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Gambling lifestyles: The importance of social capital and diverse networks

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ABSTRACT

Scholars often overlook leisure gambling perspectives and focus on more health-related mechanisms, such as compulsive gambling behaviours. Consequently, understanding gambling as leisure is under-explored, especially in an economic sociological context. We begin to address this gap by identifying whether (1) leisure gambling is stratified across gambling activities and society, (2) social capital and (3) diverse networks are essential in leisure gambling consumption. Using 12,991 respondents to the 2007–2008 Taking Part Survey, we apply latent class analysis to identify different typologies of leisure gamblers, modelling the influence of socio-cultural characteristics and network resources and diversity. We identify five leisure gambling typologies, with social capital and network diversity playing an important role in their formation. Generally, leisure gambling consumption depends on more social capital and diverse networks.

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Introduction

Gambling is ubiquitous to civilisation, dating back to Ancient Greece's games of chance (Hombas & Baloglou, 2005) and the Roman Empire's wagers over chariot racing (Moody, 2013). Saunders and Turner (1987) demonstrated the importance of distinguishing between the perspectives of gambling: compulsive and leisure gambling. However, over recent years the leisure perspective of gambling has far less attention than the more deviant forms of gambling, like compulsive, disordered, addictive, pathological or problem gambling activities (see reviews by Bitanhirwe & Ssewanyana, 2021; Johansson et al., 2009). Within the sparse body of literature considering gambling a leisure activity rather than an individual or social problem, it either focusses on one activity – often horseracing – or socio-psychological consumption motivations (Binde, 2005a, 2005b, 2013; Casey, 2008, 2006; Cotte & Latour, 2009; McManus & Graham, 2014; Neal, 2005). Other work treats leisure (or recreational) gambling as a group within the non-, recreational, problem, or pathological gamblers categories, and often focuses on discriminating characteristics between each group (Mazar et al., 2018; Volberg & Banks, 2002). While all this work is important, it assumes leisure gambling is one class, whereas some time ago Bloch (1951) discussed that gambling was a function of leisure pursuits which varied across social classes – a postulation still empirically unexplored. It is this knowledge gap we aim to fill.

More specifically, we focus on testing various propositions regarding leisure and how they pertain to gambling activities. Firstly, we use multiple gambling activities to understand if gambling patterns are segmented into different typologies or classes of leisure

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gambling. Second, we explore if and how leisure gambling behaviours are structured by class dimensions and other sociodemographic factors, empirically testing Bloch's (1951) postulation.

RQ1: *Are leisure gambling activities socially stratified into different typologies?*

RQ2: *What sociodemographic characteristics distinguish any leisure gambling typologies?*

Third, multiple studies note the importance of socialising as a motivating factor for gambling (Fang & Mowen, 2009; Shinaprayoon et al., 2017; Hope & Havir, 2002; Neighbors & Larimer, 2004; Neighbors et al., 2002), we examine how social capital, through resources embedded in networks (Lin, 1999), influence leisure gambling typology membership. Thus, we aim to answer the following research question;

RQ3: *What role does social capital have within leisure gambling typologies?*

Finally, potentially our most significant contribution, we explore how social structure – specifically around the network mechanisms of homophily and heterophily – influences leisure gambling behaviour.

RQ4: *How does the composition of social networks influence leisure gambling behaviour?*

Overall, our contribution to the leisure field is three-fold. At the most basic level, we provide much-needed insight into leisure gambling (non-problem gambling participation) and how it is stratified across societal structures. At a deeper level, we investigate social capital's role in gambling behaviours and typologies. Finally, we investigate how leisure gambling behaviour is contingent on social structure, social network configuration and strength of ties.

Gambling, social capital and networks

The underlying principle of social capital is the investment in social relations with expected returns in the market. The leisure and cultural fields tend to draw upon three main theories of social capital, as reflected in the work of Bourdieu (1980, 1986, 1990), Coleman (1988, 1990) and Putnam (1993, 1995a, 1995b, 2000). Although social capital is contested, with each of these theorists taking fundamentally different viewpoints, they agree that it is resources embedded in networks. The three positions are well documented, so we do not explore them here. Instead, we follow Kwon and Adler (2014), who discussed the need for more application and less discussion of social capital theory.

Furthermore, Widdop et al. (2016) suggest focusing on the complexity of social capital. For example, the extent to which different forms of bridging or bonding or both are present or the different contexts and the differential outcomes that inform or realise how, why and if social capital as a mechanism gains returns. Consequently, the leisure literature has said less about the social capital contribution made by Lin (1999, 2001) through his social network theory, drawing on Bourdieu, Coleman and especially Putnam. Lin (*ibid.*) views social capital as access and use of resources embedded in social networks, positing that network diversity (or lack of) through homophily and heterophily become essential social and economic activity mechanisms. The similarity or diversity of social relationships and 'who' people spend leisure time with is significant.

