did not live in University housing these respondents were almost certainly a prior resident of University housing. Mid-week drinkers did not come from target postcode areas or households whose annual incomes had been tested at below £25,000. They owned cars, computers, their parents owned their own homes and they received funding from parental sources. They also tended to study in Level One and Two. Mid-week students were more likely to pre-drink, drink to get drunk, enjoy being drunk, be influenced by their peers and damage property.

Being male very slightly increased a student's involvement with this culture, but females certainly engaged in all aspects of it, from drinking heavily and bingeing through to damaging property when drunk. In this way the data accords with two general trends reported in the literature. Firstly that the 'drinking behaviour of women has increased towards that of men' (Smith and Foxcroft, 2009, p. 2) and secondly, that this trend is even more noticeable in students, so much so that 'women appear more similar to their male cohort than do women in the general population' (Gill, 2002, p. 118).

Within the general student culture there were several temporal sub-cultures. Students of Sport and players of sport characterised Wednesday night, along with Level One students, fancy dress, shots, the playing of drinking games and the downing of torpedoes. In contrast to Wednesdays, those in Societies, Business students, Education students, and more Level Two and Final Level students were found consuming alcohol on Mondays, wearing slightly less fancy dress and downing fewer torpedoes, but still playing drinking games and slamming shots. Arts students drank on Thursdays, along with older male students (21+) who tended to drink Heavily and whose behaviour seemed to anticipate the weekend drinking pattern. This is, of course, a reflection of the way in which the night-time economy has diversified its temporal appeal in reciprocal relationships with sub-cultures amongst the main body of students. It makes sound business sense to tailor certain 'nights' towards groups whose tastes are likely to cohere.

The weekend culture of Friday and Saturday tended to be what the mid-week culture was not, that is older (over 21, as the literature suggests), studying Health & Social Work (and to some

extent Business), living with parents or with their own partners and children. There are especially high numbers of those who commute to the University from outside Cheltenham and Gloucester. That is not to say that the students who drink mid-week did not also consume alcohol on weekends; they did, but not to the same extent. In respect to these students, they were more likely to be female and in their Final Year.

In terms of the demographics of consumption it is better to conceptualise the situation from the other direction: students who actively consumed alcohol at the weekend simply did not consume alcohol mid-week, unless they were an older male in which case they may do so on a Thursday. Though the following list does not describe the norm of weekend consumers by any means, it is true to say that if a student was older, non-white, married, with children, disabled, from a target postcode and a household with an annual income of less than £25,000, then they were more likely to consume alcohol on a Friday or Saturday than they were mid-week. Part-time employment and parents' and siblings' education levels all had little interaction with alcohol consumption at all, indicating perhaps the ubiquity of part-time work in the current HE landscape and with respect to education levels, the success of expansion on the one hand, and the growth of the middle class on the other.

5.3.2 Discussion of the data and its relation to WP

There was nothing in the results that agreed with Cooke *et al.*'s (2004) finding that students from the lowest socio-economic backgrounds consistently consumed more alcohol than those from higher backgrounds. Indeed, the data suggested the opposite: traditional students were firmly situated within the excessive mid-week drinking culture. Chi-Square analysis of the various alcohol measurements described in 4.2.2 against the aggregated traditional student variable discussed in 4.2.1 comprehensively confirmed this conclusion. Double the expected amount of traditional students drank and binged on Mondays and Wednesdays ($p \ll 0.05$). Over 76% drank Heavily on Mondays and/or Wednesdays, and double the expected amount wore fancy dress on Wednesdays ($p \ll 0.05$), double played drinking games and downed torpedoes on Mondays and Wednesdays ($p \ll 0.05$) and more than expected amounts drank shots on Mondays, Wednesdays and Thursdays ($p < 0.05$). There was very little difference between the sexes. Traditional students tended to stay in on Friday and Saturday and tended not to drink with non-students. There were almost double the expected amount of traditional students drinking alcohol exclusively with students throughout the week ($p \ll 0.05$) and 90% less than expected drinking alcohol exclusively with non-students in the week ($p \ll 0.05$). Traditional students drank to get drunk and engaged in pre-drinking ($p \ll 0.05$). They were more likely to damage property when drunk ($p < 0.001$) and

enjoyed getting drunk more than other students ($p < 0.001$). Their drinking habits were more affected by their peers and university itself ($p \ll 0.05$).

According to linear regression, being a traditional student was not, however, one of the variables that significantly increased alcohol consumption on any day in the week, or the weekend, as demonstrated by Table 38 which collates the significant variables identified by regression.

