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YOUNG PEOPLE'S LEISURE AND RISK-TAKING BEHAVIOURS: CHANGES IN GENDER PATTERNING IN THE WEST OF SCOTLAND DURING THE 1990s

ABSTRACT

Until the 1990s, the literature on youth leisure characterised that of females as home-based, passive and largely absent from male-dominated subcultures. Contrasting with this, over the course of the 1990s, evidence emerged of increasing public visibility, reduced restrictions on activities and relatively greater increases in health-risk behaviours among females, together with suggestions of a domestication of leisure among males. This paper uses data from two cohorts of 15 year olds in the same geographical area (the West of Scotland), separated by 12 years (1987 and 1999) to examine changes in the gender patterning of young people's leisure, use of public space and risk taking (as represented by substance use) over this time period. Gender differences in 'street-based' (previously more males) and 'conventional/safe' (previously more females) leisure disappeared over this period while male excesses in watching sports and computer game-playing increased. At the same time, female levels of drinking and experience of illicit drugs reached, and those of smoking overtook, their male counterparts. Additional analyses showed that changes in leisure activities over time accounted in part for the changing gender patterns in substance use. The paper discusses how greater public visibility and increased risk-taking behaviours among females have resulted from the lifting of constraints of respectability on young women's lifestyles. These changes have been rapid and have significance in both social and health terms.

INTRODUCTION

This paper examines changes in the gender patterning of young people's leisure, use of public space and risk-taking (as represented by substance use) over the course of the 1990s. We begin by reviewing the literature, focusing unless otherwise specified, on the findings of UK-based studies (although some of the commentaries are European), and follow this with illustrative data on the leisure and lifestyles of two cohorts of 15 year olds, both living in the same geographical area (Glasgow in the West of Scotland), 12 years apart (1987 and 1999). The two studies included (almost) identical questions on leisure activities and substance (smoking, drinking and drug) use, so allowing an analysis of changes according to both gender and time over this relatively brief period.

It is generally accepted that leisure is central to the lives of teenagers and young people (Agnew & Petersen, 1989), and the peer group is its normal arena (Roberts, 1983), the most common form of non-obligatory activities being social ones with friends, including hanging out and talking on the phone (Shaw, Caldwell & Klieber, 1996). Until the 1990s, the sociological literature on gender and youth leisure paralleled that of adults, which characterised females' free time as not only limited due to their location within the domestic sphere but also as devalued and constrained by norms of appropriate behaviour (Green, Hebron & Woodward, 1990). Roberts (1983), for example, suggested that the findings of post-war studies showing that boys went out more and had higher sports participation rates, while girls stayed in, rarely practised sports and named 'dancing' as their preferred activity, still held true 35 years later (see also Hendry, 1983). Around the same time, Deem (1986) described the leisure of young women as 'relatively unvaried', containing little sport, involving relatively few locations, revolving largely round the home and immediate neighbourhood, while McRobbie suggested that 'possibly the only hobbies which are deemed truly suitable for *Jackie* readers are fashion and beauty' (1981, p.122).

A very clear gender-based strand in the literature on youth leisure and subcultures is the relationship between the street and masculinity. The most frequently-cited example is that of Willis (1977), where young women's roles and identities on the street were restricted; if present at all, the girls were unassertive, displaying 'a simple sheepishness, weakness and a silly indirectness in social relationships' (p.45).

Numerous accounts, generally tracing back to McRobbie & Garber (1976), have commented on the invisibility of girls and associated romanticising of 'the lads' in the subculture literature (Griffin, 1993; 2000; Hey, 1997; McRobbie, 1978; Richards & Milestone, 2000; Valentine, Skelton & Chambers, 1998; Wallace & Kovatcheva, 1998). The key question has been whether girls were really absent from subcultures, or rather rendered invisible to (or by) researchers. It is, after all, by no means only the academic youth culture literature from which they have been absent (McRobbie, 1978; Osgerby, 1998; Wall & Gannon-Leary, 1999), other examples including earlier studies of education (Walkerdine, 1997) and, indeed, leisure itself (Henderson, 1996).

Explanations for gender divisions in (youth) leisure dating from the 1970s and 80s, tend to be formulated in terms of traditional gender constraints and sexual oppression (McRobbie, 1978; Osgerby, 1998; Richards & Larson, 1989; Roberts, 1983). Thus they describe how behaviour deemed appropriate for respectable women, based on the traditional female role with its focus around relationships, domesticity and intimacy may be particularly heightened during the teenage years ('gender intensification'), while gender-based notions of risk mean that parents tend to police daughters more strictly than sons. The literature also links the home-centredness of female lives to a merging of leisure with domestic work, as well as to financial and other restrictions on their access to leisure in terms of both geography and experience. For example, McRobbie & Garber (1976) argued that because of their centrality to the private spheres of the home and family, teenage girls' cultures occurred within the safety of the bedroom and were largely consumer-based (make-up, clothes, records, magazines, and fan clubs) as they prepared for future lives of steady domesticity.

However, much of the literature since 1990 suggests that the picture of home-based, passive females, largely absent from youth subcultures may be changing. Ganetz (1995), for example, suggests that girls no longer just decorate their bodies (as the objects of others' gaze), they also do something with them – activities such as dancing, football and work-outs - as a source of personal pleasure. Similarly, cultures such as Rave, largely about individual enjoyment, have allowed young women to dance without fear of sexual harassment (Richard & Kruger, 1998). 'Riot

grrrl' and associated bands and publications (both paper and online 'zines', such as the F-word), have been offered as examples of an all-girls sub-culture. It has been suggested that while the text of the zines may suggest an opening up of frontiers and increasing female access to public spaces, its production occurs indoors, often in the bedroom (Leonard, 1998). However events such as Ladyfest (which included Ladyfest Glasgow 2001, modelled on the original US 1991 Riot grrrl convention) aim to showcase and encourage female artistic and political abilities (Bell, 2002). Leisure is one of the areas in which Wilkinson & Howard (1997) identify increasing androgyny, citing significant recent reductions in the proportion of women knitting or dress making, accompanied by increases in those who do DIY, attend football matches and participate in male sports. A study of leisure among young tourists in an English seaside resort found that with the exception of shopping for souvenirs, there were no gender differences in behaviour, nor the explanations provided for particular activities (Carr, 1999).