Although limited, studies have shown that leisure and cultural participation benefit from broader, more diverse (heterophily) social networks (Millward et al., 2017). Here individuals can display knowledge gained from interaction with others from different parts of their social structure, and impact back upon the various social worlds (work, family, friendship, among others) they inhabit, reinforcing social approval within these different worlds (Erickson, 1996; Kane, 2004; Lizardo, 2006; Relish, 1997; Warde and Tampubolon, 2008). These studies all observe that the network structure and an individual's position within that structure have a crucial impact on the resources available to them for participation behaviour. Thus, position in social structure is a mediating factor in the construction and socialisation of cultural preferences and consumption patterns. Nevertheless, despite research identifying that gambling is embedded in social structures (Reith & Dobbie, 2011), limited attention has been paid to the social nature of gambling within academia (Gordon & Reith, 2019). Scrutinising pathological gambling networks Reith and Dobbie (2011) pinpoint social networks as fundamental to individuals becoming gamblers, signifying the inheritance of gambling etiquette, norms and behaviour through family, friends and colleagues. Akin to Mazar et al. (2018) findings discriminating between non-, recreational and problem gamblers. Gambling does not happen within a vacuum, with multiple factors influencing participation. This notion is investigated further by Gordon et al. (2015), framing sports betting as a *lifestyle consumption community*, identifying numerous social returns in which networks and social capital play an important role.

Homophily and heterophily in networks

Network homophily and heterophily are essential mechanisms in the network theory of social action. Homophily is when people like, interact, connect and stick with people who are similar to themselves: birds of a feather flock together (Kim & Altmann, 2017; McPherson et al., 2001; Zhang et al., 2017). Therefore, homophilous networks tend to include individuals tied to others like them, deriving from either status (formal or informal) or value (attitudes and beliefs; Lazarsfeld & Merton, 1954; Rogers & Bhowmik, 1970). By contrast, heterophilous networks are analogous, whereby a socially diverse mix of individuals constructs networks. Naturally, these two network concepts have been used to explain behaviour. For example, Mark (1998) showed that music preferences are transmitted through homophilous network ties; similar people interact and develop similar musical tastes. However, Erickson's (1996) study identified how heterophilous networks within the workplace lead to more cultural preferences, developing omnivorous tastes that allow them to respond in different social settings.

For Erickson (1996), personal networks are a significant source of cultural resources and a more powerful source than class. High-status people will undoubtedly have a greater level of cultural capital, defined by the social assets of a person (education, intellect, style of speech, style of dress, among others) that promote social mobility in a stratified society (see Bourdieu, 1984; for a review of cultural capital). Cultural capital reflects not only their class position but also the extent to which they are embedded in diverse class-based networks. Furthermore, Kane (2004) notes that diverse consumption behaviours and networks may indicate an underlying desire for cosmopolitanism. This is compounded by the fact that in all studies of this nature, high levels of cultural consumption and diverse networks are associated with high status. Few studies have explored these notions concerning leisure gambling. Meisel et al. (2012) investigated homophily within problem gambling networks, identifying gamblers tend to be closer to other gamblers, working to reinforce addictive behaviours. Other studies have noted how problem gamblers attach to other gambling friends and family (Gupta & Derevensky, 2000; Mazar et al., 2018).

The social connections that bind us

This paper sees gambling as a social activity (Gordon & Reith, 2019), like all leisure activities. Hence, an individual may consume gambling activities independently, but

inevitably, they interact, communicate and consume with family, friends and acquaintances (De Grove, 2014, Mazar et al., 2018). Individuals are part of multiple networks cutting across different social worlds – they may be part of a network at work, home, and social clubs – that may or may not cross (Crossley, 2010; McPherson et al., 2001). The message here is that we are all part of networks of networks. Within these networks, we have strong relationships that offer social support, but some may also be weaker. Therefore, as well as diverse networks, the types of ties in social networks will mediate participation behaviours (Millward et al., 2017). For example, sharing time with a diverse friendship network that crosses social worlds might be very different to having a diverse family network.

Granovetter's (1973) seminal 'strength of weak ties' theory becomes fundamental here, where ties that span different social worlds may be considered 'weak', yet they provide access to new information sources. Weak ties are more likely to occur in comparatively heterogeneous networks. They are preferable to 'strong' bonding ties when novelty and innovation are valued. While Granovetter looked at the employment market, the same rationale can be applied to gambling consumption. The network structure of weak ties allows individuals to tap into a greater variety of gambling genres and act as conduits for these gambling sources otherwise removed from the individual (Granovetter, 1973, 1982). For example, Lamont and Hing (2020) considered how sports betting might constitute cultural capital, where prior, essential knowledge may be needed within the network for participation. Therefore, under this framework, individuals with various gambling behaviours are more likely to have looser, less dense networks of more bridging types of connections where new information about gambling is more readily available. Consequently, we would expect individuals actively participating in a variety of gambling activities (an analogue of cultural omnivores found in other participatory activities, see Peterson & Kern, 1996), would be more reliant on diverse friendship and acquaintance networks compared to non-gamblers who would have more bonding ties characteristic of family networks.