38. Significant variables increasing alcohol consumption (collated after linear regression)^a.

Monday	Wednesday	Thursday	Friday	Saturday	Weekly
Member of a University sports team	Member of a University sports team	Male	21 and over	21 and over	Male
Lives away from parental home	Sports student	Arts & Humanities student	Comes from a local WP target postcode	Lives with parents	Member of a University sports team
Sports student	Lives in Gloucester or Cheltenham	Lives away from parental home		Male	Lives away from parents home
Under 21	Member of a University society			Level Two & 3	Sports student
				Health & Social Work student	
				Household income above £25,000 a year	

a. See tables 30 – 35 for full information.

The most important variables are those associated with sport and residence, specifically living away from home. Both of these variables were, to some extent, anticipated by the literature. Qualitative work has certainly confirmed a strong link between sports students, players and the consumption of alcohol (Sparkes *et al.*, 2007) while residence (specifically leaving the parental home), is the key indicator for the processes of studentification, a central element of which is the provision of alcohol via a reciprocal student-focused night-time economy (Chatterton, 1999; Smith and Holt, 2007). Sport increased alcohol intake more than residence in terms of volume (see Table 30 and 31), but is only a factor in the mid-week pattern, having little bearing over

weekend consumption. Residence however is significant in one way or another on every day of the week. It can be interpreted as a reflection of the centrality of what Bourdieu (1990) terms *habitus* in guiding and forming behaviour. Students who lived with their parents still drank and consumed alcohol; some drank Heavily and binged, but not to the same extremes. Furthermore, they tended to so on a Saturday with non-students and once a week, not twice, as many mid-week students did. This difference is a reflection of the centrality of residence to governing whether or not one enters the traditional student *habitus* of the mid-week, with its fancy-dressing and shot-slaming.

That youth is a significant criteria for membership of the mid-week drinking pattern is no surprise following the research of Lusk (2008), discussed in 2.1. Many of the weekend drinkers would have no interest in regularly dressing up like a Smurf (a popular mid-week costume). More interesting are the activities of the students of a similar age, living at home and/or commuting to University. The literature, discussed in 2.1, suggests student mobility is an elite practice (Holdsworth, 2009), which indicates (along with the separation between the patterns of alcohol consumption) that there is a differential class experience of social life amongst students at the University. This is an important finding in that it contributes to the debate of 'what class are students?' by indicating that residence is a key if not the key factor in determining inclusion in the social activities of the traditional student, and suggesting that the student experience is stratified at the same institution along what appear to be social class lines (traditional vs. non-traditional student).

Since other markers of being a traditional student (such as having a history of higher education in the family) do not seem to have such an affect on the temporality of alcohol consumption, the implication is that students from a lower socio-economic background can in fact join the traditional student *habitus* if they enter into the same housing biography as a traditional student and move away from home. Not surprisingly, many of the non-traditional students from lower socio-economic backgrounds choose not to do this. As confirmation, Chi-Square analysis between the variable measuring 2+ indicators of lower socio-economic background cross-tabulated against whether the student lives with their parents produces a result that is almost significant ($p < 0.056$). When the latter variable is changed to whether the student is a prior or current resident of University Housing the result is significant ($p < 0.001$), with poorer students less likely to be a resident of University housing.

This places students from a lower socio-economic background at a disadvantage: entertain significant debt and join the traditional students or remain in the social context of one's own home. Because research already suggests that students stay at home as a debt-avoidance strategy (Patiniotis and Holdsworth, 2005; Gorard *et al.*, 2006), leaving home does not seem like a

viable financial option. This relates to the debate of what a University is and who has access to the student experience and the ability to make unofficial social connections. One could argue that temporal alcohol consumption is not the best measure of this, to which I would counter that it is an innovative way of approaching a subject that is hard if not impossible to quantify otherwise. Alcohol consumption has a high social participation rate, especially amongst 18-24 year olds, and is an engrained social activity in the UK and thus a strong indicator of social activity. The separation between the two cultures at the University of Gloucestershire, whatever their health implications, indicates that going to University is only a socially equalising act if a student leaves home.

This relates to the scholarship on studentification which indicates that there is a marked separation between local and student populations, not only in terms of actual behaviour, but also in terms of mindset and outlook. The data in this survey suggests that this dividing line is present amongst students who have remained 'at home' and those who have 'gone away'. One may ask why a student who lives with their parents or commutes cannot choose to occasionally spend their social time with students who live in university residences. The evidence from this study certainly suggests that this is not happening, indeed it confirms the qualitative research into the construction of an exclusive *habitus* on behalf of residential students (Chatterton, 1999; Kenyon, 2000). These findings do, however, contradict predictions that Chatterton and Smith made suggesting that studentification would not happen at 'local' universities or non-prestigious HEIs (Chatterton, 1999; Smith and Holt, 2007) and implies perhaps that the establishment of exclusive geographies is a process that occurs whenever students live away from home.