These changes are echoed within the recently expanding (feminist) geographic literature on gender and the public-private distinction. This has traced the way in which assumptions that women's place in the home was somehow 'natural' have receded since the second world war as their entry into the labour market has impacted upon women's public presence as well as household income and consumption patterns, housing locations and travel behaviour (Day, 2000; Pain, 2001; McDowell, 1993; Richards & Milestone, 2000; Taylor, Evans & Fraser, 1996). Along with their increasing presence, has been an easing of cultural disapproval of women and girls in public spaces without appropriate escorts (Ganetz, 1995).

Feminist critiques of the earlier youth subculture literature stressed the need to focus on girls (Nava, 1992), so shifting attention from young male cultures. But if, as has been suggested, young women are increasingly to be found in the public arena, what does the currently sparser literature on young men tell us? McNamee (1998) argues that they have moved from the street to the supervised, protected and controlled arena of the home. She links young people's increasing dependency and 'infantilisation' with the massive increase in home computer and video game ownership during the 1990s (Colwell & Payne, 2000) to suggest that computing and

game-playing have created a new place for male youth cultures (Haddon, 1992). Similarly, Drotner (2000) claims that the new media technologies have led to a domestication of boys' and young men's leisure patterns, coupled with reduced participation in sports and social activities while girls and young women have taken more and more control over public spaces. If boys have returned to the home while girls have left it, this would imply a shift in the gender balance of young people's leisure activities over the course of the 1990s.

Further parallels in respect of reduced restrictions on females can be found in the literature on risk-taking (that is behaviour which could lead to an undesirable or dangerous outcome – Furby & Beyth-Marom, 1992), generally regarded as more likely among males. Female risk has traditionally been associated with a certain type of woman; the stereotypical division being between women who are respectable versus those who are not, the latter ('fallen women') perceived as unlikely to make the grade as mothers or housewives (Green, Hebron & Woodward, 1990). However, in their description of the 'fracturing of British values', Wilkinson & Mulgan (1995) describe a swing away from traditional masculinity among young people at the end of the twentieth century; as men become more attached to 'soft, caring' values, women have become attached to risk, hedonism and violence, ideas which are revisited in the subsequent caricature of 'Mannish Mel', following 'the age-old male concoction of football, fags and fornication' (Wilkinson & Howard, 1997, p100). Corresponding with this, a meta-analysis of gender differences in risk taking which included 150 wide-ranging studies conducted in many different countries between 1967 and 1994 clearly supported the idea that males are more likely to take risks than females (although gender differences varied according to context and age), but crucially also found that the gender gap in risk-taking had grown smaller over the period studied (Byrnes, Miller & Schafer, 1999).

As Byrnes, Miller & Schafer (1999) point out, a wide range of behaviours (from, for example, daring to raise a hand in class to having unprotected sex) qualify as instances of risk-taking, some of which have potentially more undesirable outcomes than others depending both on the context in which they occur and the perceptions of the individual in question. Young people's health-risk behaviours such as smoking, drinking and use of drugs represent a set of activities which may be both

illegal and physically dangerous, and so likely to have long-term impact on the individuals involved (Karvonen, West & Sweeting et al, 2001). There is evidence of relatively greater increases among females in each of these behaviours over the course of the 1990s.

Focusing on Scottish studies as most relevant to the context of our own analysis, first, in respect of smoking there seems general agreement on an increasing female excess over the course of the 1990s accompanied by suggestions of a downturn in male rates (Todd, Currie & Smith, 1999; Boreham & Shaw, 2001). Second, and contrasting with Willis' (1990) observation that drinking among young women 'is not social, nor competitive, nor encouraged by the group' (p102), significant gender differences among Scottish teenagers in respect of frequent drinking and drunkenness disappeared during the 1990s (Boreham & Shaw, 2001; Todd, Currie & Smith, 1999). Finally, in respect of drug use, and again in contrast with the existence of a male:female ratio of around 2:1 which was widely reported in the early 1990s (Barnard and McKeganey, 1994), by 2000 any drug use was higher for female than male 16-19 year olds, while there was almost no gender difference among 20-24 year olds (ISD Scotland, 2002). Between 1994 and 1998, among 13-15 year olds a male excess for cannabis and amphetamines disappeared, and a female excess emerged in respect of glues/solvents and non-prescription tranquillisers (Todd, Currie & Smith, 1999).

Findings similar to these Scottish ones have been reported elsewhere. For example a study of adolescent smoking trends in eight European countries between 1990 and 1998 found generally increasing rates, but most marked among girls; indeed in Austria and Belgium (as Scotland) the female rates almost doubled over the 8 year period (Wold, Holstein & Griesbach et al, 2000). Similarly, a study of drinking among 14-18 year olds in Finland between 1977 and 1999 found increases among all groups, but a diminution in gender differences, with the most notable increases occurring among 14 year old girls (Lintonen, Rimpela & Ahlsrom et al, 2000).

The suggestion that there has been a shift among young people in the gender patterning of not only leisure activities and control of public spaces but also substance use, raises the question of whether changes in the former might have

impacted on changes in the patterning of health-risk behaviours. At the most general level, it has been suggested that reliance on the peer group rather than the family for support may increase vulnerability to peer pressure to engage in substance use (Noller and Callan, 1991). The street has long been considered an arena for urban gangs and delinquency (Cotterell, 1996). It is an 'exciting and dangerous place', outwith the adult gaze and, given lack of alternative social spaces, particularly associated with working class youth cultures (Brake, 1980, p.31). It is also a place where prohibitions on smoking or drinking are less likely to be enforced (Agnew & Petersen, 1989). In Scotland the highest levels of substance use occur among 'peer oriented' young people (Glendinning, Hendry & Shucksmith, 1995; Glendinning & Inglis, 1999), those who spend time in outdoor/hidden environments (Forsyth & Barnard, 2000) and have the strongest street-based leisure orientation (Karvonen, West & Sweeting et al, 2001). Several American studies have also found time spent in adult-free, unstructured leisure contexts (hanging out with friends, partying) to be positively associated with behaviours such as substance use in addition to delinquency such as theft, fighting or arson. Conversely, time spent in organised leisure activities, passive entertainment and non-competitive sports, hobbies, crafts and church involvement is negatively associated with such behaviours (Agnew & Petersen, 1989; Caldwell & Darling, 1999; Harford & Grant, 1987). Given this, can the relatively greater increases in substance use among young women over the course of the 1990s be attributed to their increasing presence in public spaces compared with that of young men?