These divisions between the student experience of traditional and non-traditional students goes against the grain of the inclusionary rhetoric of WP policy. This rhetoric however, with its insistence on social inequality and inclusion in a 'student experience' could be deemed patronising towards the desires of non-traditional students in light of the results I have presented here. By assuming that non-traditional students want to be included in the social experience of HE it suggests they would want to be slamming shots and sucking down torpedoes at 2am on a Tuesday morning. In terms of Education research, this relates directly to Keane's (2008) work on WP students in Ireland, who, as discussed in 2.1, found non-traditional students 'mainlining' their academic commitments and 'sidelining' their social ones as they valued the 'chance' they had at HE. Although my statistics are not tied to academic achievement in any way, they have the potential to describe non-traditional students in the way that Keane has experienced them.

5.3.3 Discussion of the data and its relation towards Health Research

Education has, for over a century, been 'considered to be related to health outcomes through its influence on lifestyle behaviours (e.g., exercise, diet)' (Liberatos *et al.*, 1988, p. 89). Coming from a lower socio-economic background has been seen to increase the likelihood of an individual experiencing health problems in their lives (Liberatos *et al.*, 1988; Krieger *et al.*, 1997). In the case of HE students both these maxims seem to be reversed. This would be amusing, a wry comment on the world-turned-upside-down inversions that characterise student life, if it were not so morbidly serious, with, in the case of the University of Gloucestershire, tangible statistics in the deaths of two students from alcohol-related accidents in the last five years. That the alcohol culture remains in rude health in Gloucestershire only serves to underline the paradox raised by Plant and Miller (2001): why do young people view intoxication so positively when it's consequences are potentially so negative?

A striking example of this occurred during data collection, when a student, upon completion of the questionnaire, told her friends she had drunk a 'BMW' on her last birthday. When asked what this was she said, 'A pint of Baileys, Malibu and Whiskey mixed up. It costs about £30.' When some students expressed distaste at this she shrugged her shoulders and said, 'It's your birthday,' as if to comment that such behaviours were obligatory. This is reminiscent of a remark reported in a newspaper discussing the death on one of the Gloucestershire students:

[A witness] described how she had seen the student drink a concoction of spirits while inside the club. She said: 'He drank it through a straw and then lit it. The barman said he had never seen anyone finish it before'.

(The Bath Chronicle, 2008)

The only sane response to this is anger: if a barman has never seen anyone finish such a drink, then why serve it in the first place? All the indications from this study are towards the normalisation of extreme intoxication as a leisure goal, borne out in the binge statistics for Mondays and Wednesdays, where, on average, every week, 46% of all students at the University consume alcohol, and of that 46%, over half, 55.5% are consuming over 6/8 units at a rate of 2 or more units per hour. This determined drunkenness is normalised, and with the routine of drinking games and shots (and the occasional BMW), emblematic of the post-industrial alcoholic order that Measham and Brian (2005) describe. The sense of normality in this endeavour is born out by the data: over two-thirds of all students (67.4%) describe themselves as 'social drinkers'; in other words, as culturally defined and culturally normal. Very few students describe themselves as Heavy Drinkers, when many would certainly qualify as such (compare Tables 9 and 16).

As discussed, I have orientated this research away from health considerations and towards the relationship between social demographics and alcohol consumption. However, this retains the implication of identifying groups that exhibit high-risk behaviour. Fittingly, considering the climate in which this research was carried out, students involved in sports have been consistently shown to engage in dangerous levels of consumption, as ably demonstrated by the linear regressions for Monday, Wednesday and the aggregated week (see Tables 30, 31 and 35). However, it needs to be remarked that students involved with sport have been identified as exhibiting high-risk behaviour in comparison to the rest of the data. By approaching the issue from the other way around and establishing a benchmark for high-risk behaviour it is clear that the situation is far more complicated.

Considering the temporal, regular qualities of the drinking cultures at Gloucestershire, Miller *et al.*'s (2005) research is a suitable indicator of high-risk behaviour: 'Binge drinking for people who drink more than ~11 units per week is an obvious target for harm minimization' (p. 462). With this as a standard, identifying specific groups through demographics becomes a lot more challenging as over half the sample (525 of n=902) drink more than 11 units a week, and of those 525 less than a quarter do not binge. Exactly 400 students from a sample of 902 are thus targets for harm-minimization. This is 44.4% of the total sample, and 52.7% of the total drinkers. Such big numbers leads one to the inevitable (and terrible) conclusion that it is not the students exhibiting high-risk behaviour but the system that contains them.

6 Conclusion

6.1 **This machine will not oil itself**

A simple link can be made between the expansion of HE and the temporal student alcohol culture, and that link is money. HE expansion has brought the student market into towns and cities in which it did not formerly exist (such as Gloucestershire) where the deregulated night-time economy capitalised on its expanded consumer base. This expansion has been both physical and cultural, as Measham and Brain (2005) comment with their 'post-industrial alcoholic order'. This cultural expansion explains the growth of the night-time student economy in a town such as Cheltenham, which has always harboured a significant amount of students. In any case, the Gloucestershire data establishes a firm link between students (especially residential traditional students) and the operation of the night-time economy in the mid-week. It is posited that the development of this high-risk drinking culture would never have happened if a) it had not been encouraged by local and national government, b) there was no profit for the night-time economy and c) students could not maintain an affordable, attractive social life that was temporally and spatially exclusive from non-students (as per the literature on studentification (see Chatterton, 1999)). There is a significant literature on the commodification of HE; it is hoped these findings will contribute towards a greater understanding of a comparable commodification of student life.

WP students of the same age are kept apart from this culture largely on merit of their residence, a financial limitation that prevents WP students from occupying the same University *habitus* as other students. This has its own drawbacks in terms of social cohesion and connection amongst the student body, as discussed. However, as a by-product of their separation, WP students are less susceptible to the extreme dangers of the mid-week pattern (but have their own, typically less extreme dangers to face in the weekend). It would be interesting to see, in further research, whether many students, WP or not, actually elect to live at home or outside University residences in order to avoid the alcohol culture that dominates there, thus mainlining the academic and sidelining the social as per Keane's (2008) findings in Ireland. Because it suggests a majority culture that encourages the consumption of alcohol, this would reverse Wechsler and Kuo's (2003, p. 1929) conclusion that suggested, for universities in the USA that:

Student-body composition, as well as the value of diversity at the college, organization, and dormitory levels, should be considered by colleges wishing to reduce their binge drinking problems.

As to the traditional students and the students who live away from home, the level of cultural participation in the mid-week bingeing culture seems too great to attempt local harm reduction strategies, or at least expect immediate results from them. There is, in any case, a lack of any nationwide response to student drinking; alcohol and drug education having no statutory requirements in UK law, depending 'mainly on the will of the college or university' (Polymerou, 2007, p. 7). Internationally, opinions and measures concerned with campus drinking differs in accordance with cultural attitudes to alcohol (Stock *et al.*, 2009). Currently the University of Gloucestershire and the University of Gloucestershire Students' Union run an annual two-week initiative centred around a poster campaign on drink and drugs. Online material is available and safe drinking is promoted in Freshers' Week. The sports club initiations that marked the beginning of this study have been banned, with the Students' Union rewording its constitution to explicitly state that such initiations are not advocated. Drinking on coaches for away games has been stopped. According to the Unions' Education & Welfare Officer, Emma Neath, these measures have 'not gone down well' amongst the students.

This is because, as Van Wersch and Walker (2009) state in relation to young people, binge-drinking is simply '*the way to socialise and to have fun*' (p. 131). Attempts to control or educate students on the dangers of alcohol will be hampered by the cultural normalisation of intoxication as a leisure goal on the one hand and the extent and power of the night-time economy on the other. It is thus suggested that efforts to redress the abuses of alcohol culture at the University are concentrated at lobbying local and national government to curb the opening hours of drinking establishments, and, more importantly, introduce a minimum price per unit. Research has indicated that this would have an immediate and noticeable effect on alcohol consumption (Meier *et al.*, 2008) and would certainly reduce instances of multiple weekly binges. Such a measure would effect WP students too, probably with a greater financial impact, and that is, of course, unfair. Social equality in terms of alcohol consumption is not however, apparent from the current situation either, which implies that equality of access to the student experience runs deeper than beer.

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Appendix One: Questionnaire text

Alcohol Questionnaire University of Gloucestershire

Dear Students:

You have been asked to fill out this questionnaire as part of a University-based effort to gain a better understanding of undergraduate students' alcohol consumption (drinking) patterns. The aim of this voluntary study is to develop a helpful response to students' concerns based on the information gathered. Thus your participation in this important endeavour is very much appreciated.

Your answers are anonymous, and will be used for scientific research purposes only. If, in the course of filling out this questionnaire, you find yourself wishing to discuss any of the questions in more detail, please contact the study's principal investigator, Dr. Margarete Parrish at 01 242 715 224, or at mparrish@glos.ac.uk

Instructions for filling out this questionnaire

Please answer the questions honestly. There are no right or wrong answers.

N/A stands for Not Applicable.