The present study

This quantitative study is based on data from two 15-year old cohorts located within the same geographical area but separated by 12 years (1987 versus 1999). Our first aim is to chart trends in gender differences in leisure activities over time, the hypothesis being a relative increase in 'public'/'visible' activities among females and in home-based (e.g. computing) activities among males. The analysis follows Roberts' (1983) suggestion that the most useful studies of leisure participation would be based on representative samples, and repeated in order to allow the detection of trends, including those in respect of gender differences. The second aim is to present data on health-risk behaviours (smoking, drinking and experience of illicit drugs) over the same period. Our third aim is to determine whether changes in the

gender patterning of these behaviours (we hypothesise a relative increase in the female rates) might be explained by changes in the gender patterning of leisure.

In a previous cross-cultural (Glasgow-Helsinki) comparison of lifestyles (Karvonen, West & Sweeting et al, 2001) we focused largely on dimensions of leisure obtained via factor analysis of a series of individual leisure activities. In this paper we present data on both individual leisure activities *and* factors in view of the possibility that changes in the gender patterning of individual activities over time may be obscured by their incorporation into composite factors.

METHODS

Background, samples and methods

Data for comparison are derived from the *West of Scotland Twenty-07 Study: Health in the Community* (Macintyre, Annandale & Ecob et al, 1989) and the *West of Scotland 11 to 16 Study: Teenage Health* (West & Sweeting, 1996). Both are longitudinal studies of health, lifestyle and life circumstances, located in the Central Clydeside Conurbation (CCC), a predominantly urban area in and around Glasgow city.

The **1987** data are from the baseline survey of the youngest of three age cohorts participating in the *Twenty-07 Study*. Each cohort was sampled from Strathclyde Region's Voluntary Population Survey (Black, 1985), using a two stage method based on postcode sectors and individuals of specified age within those sectors (Ecob, 1987). The response rate among the youngest cohort at baseline was 65% of the issued sample (excluding movers prior to first contact) providing 1009 respondents. Comparison with the 1991 census showed the sample to be representative of the gender ratio and social class distribution of the population of 15 year olds in the CCC (Der, 1997). The principal method used in the *Twenty-07 Study* is a structured home interview, supplemented by questionnaires.

The **1999** data are derived from the final (age 15) sweep of the *11 to 16 Study*. This school-based cohort was recruited in 1994-5 during their final year of primary schooling (aged 11) and followed through the transition to secondary school until the

final year of statutory education (Scottish Secondary 4 – S4, aged 15), with one intermediate contact (aged 13). The sampling scheme involved a number of steps to ensure a representative sample at both the primary and secondary school stages (for further details see Ecob, Sweeting & West et al, 1996). In 1999, 2,196 respondents (1116 males and 1080 females, average age 15 years 5 months) in 43 secondary schools, representing 85% of the baseline and 79% of the original issued samples, took part. During classroom sessions respondents completed questionnaires which included items on leisure and substance use.

Since the 1987 (*Twenty-07 Study*) data collection continued throughout the year, over 20% of respondents had either left school or moved beyond the final year of statutory education (Scottish Secondary 4) at the time of interview. For comparability with the 1999 (*11 to 16 Study*) sample, analysis was restricted to those in mainstream education at the S4 level at the time of their interview, and this reduced the 1987 sample to 782 (373 males and 409 females, average age 15 years, 7 months).

While the 1987 (*Twenty-07 Study*) data were obtained from a baseline survey, the 1999 (*11 to 16 Study*) data were from a second follow-up. As with other longitudinal studies (Shepherd, 1993), losses from the *11 to 16 Study* at each follow-up have been greater among those from more materially deprived areas, with lower academic achievement and more behavioural problems including (not surprisingly, given its school-based nature) truancing (Sweeting, West & Der, 2001). Probabilistic weights have been derived for each *11 to 16* survey, based on sampling, socio-demographic, health, behavioural and attitudinal characteristics. Since the results of analyses based on the weighted data differed only marginally from those of the unweighted data, figures based on the latter are presented here.

Individual leisure items

The interview used in the 1987 survey included 19 leisure items prefaced by '*What do you do in your own free time?*', with 12 frequency options (more than once a day, daily, 4-6 days a week, 2-3 days a week, weekly, fortnightly, monthly, every 3 months, every 6 months, once a year, less, never). The 1999 questionnaire included a list of 15 similar or equivalent items prefaced by '*Here is a list of things that*

teenagers sometimes do in their free time, when they aren't at school. What about you?', with 5 frequency options (every day, most days, weekly, less often, never). For purposes of comparability, a number of items had to be combined, taking whichever was the highest frequency: 'go to friend's house' and 'have friends round' from 1987 (equivalent to 'see my pals' in 1999); 'do musical, artistic or dramatic activities' and 'do a hobby' from 1987 (equivalent to 'do a hobby, art or play a musical instrument' from 1999) and finally, 'read newspapers, mags or comics' and 'read books' from 1999 (equivalent to 'read books, mags, newspapers or comics' from 1987). Five items unique to the 1987 survey, and 2 to that of 1999 could not be included in this analysis. In addition, a variable representing the highest frequency of any sport outside school was constructed for each survey (Young, Sweeting & West, 2001). The resulting 13 comparable items are listed in Table 1. Finally, the 12-point frequency options used in 1987 were collapsed to be equivalent to the 5-point scale used in 1999.

Leisure factors

The structure of the leisure items was examined, first using exploratory factor analysis (following which the item 'do a hobby' was dropped because of low communality) and then via confirmatory factor analysis. This revealed that at both time points, four comparable leisure dimensions could be discerned which were similar to those identified in previous literature (Young, Sweeting & West, 2001). These dimensions were *street-based leisure*, the principal constituents of which were going out nowhere in particular, hanging around the street and seeing pals; *commercialised leisure*, represented by going to the cinema, discos or clubs and gigs or concerts; *conventional/'safe' activities* including listening to music, reading and looking round the shops; and *sports and games*, principally going to watch sports matches, playing computer games and taking part in sports (Young, Sweeting & West, 2001). The factor score coefficient matrices for both samples were averaged (to adjust for sample size), the averaged matrix then being used to compute standardised factor scores for the combined sample.