Age: _____ Male Female Height: _____ Weight: _____

6. About your course (you may mark more than one):

- Full-time Part-time
 International student Mature student

7. What is your year of study at the University?

- 1st Year UG 2nd Year UG 3rd Year UG
 4th Year UG 5th Year UG 6th Year UG+

8. What undergraduate degree/course are you enrolled on?

9. Where were you born?

- England Wales N. Ireland Scotland Other:

10. Marital status and family (you may mark more than one):

- Single Long-term partner Married Divorced
 Have children Single Parent Other:

11. What do you consider your ethnic origin?

- Bangladeshi Black African Black Caribbean
 Black Other Chinese Indian
 Pakistani White Other:

12. With what religion do you feel most affiliated?

- None Christian Hindu Jewish
 Muslim Sikh Other:

13. What is the first part of your family home's postcode?

14. What type of housing are you living in this academic year?

In University housing:

- Eldon/Merrowdown Oxstalls Shaftsbury Hall
 Eldon/Merrowdown Annexe Park Challinor St. George's
 Ermin Hall Park Villas St. Mary's Halls
 Hardwick Pittville Upper Quay
 Maidenhorn Regency Halls Whitehart

In private housing:

- With partner and/or own children Shared house with other students Shared house with non-students
 With parents/relative Lodging

15. Where is it?

- Cheltenham Gloucester I commute from:

16. (For 2nd years +) Have you previously lived in Halls or University houses?

- Yes No Not Applicable

17. (For 2nd years +) Do you currently live with friends you made in Halls or University houses?

- Yes No Not Applicable

18. How would you rate your academic performance at University?

- Excellent Above average Average
 Below average Poor

19. How important are good grades to you at University?

- Very important Somewhat important
 Not very important Not at all important

20. Do you have any identified conditions or learning difficulties?

- No Chronic fatigue Mobility problems
 Dyspraxia Hearing impairment Mental health
 Dyslexia Visual impairment Other:

21. What are the highest levels of education in your family?

	Mother	Father	Sibling(s)
No formal education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Left school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GCSE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A level or vocational	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bachelor's degree	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Master's degree	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ph.D. or equivalent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unsure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. How do you finance university? You may mark more than one.

- Full Maintenance grant Partial Maintenance grant Special support grant
 Part-time job Personal savings University bursary
 Overdraft Credit card(s) Parental Contribution
 Student loan (for maintenance) Student loan (for tuition fee)
 Other (DSAs, NHS bursaries etc.) :
 Full help towards tuition fees grant (pre-1 Sep 2006 students only)
 Full help towards tuition fees grant (pre-1 Sep 2006 students only)
 Higher Education Grant (pre-1 Sep 2006 students only)

23. Do you own your own car? Yes No

24. Do you own your own computer? Yes No

25. Do your parents own their own home?

N/A Yes No I own my own home

26. Are you in paid employment?

No Full-time work Part-time work

If yes how many hours a week do you work:

27. Are you a member of a University sports team? Yes No

If yes, which one(s)?

28. Are you a member of a University society? Yes No

If yes, which one(s)?

29. Describe your general health since arriving at university:

Excellent Good Average
 Frequent colds/infections Poor

30. How would you describe your drinking habits?

Non-drinker Rarely drink
 Social Drinker Heavy Drinker

31. At what age did you begin regularly drinking alcohol?

N/A < 12 13 – 15
 16 – 17 18 – 20 21 +

32. How would you describe your drinking patterns since arriving at university, compared with before coming to university?

Non-drinker Less than Same as before
 More than Much more than

33. Since arriving at university, how would you describe the influence of your peers or flatmates upon your drinking?

- I don't drink Decreased drinking
 No noticeable change Increased drinking

34. Since arriving at university, have you found yourself drinking in response to any of the following feelings:

- I don't drink Homesickness Loneliness
 Sadness Upset with partner/boyfriend/girlfriend
 Stress Other:

35. Since arriving at university, have you ever had your sleep or studying interrupted by others' alcohol-related behaviours?

- No Once Sometimes
 Regularly Often

36. Since arriving at university, have you been in a situation where you felt unsafe in relation to alcohol misuse?

- No Yes (please detail):
 Intimidation Physical threats Physical injury
 Robbery Sexual Aggression Other:

37. Since arriving at university, have any of your friends/flat mates/class mates been in a situation where they felt unsafe or physically threatened in relation to alcohol misuse?

- No Yes (Please describe):

38. Since arriving at university, has drinking caused you to damage any property?

- I don't drink No Yes

39. Since arriving at university, has drinking ever caused a friend, roommate, or partner to damage any property?

- No Yes

40. Have you ever had a drink upon waking to steady your nerves or to get rid of a hangover?

- I don't drink No Yes

41. During the past three months, has drinking ever caused you to say or do something you later regretted?

- I don't drink No Yes

If yes please describe:

42. Since arriving at university have you ever experienced a loss of memory of a time during which you were drinking heavily?