Substance use

Our questionnaires allow us to identify several different levels of smoking and drinking (but not drugs) at both time points, from none through 'experimental' or

lighter use to regular or more frequent use. Since it is possible that any changes in the gender patterning over time may be different for different levels of substance use, here we identify 'ever' smoking, drinking and drug use, 'current' smoking and 'monthly' drinking. In respect of the 'ever' definition, even very low levels of teenage smoking generally represent some form of experimentation unlikely to have been sanctioned by parents. However since infrequent drinking often takes place in the home under parental supervision, we suggest that 'monthly' drinking may represent an experimental level. Analyses of the associations with leisure (items and factors) focus on experimental substance use since we assume that this will be more strongly related to 'public', street-based activities than parentally-approved levels.

- *Smoking.* In both the 1987 interview and the 1999 questionnaire, respondents were asked whether they had never smoked, tried once or twice, used to smoke, smoked occasionally or regularly. The last 4 of these categories were combined as 'ever smoked' and the last 2 as 'current smoker'.
- *Drinking.* In 1987, respondents were asked whether they had never drunk alcohol, tried it once or twice, used to drink, only drank on special occasions, drank occasionally or regularly. Current drinkers were asked how often they drank using 12 frequency options (identical to those used in respect of the leisure items). The 1999 questionnaire simply asked how often respondents had an alcoholic drink (options 'every day', 'most days', 'about once a week', 'about every couple of weeks', 'about once a month', 'once or twice a year' and 'I have never had an alcoholic drink'). 'Ever', and 'monthly' drinkers were identified at each time point.
- *Illicit drugs.* In both 1987 and 1999, respondents were asked whether they had ever tried any from a list of illicit drugs, 'drugs ever' comprising those with any experience (for the vast majority on both occasions this amounted to cannabis only). We acknowledge that this categorisation is crude, but it is the only measure of drug use common to both studies.

Analyses

Analysis of variance was used to examine how the individual leisure items and composite leisure factors were patterned by year and gender, and whether any of the year by gender interactions were significant. Chi-square analyses were

conducted to determine whether rates of smoking, drinking and experience of drugs differed according to year and gender. Logistic regression analyses (using indicator coding for year and gender) were conducted in order to examine the following: firstly, year by gender interactions in respect of each measure of substance use; secondly, the relationship that the leisure items and factors had with experimental levels of substance use (ever smoking, monthly drinking and any experience of drugs) at both time points; and finally, whether any variation in gender differences in smoking, drinking and drug use between 1987 and 1999 could be explained (statistically) by variation in gender differences in leisure over this period. The Wald test was used to assess statistical significance levels of each coefficient in the logistic regression models. All analyses were conducted using SPSS version 7.5.

RESULTS

TABLE 1 ABOUT HERE

The upper section of Table 1 shows the mean frequency of each leisure item by gender in each year, together with the results of ANOVAs, in order to test the year by gender interactions. Considering differences over time first, it is clear that while the popularity of going out nowhere in particular considerably reduced, that of seeing pals, going to the cinema, attending discos or clubs, watching sports matches, looking round the shops, going to gigs or concerts, playing computer games and sport or exercise outwith school all increased between 1987 and 1999. On both occasions, consistent gender differences occurred in respect of listening to music and shopping (more frequent among females), watching sports matches, playing with computers and taking part in sport or exercise (more males).

More crucial, however, is whether the gender patterning of these behaviours differed between the surveys. As the ANOVAs show, there were significant year by gender interactions in respect of the following: reading (more popular among females in 1987, but males in 1999); hanging round the street (the male excess in 1987 having disappeared by 1999 as levels decreased among males but increased among females, a pattern also seen for 'out nowhere'); looking round the shops (a reduction in the female excess over time), watching sports matches and playing computer games (an increase in the male excess in both, but particularly the latter, over time).

Finally, two interactions just failed to reach a conventionally significant level; listening to music (reducing for males, stable for females) and going to gigs or concerts (greater increases among females than males).

This pattern of changes over time is reflected in the leisure factors, only the 'commercialised' factor (cinema, discos or clubs and gigs or concerts) showing no year by gender interaction, although there were very strong effects for both year (higher in 1999) and gender (higher among females). 'Street-based' diminished overall with time, but while considerably stronger among males in 1987 was undifferentiated by gender by 1999. The 'conventional/safe' factor (music, reading and shopping) showed the strongest year by gender interaction, because of much larger increases among males. Finally, 'sport/computers' (watching sports, playing computer games and sports) showed the strongest effects for year (higher in 1999) and gender (higher among males), particularly at the later time point.

TABLE 2 ABOUT HERE

Continuing the theme of changes over time, but turning our attention now to substance use, Table 2 shows rates of smoking (ever and current), drinking (ever and monthly or more often) and experience of illicit drugs (ever) by year and by gender in each year. Rates of ever smoking and drinking did not change over the 12 year period, however there were significant increases with more stringent definitions, particularly in respect of drinking. Thus, while current smoking rose by 1.7 times, the monthly drinking rate was 3.5 times higher at the later time point. Finally while 9% had any experience of drugs in 1987, this had risen 4.4 times to 40% by 1999.

Again, however, our interest lies mainly in the way these behaviours were patterned by gender in each year. At the earlier survey, rates of ever and current smoking and ever drinking did not differ by gender, while monthly drinking was more likely among males; 12 years later all rates were significantly higher among females. Finally, the significant male excess in experience of drugs in 1987 had disappeared by 1999, the rates having increased equally (by around 30%) for each gender.

Formal tests (logistic regression analyses) demonstrated significant year by gender interactions in respect of ever smoking and drinking ever and monthly, while that for experience of drugs approached conventional significance levels.

TABLE 3 ABOUT HERE

We now examine the association between substance use and leisure. Because this also changed over time, Table 3 shows the relationship which ever smoking, monthly drinking and drugs ever had with each of the leisure activities and factors at both the earlier and later time points, together with the significance of the year by activity interaction for each behaviour. So, for example, the first line of figures shows that the odds-ratio for ever smoking according to a unit increase in 'see pals' in 1987 was 1.4 (significant at the .000 level), that from an identical analysis conducted in respect of the 1999 data was 1.6, while that from a third analysis which entered the year and 'see pals' interaction resulted in a non-significant ($p=.241$) odds-ratio. The line continues by showing the results of identical analyses in respect of drinking and drugs.

The strongest positive relationships occurred in respect of seeing pals, hanging round the street and going to discos or clubs, but listening to music, going out nowhere, shopping and going to gigs or concerts also tended to have a positive association with each substance, while reading, hobbies and computer games were negatively related.

The year by activity interactions suggest some interesting changes over the 12-year period. The positive association with hanging round the street increased for each substance; the association between the cinema and smoking and drinking which had been positive in 1987 reversed to negative in 1999; positive relationships emerged for both going out nowhere and shopping with drinking, while that between pals and drinking increased over time; a positive relationship also emerged between discos/clubs and drugs; finally, negative relationships emerged in respect of reading with smoking and hobbies with drinking. Again, these changes for individual activities are reflected in the results seen for the leisure factors. The positive association of 'street-based' with each substance and the negative association of

'conventional/safe' for smoking were significantly stronger in 1999 compared with 1987.

TABLE 4 ABOUT HERE

Having shown changes in the gender patterning of some leisure activities, together with changes in the relationship between certain activities and smoking, drinking and drugs, we come finally to the question of whether changes in the male-female patterning of teenage leisure help to 'explain' (statistically) changes in the male-female patterning of substance use. To answer this, logistic regression analyses were conducted with smoking, drinking and experience of drugs as dependent variables, entering (a) year, gender, gender by year and (b) then including each leisure activity in turn. The aim was to see which, if any, leisure activities would reduce the size of the gender by year interactions.

As Table 4 shows, the two activities which had most impact, considerably reducing the Walds in respect of the gender by year interaction for each substance, were hanging around the street and playing computer games. Going out nowhere and reading also reduced the Walds, but mainly for smoking, and to a smaller extent. Reflecting this, the 'street-based' factor also reduced the gender by year interaction Wald for each substance (although, because of the inclusion of 'see pals' in this factor, not by the same extent as hanging round the street alone). The gender by year interaction for smoking and drugs was also somewhat reduced after entering the 'conventional/safe' factor.

TABLE 5 ABOUT HERE

This suggests that the changing gender patterning of smoking, drinking and experience of drugs between 1987 and 1999 can be 'explained' in part by changes in the gender patterning of these activities and/or the strength of the relationship between these activities and substance use. Importantly however, as demonstrated by Table 5, this does *not* mean that leisure activities can explain the *absolute* increases in substance use over time. In order to do this, overall levels of those activities with a positive relationship to substance (represented by the 'street-based' and 'commercialised' factors) would need to have increased and/or those with a negative relationship ('conventional/safe' and 'sports/games') to have decreased

over the 12 year period. Only 'commercialised' activities matched this picture, with 'street-based' decreasing, but 'conventional/safe' and 'sports/games' increasing. This is reflected in Table 5 by the increasing effects for year when the leisure factors are introduced into analyses including 'year', 'gender' and 'year by gender'. (Note that their inclusion also virtually eliminates each year by gender interaction.) Additional analyses (not shown) also found increasing effects of 'year' for monthly drinking and drugs ever when the individual activity of hanging round the street was included. This occurred even though hanging round had a significantly stronger relationship with substance use at the later time point (see Table 3), when it was less frequent overall (see Table 1).

DISCUSSION

By comparing questionnaire data from equivalent samples of 15 year olds living in the same geographical area in 1987 and 1999, we have shown significant changes in participation in a number of leisure activities over a relatively short time period. These include very large increases in looking round the shops, playing computer games and going to the cinema, and smaller ones in watching sports matches, seeing pals, and going to discos, clubs, gigs and concerts. These increases are consistent with the recent expansion of commercial youth culture (fashion, pop music etc), the burgeoning of cable and satellite tv sports provision, the resurgence in cinema admissions related to the expansion of multiplex facilities (Mathieson & Summerfield, 2000a,b) and the way in which computing (and particularly computer games) has become a more mainstream hobby and less regarded as a solitary or academic activity (Young, Sweeting & West, 2001). These structured, commercialised activities can be contrasted with the only one to have significantly fallen over the 12 year period; 'going out nowhere'. Commenting on this, Katz suggests that decay or elimination of urban spaces for outdoor play and recreation has reduced the opportunities for young people to 'hang out', although she urges caution against 'setting up some mythical halcyon past ecology of childhood and youth' (1998, p.136).

More central to the paper, however, are changes in the gender patterning of these activities over time. As predicted by the literature describing increasing female visibility, the male excess in hanging around the street disappeared between 1987

and 1999, as levels decreased among males but increased among females. Similarly, while levels of 'out nowhere' reduced for both males and females, reductions were greater for males, resulting in equivalent rates at the later time point. Decreases in reading among females accompanied by slight increases among males are also consistent with suggestions that home-based activities have reduced among girls and young women but increased among boys and young men. In line with this are the findings showing large increases in time spent by males playing computers and watching sports matches (assuming this is on-screen rather than actually attending), corresponding with Drotner's (2000) observation that boys' and young men's leisure has been domesticated by the new media technologies. Finally, greater increases in the amount of shopping among males than females demonstrates the homogenising effects of purchasable styles associated with commercial youth cultures.

Of course, while we have evidence that females are now just as likely to be found in the 'traditional' male arenas of the street or other public places, as Roberts (1983) notes, we cannot be sure that they are acting in the same way. Nor, indeed, can we even be sure that they are on the same streets (McVie – personal communication) or whether they are in mixed or separate gender groups. However, in line with the results of other studies (Boreham & Shaw, 2001; Lintonen, Rimpela & Ahlstrom et al, 2000; Todd, Currie & Smith, 1999; Wold, Holstein & Griesbach et al, 2000), we have shown that at the same time as rates of substance use have increased considerably overall, levels among 15-year old females have now 'caught up' with those of males in respect of drinking and experience of illicit drugs, and overtaken them in respect of smoking. The changes in the gender patterning of smoking ever and drinking both ever and monthly among young people over the course of the 1990s were statistically significant. Although the year by gender interactions for current smoking and drugs ever did not reach conventional significance levels, we would argue that the significance in respect of both longer term health (as well as accidents, crime and violence), of the changing levels and gender differences over this relatively short (12 year) period, is clear.