- I don't drink No Yes

43. Since arriving at university, has drinking made you feel unwell?

- | | | |
|---|-----------------------------------|---|
| <input type="checkbox"/> I don't drink | <input type="checkbox"/> No | <input type="checkbox"/> Yes (please detail): |
| <input type="checkbox"/> Hangover | <input type="checkbox"/> Headache | <input type="checkbox"/> Nausea |
| <input type="checkbox"/> Stomach Distress | <input type="checkbox"/> Tremors | <input type="checkbox"/> Sweats |
| <input type="checkbox"/> Unconsciousness | <input type="checkbox"/> Other: | |

44. Since arriving at university, has drinking caused you any injury?

- | | | |
|--|------------------------------------|---|
| <input type="checkbox"/> I don't drink | <input type="checkbox"/> No | <input type="checkbox"/> Yes (please detail): |
| <input type="checkbox"/> Car crash(es) | <input type="checkbox"/> Fall(s) | <input type="checkbox"/> Sexual assault(s) |
| <input type="checkbox"/> Fight(s) | <input type="checkbox"/> Visit A&E | <input type="checkbox"/> Other |

45. Describe your drinking and going out habits for a typical week:

	Mo	Tu	We	Th	Fri	Sat	Sun
Estimated alcohol units consumed	_____	_____	_____	_____	_____	_____	_____
Time spent drinking in hours	_____	_____	_____	_____	_____	_____	_____
Amount spent on alcohol in £	_____	_____	_____	_____	_____	_____	_____
Drink no alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stay in?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visit Hall/Union bar?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visit bar/pub?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visit nightclub?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In Gloucester?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In Cheltenham?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wear fancy dress?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drink shots?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Play drinking games?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Torpedo any drinks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drink watching TV?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drink with students?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drink with non-students?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drink alone?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drink with partner/bf/gf?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drink with house/flatmates?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drink with sport team?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drink with Uni society?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Go to bed (use 24 hr clock)	_____	_____	_____	_____	_____	_____	_____

46. When you drink, how often do you drink to get drunk?

- I don't drink Never Rarely
 Sometimes Regularly Always

47. On a typical night out how many alcohol units do you consume?

- I don't drink I drink, but none 1-2 units
 3-5 units 5-8 units 8-10 units
 10-15 units >15 units Not sure

48. Over what period of time does this occur?

- N/A 1-2 hours 3-4 hours
 5-6 hours 7-8 hours Not sure

49. Do you begin drinking before going out? N/A Yes No

50. Please mark how drunk you like to get on a typical night out:

Sober	Tipsy	Merry	Drunk	'Pissed'	Legless	Comatose
-------	-------	-------	-------	----------	---------	----------

51. During the past month, how many times if any have you had 5 or more drinks (8+ units) in one sitting?

- I don't drink Never Once
 Twice Regularly Not sure

52. Have you ever felt that you should cut down on your drinking?

- I don't drink No Yes

53. Have people ever criticized/annoyed you over your drinking?

- I don't drink No Yes

54. Have you ever felt embarrassed or guilty about your drinking?

- I don't drink No Yes

55. Since arriving at university, has drinking caused you to have:

- Unplanned sexual activity Unwanted sexual activity
 Emergency contraception Unplanned pregnancy
 I don't drink No

56. Since arriving at university, has drinking ever caused a friend, roommate, or partner to have an injury?

- No Yes (please detail):
 Car crash(es) Fall(s) Sexual assault(s)
 Fight(s) Visit A&E Other

57. Since arriving at university, has drinking ever caused a friend, roommate, or partner to be unwell?

- | | | |
|---|---|---------------------------------|
| <input type="checkbox"/> No | <input type="checkbox"/> Yes (please detail): | |
| <input type="checkbox"/> Hangover | <input type="checkbox"/> Headache | <input type="checkbox"/> Nausea |
| <input type="checkbox"/> Stomach Distress | <input type="checkbox"/> Tremors | <input type="checkbox"/> Sweats |
| <input type="checkbox"/> Unconsciousness | <input type="checkbox"/> Other: | |

58. Has drinking ever prevented you from getting up when you intended?

- | | | |
|--|------------------------------------|---------------------------------|
| <input type="checkbox"/> I don't drink | <input type="checkbox"/> Never | <input type="checkbox"/> Rarely |
| <input type="checkbox"/> Sometimes | <input type="checkbox"/> Regularly | <input type="checkbox"/> Often |

59. Since arriving at university, has your drinking ever caused you to miss a lecture?

- | | | | | |
|--|-----------------------------|---------------------------------|------------------------------------|-------------------------------------|
| <input type="checkbox"/> I don't drink | <input type="checkbox"/> No | <input type="checkbox"/> Rarely | <input type="checkbox"/> Sometimes | <input type="checkbox"/> Frequently |
|--|-----------------------------|---------------------------------|------------------------------------|-------------------------------------|

60. Since arriving at university, has your drinking ever interfered with your completing &/or succeeding with an assignment?