These year by gender interactions for substance use can be in part (statistically) 'explained' by time spent hanging around the street and playing computer games,

together with (but less importantly) that spent out nowhere and reading. Given the strong positive association between the street and substance use it would be easy to read this, as we did ourselves at first (Sweeting & West, 2000) as simply meaning that the girls have now emerged from their bedrooms and having joined the lads on the street are behaving like them too ('ladettes').

However the picture is more complicated. First, while the girls have remained on or arrived at the street corner, the lads have left it. The lack of a gender difference in 'hanging round the street' in 1999 arose because slight increases in the amount of time females spent on the street were accompanied by reductions among males while 'out nowhere' was not differentiated by gender at the later time point because reductions over time were greater among males than females as they spent more time on indoor pursuits such as computer games, reading and watching sports. At the same time, males have become increasingly visible in the shopping centre, and both males and females more frequently involved in commercial leisure outwith the home. The net result is a change in the gender balance of the 'street', 'conventional/safe' and 'sport/computers' leisure dimensions during the 1990s in ways which, because of the direction of their association with substance use (positive in the case of the first, negative for the other two) 'explains' statistically the relatively greater increases in female substance use.

The second complication relates to our finding that while accounting for leisure activities may help explain changes in the gender patterning of young people's smoking, drinking and drug use, it cannot explain absolute increases in substance use over the course of the 1990s. Even though in 1999 (when it was less frequent overall) hanging round the street had a significantly stronger relationship with substance use (suggesting that those who were hanging around in 1999 represented a more extreme or 'hardcore' group), hanging round did not account for increases in smoking, drinking or drugs between 1987 and 1999.

A related issue here is the direction of causality. The results of one American study (Vicary, Smith & Caldwell et al, 1998) which found that increases in social activities such as parties, dating, being with a crowd (and for females only, decreases in sports, hobbies and crafts and church involvement) most often occurred prior to

increased alcohol use, suggest that the additional time spent hanging out with peers provides the incentive or opportunity for increased alcohol use rather than the other way around. These results should be contrasted with those which suggest that to some extent young people select their friends on the basis of characteristics such as smoking (Ennett & Baumann, 1994; West, Sweeting & Ecob, 1999) and the more general view that children and young people choose, at least partly, the influences they experience (Hill, 1990; Eiser, Morgan & Gammage et al., 1991).

What these results suggest is that in addition to any causal relationship, females' greater visibility in the public arena and increasing risk-taking behaviours such as substance use represent two different results of the lifting of the constraints of respectability on young women's lifestyles at the end of the twentieth century. These trends demonstrate how gender, as a feature of identity is subject to historical and cultural influences (Holstein-Beck, 1995; Lippa & Connelly, 1990; Mac an Ghail, 1994; Reimer, 1995), uncertain and mutable rather than a fixed 'essentialist' attribute (Ganetz, 1995; Nielsen, 1996; Phoenix, 1997; Vik Kleven, 1993; Wallace & Kovatcheva, 1995). The construction of one's own biography and identity within a less certain world has become conceptualised as a personal project (Nielsen & Rudberg, 1994), something which brings both advantages and disadvantages. While on the one hand there is freedom to concentrate on oneself, experimenting with styles and picking from supposed equal opportunities, on the other there may be anomie/anxiety due to lack of norms (Kellner, 1992; Holstein-Beck, 1995; Vik Kleven, 1993), or enormous pressures to achieve (West & Sweeting, in press). In the past girls could be sweet or clever (not sexy), while young women today must strive to be all three (Nielsen & Rudberg, 1994).

Current descriptions of girls and young women represent them in terms of 'girlpower', as relatively privileged, having it all (Griffin, 2000), confidently and articulately moving into previously male-dominated areas, and 'conquering' the public arena (Vik Kleven, 1993). Some are more extreme, including risk-taking behaviours such as fast driving, ignoring curfews, heavy smoking and drinking (Nielsen & Rudberg, 1994) : 'Girls can be good, bad or – best of all – they can be boys' (Fine & Macpherson, 1994, p.241). There is similar evidence of a turnaround in male and female values: Wilkinson & Mulgan (1995) note that among young

working (but not middle) class people, attachment to success is more common among females.

Into this, McRobbie strikes a note of caution: 'In witnessing confident, voluble young women in the sixth-form classroom, or else in leisure, or simply on the streets, the very idea of sexual inequality seems to disappear into thin air. The assumption of equality is dangerously easy' (2000, p.200). The fact is that gender-based opportunities and expectations still prevail. Thus, a qualitative study of American teenage girls and outdoor/sports activities found that while the majority believed there had been significant reductions in gendered restrictions on women's behaviour in recent generations, most continued to express frustration at gender-based constraints in the subtle form of peer, parent and institutional expectations rather than blatant discrimination (Culp, 1998). While male youth cultures may have moved from the street to the home (often the traditional girls' space of the bedroom), with a particular focus on computing and game playing during the 1990s, one study suggests that by controlling access to the computers and games, boys remain able to assert their masculinity, in this case over their sisters (McNamee, 1998). In addition, descriptions of girls' participation in traditionally masculine activities such as crime, fighting or drunkenness continue to interpret it differently from the same behaviours among males (Brake, 1980; 1990; Muncer, Campbell & Jervis et al, 2001; Osgerby, 1998; Wallace & Kovatcheva, 1998). (An article in a local Scottish paper about 'hooligans' smashing glasses onto a pavement closed with the words 'perhaps most surprisingly, the culprits were two well-dressed, mature schoolgirls' - Helensburgh Advertiser, 26.6.2000).

Before concluding, one methodological issue should be noted, namely the different contexts in which the data were collected; home-based, face-to-face with an interviewer in 1987, school-based using self-completion questionnaires in 1999. This may well have made a difference, the former most likely to produce underestimations of substance use (West, Sweeting & Ecob, 1999). Given this, it is interesting that the rates of ever smoking or drinking were not significantly less in 1987 than 1999, but perhaps respondents perceived these responses as acceptable, in comparison with the admission of more frequent use. However, since the main point of the analysis was to examine changes in gender patterning, we suggest that

this is less of an issue (although it is possible that gender differences in behaviours perceived as acceptable or admissible may have resulted in a gender by context/year interaction).

We conclude by noting that in the early 1980s, both Roberts (1983) and Hendry (1983) predicted gradual changes in young women's leisure activities in response to changes in women's role in society: 'My hunch is that ... any changes will take generations rather than years' (Roberts, 1983, p.98). In contrast, our data demonstrate changes in the gender patterning of both leisure and health-risk behaviours among young people over little more than a single decade. These changes are both measurable and significant, not only from a statistical point of view, but in social and health terms also.

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TABLE 1: Leisure items and factors by gender and year – (means¹ and results of ANOVAs)

	mean & (s.d.)				ANOVA – f-value & (sig)		
	1987		1999		year	gender	year by gender
	males	females	males	females			
see my pals	3.91 (0.92)	3.86 (0.92)	4.24 (0.86)	4.25 (0.79)	104.7 (.000)	0.2 (.647)	0.6 (.456)
listen to music	4.46 (0.85)	4.67 (0.61)	4.36 (0.83)	4.69 (0.55)	1.5 (.225)	80.4 (.000)	3.8 (.052)
out nowhere	3.29 (1.47)	3.09 (1.34)	2.41 (1.26)	2.42 (1.20)	209.2 (.000)	3.6 (.056)	3.5 (.062)
read books, mags, papers	3.82 (1.27)	4.08 (1.02)	3.95 (1.07)	3.75 (1.02)	4.9 (.027)	0.7 (.408)	26.3 (.000)
go to the cinema	1.95 (0.48)	1.95 (0.40)	2.29 (0.66)	2.32 (0.58)	218.1 (.000)	0.2 (.635)	0.5 (.479)
hang around the street	3.06 (1.49)	2.55 (1.43)	2.90 (1.36)	2.77 (1.39)	0.3 (.596)	29.1 (.000)	11.1 (.001)
do hobbies	2.94 (1.47)	2.53 (1.42)	2.88 (1.44)	2.62 (1.40)	0.1 (.809)	31.8 (.000)	1.8 (.181)
go to discos/clubs	1.86 (0.65)	2.05 (0.53)	2.03 (0.86)	2.25 (0.79)	34.9 (.000)	40.4 (.000)	0.2 (.680)
watch sports matches	2.08 (0.79)	1.54 (0.70)	2.55 (0.90)	1.80 (0.80)	112.7 (.000)	350.3 (.000)	9.4 (.002)
look around shops	1.90 (0.91)	2.69 (0.93)	2.99 (0.78)	3.20 (0.68)	587.8 (.000)	229.1 (.000)	76.6 (.000)
go to gigs/concerts	1.48 (0.56)	1.53 (0.50)	1.61 (0.69)	1.76 (0.55)	51.0 (.000)	16.0 (.000)	3.7 (.053)
play computer games	2.39 (1.44)	1.50 (0.84)	3.82 (1.01)	2.21 (1.06)	563.2 (.000)	780.5 (.000)	64.2 (.000)
do sport	3.80 (1.01)	2.93 (1.36)	4.06 (0.85)	3.41 (1.04)	75.1 (.000)	321.9 (.000)	6.4 (.011)
'street' factor	0.20 (1.06)	0.03 (1.01)	-0.13 (0.97)	-0.09 (0.93)	30.6 (.000)	2.9 (.090)	7.0 (.008)
'commercialised' factor	-0.54 (0.84)	-0.13 (0.74)	0.08 (1.13)	0.59 (0.91)	262.3 (.000)	123.1 (.000)	1.7 (.192)
'conventional/safe' factor	-0.37 (1.14)	0.11 (0.86)	0.13 (1.02)	0.10 (0.87)	36.8 (.000)	30.4 (.000)	39.2 (.000)
'sport/computers' factor	0.09 (0.81)	-0.81 (0.72)	0.97 (0.78)	-0.24 (0.73)	514.2 (.000)	1094.8 (.000)	25.1 (.000)

¹ For the leisure items, the mean is of a scale running from 1 (representing 'never') to 5 ('every day').

TABLE 2: Smoking, drinking and experience of drugs by year and by gender in each year (percentages and year by gender interaction).

	BY YEAR			BY GENDER - 1987			BY GENDER - 1999			YEAR BY GENDER INTERACTION	
	1987 %	1999 %	X ² (sig)	male %	female %	X ² (sig)	male %	female %	X ² (sig)	wald	(sig)
SMOKING											
ever	63.9	66.8	2.1 (.144)	62.2	65.5	0.9 (.333)	61.5	72.3	29.0 (.000)	3.9	(.047)
current	15.0	25.5	36.3 (.000)	14.2	15.6	0.3 (.573)	21.9	29.2	15.2 (.000)	1.5	(.227)
DRINKING											
ever	91.4	89.6	2.0 (.155)	93.0	90.0	2.3 (.131)	86.7	92.7	21.2 (.000)	12.5	(.000)
monthly+	18.2	63.2	465.3 (.000)	21.8	15.0	6.2 (.013)	60.8	65.7	5.6 (.018)	10.5	(.001)
DRUGS											
ever	8.6	40.3	265.3 (.000)	11.0	6.4	5.4 (.021)	42.0	38.5	2.7 (.099)	2.7	(.099)

TABLE 3: Ever smoking, monthly drinking and drugs ever – odds in respect of each leisure activity and each leisure factor in 1987 and 1999.