- | | | |
|--|-----------------------------|------------------------------|
| <input type="checkbox"/> I don't drink | <input type="checkbox"/> No | <input type="checkbox"/> Yes |
|--|-----------------------------|------------------------------|

61. How frequently does drinking affect your studies?

- | | | | | |
|-------------------------------------|-----------------------------------|---------------------------------|---------------------------------|----------------------------------|
| <input type="checkbox"/> It doesn't | <input type="checkbox"/> < 1/week | <input type="checkbox"/> 1/week | <input type="checkbox"/> 2/week | <input type="checkbox"/> 3/week+ |
|-------------------------------------|-----------------------------------|---------------------------------|---------------------------------|----------------------------------|

62. Are you aware of any member of your immediate family who has experienced alcohol or drug misuse or dependence?

- | | | |
|---------------------------------|---|---------------------------------|
| <input type="checkbox"/> No | <input type="checkbox"/> Yes (please indicate): | |
| <input type="checkbox"/> Parent | <input type="checkbox"/> Sibling | <input type="checkbox"/> Other: |

63. Do you ever find yourself worried about your drinking?

- | | | |
|--|-----------------------------|------------------------------|
| <input type="checkbox"/> I don't drink | <input type="checkbox"/> No | <input type="checkbox"/> Yes |
|--|-----------------------------|------------------------------|

64. If you wished to discuss any drinking-related concerns, where would you start?

- | | | |
|---|-------------------------------------|---|
| <input type="checkbox"/> I don't drink | <input type="checkbox"/> Friends | <input type="checkbox"/> Tutor/Personal Tutor |
| <input type="checkbox"/> Parents/Family | <input type="checkbox"/> Don't Know | <input type="checkbox"/> Other: |

65. Since arriving at university, how much would you estimate that you normally spend on alcohol?

- I don't drink < £20/wk £21-30/wk
 £31-40/wk >£40/wk Unsure

66. Since arriving at university, has drinking ever caused you any financial difficulty?

- I don't drink No Yes

67. Where do you usually purchase alcohol?

- Non-drinker Student Union Bar Supermarket
 Local Shop Off-license shop Pub
 Other (Please specify):

68. Since arriving at university, under what circumstances do you usually do the majority of your drinking?

- Non-drinker With partner/boyfriend/girlfriend/spouse
 With friends Happy hour Alone
 Student bar/pub Non-student bar/pub Nightclub
 With meals Other:

69. How important do you consider drinking to be to the student experience at the University of Gloucestershire?

- Not very Somewhat Varies Important Essential

Comment:

70. Would any of the following make a difference to your drinking patterns while at university?












- I don't drink An alcohol-free zone on campus
 More evening and weekend hours of operation for the canteen
 More non-alcohol related activities on campus mid-week
 Films shown on campus mid-week
 No Other:

71. Do you know who Julia Hester was? No Yes

72. Any further comments or thoughts about drinking:

THANK YOU for participating in this study.

Appendix Two: Image used to present alcohol units during data collection

		1 unit	1.5 units	2 units	3 units	9 units
UNIT guide						
		Half pint of regular beer/lager	Small glass of wine	Half pint of strong beer/lager	Large bottle/can of strong beer/lager	Bottle of wine
						
		Single spirit shot	Alcopop bottle	Large bottle/can of normal beer/lager	Large glass of wine	
	<p>MEN - Should not regularly drink more than 3-4 units a day (no more than 21 units per week).</p> <p>WOMEN - Should not regularly drink more than 2-3 units a day (no more than 14 units per week).</p>					
						<p>30 units</p>  <p>Bottle of spirits</p>

Appendix Three: Demographic, social and academic attributes collected

I. General demographic information

- a. Sex
- b. Age
- c. Under 24 years old/25 year old+
- d. Under 21 years old/21 years old+
- e. Ethnic origin
- f. Ethnic origin condensed
- g. Marriage
- h. Children and dependents
- i. Disability
- j. Employment

II. Education

- a. Level of study
- b. In first year
- c. Field of study
- d. Sport student vs. non-sport student
- e. Arts & humanities student vs. non-arts & humanities student
- f. Health & social work student vs. non-health & social work student
- g. Member of University sports club
- h. Member of University society
- i. Part-time students
- j. International students