	ever smoking			monthly drinking			drugs ever								
	1987 odds ratio	(sig)	1999 odds ratio	(sig)	year by activity (sig)	1987 odds ratio	(sig)	1999 odds ratio	(sig)	year by activity (sig)					
see my pals	1.4	(.000)	1.6	(.000)	(.241)	1.2	(.040)	1.7	(.000)	(.010)	1.6	(.003)	1.7	(.000)	(.662)
listen to music	1.3	(.012)	1.3	(.000)	(.710)	1.4	(.018)	1.6	(.000)	(.598)	1.1	(.726)	1.3	(.000)	(.303)
out nowhere	1.3	(.000)	1.3	(.000)	(.796)	1.1	(.080)	1.3	(.000)	(.033)	1.2	(.031)	1.3	(.000)	(.515)
read books, mags, papers	0.9	(.192)	0.8	(.000)	(.096)	0.9	(.182)	0.9	(.006)	(.875)	0.8	(.072)	0.8	(.000)	(.896)
go to the cinema	1.2	(.340)	0.8	(.000)	(.021)	1.5	(.046)	0.8	(.003)	(.004)	0.9	(.620)	0.6	(.000)	(.353)
hang around the street	1.4	(.000)	1.5	(.000)	(.063)	1.2	(.005)	1.6	(.000)	(.000)	1.4	(.000)	1.6	(.000)	(.090)
do hobbies	0.9	(.111)	0.9	(.000)	(.244)	1.0	(.991)	0.8	(.000)	(.012)	0.8	(.058)	0.9	(.000)	(.674)
go to discos/clubs	1.7	(.000)	1.8	(.000)	(.643)	1.7	(.000)	2.1	(.000)	(.251)	1.3	(.222)	1.8	(.000)	(.106)
watch sports matches	0.9	(.517)	1.0	(.445)	(.824)	1.1	(.245)	1.1	(.078)	(.696)	1.1	(.702)	1.0	(.308)	(.936)
look around shops	1.1	(.140)	1.1	(.083)	(.956)	0.9	(.402)	1.1	(.041)	(.072)	0.8	(.238)	1.0	(.412)	(.158)
go to gigs/concerts	1.3	(.074)	1.2	(.026)	(.569)	1.6	(.004)	1.3	(.001)	(.176)	1.0	(.854)	1.1	(.256)	(.892)
play computer games	0.8	(.000)	0.8	(.000)	(.620)	0.9	(.108)	0.9	(.000)	(.867)	0.9	(.180)	0.9	(.074)	(.431)
sport out of school	0.9	(.159)	0.9	(.090)	(.938)	1.1	(.074)	1.0	(.862)	(.146)	1.2	(.097)	1.0	(.672)	(.169)
'street' factor	1.7	(.000)	2.0	(.000)	(.072)	1.3	(.006)	2.2	(.000)	(.000)	1.7	(.000)	2.2	(.000)	(.038)
'commercial' factor	1.4	(.000)	1.3	(.000)	(.409)	1.7	(.000)	1.4	(.000)	(.138)	1.1	(.673)	1.2	(.000)	(.603)
'conventional/safe' factor	1.0	(.619)	0.8	(.000)	(.049)	0.9	(.187)	0.9	(.010)	(.958)	0.8	(.037)	0.8	(.000)	(.871)
'sports/computer' factor	0.7	(.001)	0.8	(.000)	(.872)	1.0	(.774)	0.8	(.000)	(.191)	1.1	(.702)	0.9	(.011)	(.260)

TABLE 4: Ever smoking, monthly drinking and drugs ever according to (a) year, gender and year by gender; (b) year by gender interactions, adjusted for each leisure activity and each leisure factor.

	ever smoking		monthly drinking		drugs ever	
	wald	(sig)	wald	(sig)	wald	(sig)
(a)						
Year (base = 1987)	0.06	(.808)	150.22	(.000)	100.06	(.000)
Gender (base = male)	0.94	(.333)	6.10	(.013)	5.23	(.022)
Year by Gender	3.95	(.047)	10.52	(.001)	2.71	(.099)
(b)						
Year by Gender interaction adjusted for ...						
see my pals	3.48	(.062)	10.07	(.001)	2.51	(.113)
listen to music	3.46	(.063)	8.20	(.004)	2.29	(.130)
out nowhere	2.93	(.087)	8.64	(.003)	2.05	(.152)
read books, mags, papers	2.66	(.103)	8.92	(.003)	1.69	(.193)
go to the cinema	4.32	(.038)	10.47	(.001)	3.33	(.068)
hang around the street	1.44	(.230)	6.47	(.011)	0.98	(.322)
do hobbies	4.54	(.033)	11.06	(.001)	2.94	(.086)
go to discos/clubs	3.93	(.047)	9.51	(.002)	2.33	(.127)
watch sports matches	4.42	(.035)	10.98	(.001)	2.68	(.101)
look around shops	4.88	(.027)	11.76	(.001)	3.05	(.081)
go to gigs/concerts	4.15	(.042)	9.00	(.003)	2.47	(.116)
play computer games	2.01	(.156)	6.22	(.013)	1.20	(.274)
sport out of school	3.94	(.047)	9.74	(.002)	2.64	(.104)
'street' factor	2.00	(.158)	5.93	(.015)	1.21	(.271)
'commercialised' factor'	4.13	(.042)	8.19	(.004)	2.62	(.105)
'conventional/safe factor	2.91	(.088)	7.73	(.005)	1.57	(.210)
'sport/computer' factor	3.18	(.075)	7.67	(.006)	1.90	(.168)

TABLE 5: Ever smoking, monthly drinking and drugs ever according to (a) year, gender and year by gender; (b) as (a) plus all four leisure factors.

	ever smoking						monthly drinking						drugs ever					
	(a)			(b)			(a)			(b)			(a)			(b)		
	OR	wald	(sig)	OR	wald	(sig)	OR	wald	(sig)	OR	wald	(sig)	OR	wald	(sig)	OR	wald	(sig)
Year (base = 1987)	1.0	0.1	(.808)	1.5	7.6	(.006)	5.5	150.2	(.000)	9.6	181.5	(.000)	5.8	100.1	(.000)	13.3	160.6	(.000)
Gender (base = male)	1.1	0.9	(.333)	1.0	0.0	(.911)	0.6	6.1	(.013)	0.5	10.4	(.001)	0.5	5.2	(.022)	0.5	7.7	(.006)
Year by Gender	1.4	3.9	(.047)	1.1	0.2	(.691)	2.0	10.5	(.001)	1.4	2.4	(.122)	1.6	2.7	(.099)	1.0	0.0	(.913)
'street' factor				2.0	218.8	(.000)				1.9	197.0	(.000)				2.2	249.4	(.000)
'commercialised' factor'				1.2	18.0	(.000)				1.4	51.8	(.000)				1.2	14.8	(.000)
'conventional/safe factor				0.8	15.6	(.000)				0.9	5.1	(.024)				0.8	21.3	(.000)
'sport/computer' factor				0.7	30.1	(.000)				0.7	26.0	(.000)				0.7	35.9	(.000)
R ² (Nagelkerke)	.015			.152			.208			.315			.143			.283		
(N)	(2976)			(2922)			(2967)			(2917)			(2971)			(2918)		