III. Residence

- a. Type of housing
- b. Currently live away from parents' home
- c. Location
- d. Prior or current resident of University Housing
- e. Prior or current resident of University Housing (condensed)

IV. Socio-economic status

- a. Student lives in a local WP postcode target
- b. Amalgamated highest level of education (mother and father)
- c. Amalgamated highest level of education (mother, father and siblings)
- d. History of Higher Education in the family (mother, father and siblings)
- e. Household income means-tested by Local Authority
- f. Some funding from parental sources
- g. Parents own their home
- h. Student computer ownership

- i. 1-3+ coinciding socio-economic variables from: local postcode target, HE in parents'
- j. 1+ coinciding socio-economic variables education, means-tested household
- k. 2+ coinciding socio-economic variables income, parents own home, student computer ownership

V. Traditional students and non-traditional students

- a. Traditional students (6-7 variables)
 - b. Traditional students (7 variables)
- (7 variables: white, 18-21, living away from home, no dependants, no spouse, family with history of HE, some parental funding)

Appendix Four: Alcohol variables used in analysis

i. Drinking levels

- A. Monday drinking levels
- B. Tuesday drinking levels
- C. Wednesday drinking levels
- D. Thursday drinking levels
- E. Friday drinking levels
- F. Saturday drinking levels
- G. Sunday drinking levels
- H. Weekly drinking levels
- I. Over 14 units a week (for women), 21 units a week (for men)
- J. Drinking days a week
- K. Units per week

ii. Binge levels (a Binge = 8+ units (male) /6+ units (female) and rate of 2 units/hour+)

- A. Monday binge
- B. Tuesday binge
- C. Wednesday binge
- D. Thursday binge
- E. Friday binge
- F. Saturday binge
- G. Sunday binge
- H. Weekly binges

iii. Temporal measures

- E. Heavy drinking on Monday and/or Wednesday
- F. Heavy drinking on Monday and/or Wednesday vs. any drink on Friday and/or Saturday and no drinking Monday and/or Wednesday
- G. Heavy drinking on Monday and/or Wednesday vs. heavy drinking on Friday and/or Saturday and no drinking Monday and/or Wednesday
- H. Any drink on Monday and/or Wednesday vs. any drink on Friday and/or Saturday and no drinking Monday and/or Wednesday

iv. Qualitative measures

- A. Describe your drinking habits
- B. How drunk do you like to get on a typical night out?
- C. When you drink, how often do you drink to get drunk?
- D. How would you describe your drinking patterns since arriving at university, compared with before coming to university?
- E. Since arriving at university, how would you describe the influence of your peers or flatmates upon your drinking?
- F. Do you begin drinking before going out?
- G. Since arriving at university, has drinking caused you to damage any property?
- H. Since arriving at university, has drinking ever caused a friend, roommate, or partner to damage any property?

v. Social influences

- A. Drink with students on a Monday
- B. Drink with students on a Tuesday
- C. Drink with students on a Wednesday
- D. Drink with students on a Thursday
- E. Drink with students on a Friday
- F. Drink with students on a Saturday
- G. Drink with students on a Sunday
- H. Drink with students in the week?
- I. Exclusively drink with students in the week?

- J. Drink with non-students on a Monday
- K. Drink with non-students on a Tuesday
- L. Drink with non-students on a Wednesday
- M. Drink with non-students on a Thursday
- N. Drink with non-students on a Friday
- O. Drink with non-students on a Saturday
- P. Drink with non-students on a Sunday
- Q. Drink with non-students in the week?
- R. Exclusively drink with non-students in the week?

vi. Associated behaviours

- A. Wear fancy dress on a Monday?
- B. Wear fancy dress on a Wednesday?
- C. Wear fancy dress on a Thursday?
- D. Wear fancy dress on a Friday?
- E. Wear fancy dress on a Saturday?
- F. Wear fancy dress in the Week?

- G. Drink shots on a Monday?
- H. Drink shots on a Wednesday?
- I. Drink shots on a Thursday?
- J. Drink shots on a Friday?
- K. Drink shots on a Saturday?
- L. Drink shots in the Week?

- M. Play drinking games on a Monday?
- N. Play drinking games on a Wednesday?
- O. Play drinking games on a Thursday?
- P. Play drinking games on a Friday?
- Q. Play drinking games on a Saturday?
- R. Play drinking games in the Week?

- S. Drink torpedoes on a Monday?
- T. Drink torpedoes on a Wednesday?
- U. Drink torpedoes on a Thursday?
- V. Drink torpedoes on a Friday?
- W. Drink torpedoes on a Saturday?
- X. Drink torpedoes in the Week?