Network resources

Nan Lin's (2001, 2009) approach to social capital stresses how resources embedded in social networks are crucial to social capital and individuals' actions. Lin's tradition (1999, 2001) emphasises an individual's position in the social structure, the diversity and homophily of an individual's network, and the strength of ties. In this paper, we test several social capital perspectives besides Lin's approach (such as trust, social participation and belonging) to determine their importance on gambling consumption after controlling for other established influences. As a consequence, the empirical contribution to this article sets out to (i) establish if there are well-defined gambling patterns; (ii) whether these behaviour patterns are socially stratified (education and class) and influenced by other sociodemographic factors; (iii) assess the impact of cognitive/subjective social capital (shared norms, belonging and trust) on gambling patterns; and (iv) examine the importance of homophily and heterophily networks on participation in gambling, specifically, whether behaviours are more or less likely to be associated with larger diverse networks and the strength of these ties.

We know gambling is a social activity (Hope & Havir, 2002), and approval from friends and family ties supports gambling behaviour (Welte et al., 2006). We also know gambling is a function of the social environment, where social networks reinforce gambling behaviour (Reith & Dobbie, 2011). However, following the same trend as gambling literature, this knowledge is derived from the problem gambling perspective. Here, we are interested in returning the leisure gambling perspective to the fore of leisure research agendas.

Methods and materials

Data

Our analysis of leisure gambling in England used Wave 3 of the 2007–2008 Taking Part Survey (TPS) data. The TPS surveyed 12,991 participants through face-to-face surveys about their leisure consumption. Households were drawn from the UK national postcode address file, and interviews were conducted with a randomly selected member of each household aged 16 or over. The survey asked respondents if they had participated in several gambling activities in the last 12 months, with 1 = Yes and 0 = No. While the data may be considered outdated, it remains the only data set that records people's gambling behaviours and Lin's (1999) social capital and social network variables, making it unique and the only available data to answer our questions. The TPS also collects sociodemographic variables allowing us to identify gambling behaviour's social, cultural and economic stratification. [Table 1](#) provides summary statistics for the data used in this research.

Gambling consumption variables

Respondents were asked about their gambling activities in the last 12 months (1 = Yes, 0 = No) to assess gambling consumption. We do not account for the volume of activities (how often or spend), mainly since latent class analysis requires binary data, allowing analysis of response patterns. A central component of our paper is that gambling activities are not isolated individual behaviours; instead, they are interconnected and part of a latent construct. Therefore, to answer our research questions, a wide variety of gambling activities that crosscut the perceived symbolic boundaries of leisure are used in our modelling approach. We used a total of 10 gambling activities: Lotteries (including the UK National Lottery and other lotteries), Scratch cards, Coupons, Horse Racing, Greyhound Racing, Events (including sports), Table games (casino, poker and other table games), Bingo, Machines, and Private. For a benchmark class, we also included those participants who indicated they did not gamble (see [Table 1](#)). Some indicators are more attached to the masses (Lotteries 55%). In comparison, others are far more exclusive and niche (Table games 2% and Private 1.8%).

Social capital and network variables

We used several variables to measure the different aspects of social capital: neighbourhood trust, belonging, social participation (socialising with friends and family), and network resources. We dichotomised the neighbourhood trust variable into a 'distrust' category, including the answers 'you can't be too careful' and 'it depends', and a 'trust'-category, with 1 = Trust, 0 otherwise. Social participation was measured by asking how often respondents meet up with friends (*Friends*) and relatives outside the household (*Family*). This was dichotomised into lower participation (Never or less often than once a month) or higher participation (once or twice a month or more) category, with 1 = high participation, 0

Table 1. Gambling activity ($n = 12,991$).

Characteristic	Per cent
Lotteries	55
None	38
Horse Racing	11
Scratch	9.4
Bingo	5.7
Machines	4.7
Events	2.9
Greyhound Racing	2.5
Coupons	2.4
Table	2
Private	1.8

Table 2. Continuous social variables ($n = 12,991$).

Variable	Min	Max	μ	σ
Age	16	96	49.37	-18.78
Age ²	256	9,216.00	2,790.55	-1,948.85
Fam_volume	0	10	0.9	-1.15
Fri_volume	0	11	2.01	-2.09
Acq_volume	0	11	0.61	-1.21

Table 3. Categorical social variables ($n = 12,991$).

Variable	Per cent
Education	
No Qualification	27%
Lower-Middle Qualification	24%
Higher-Middle Qualification	27%
Higher-Education	22%
Intermediate Class	33%
Salarial Class	29%
Female	56%
Neighbourhood Trust	40%
Belonging	74%
Socialise with Relatives	79%
Socialise with Friends	90%

otherwise. We also controlled for an individual's sense of belonging to an area. Here we conceptualise belonging (*Belonging*) as a socially constructed, embedded process where individuals subjectively gauge the suitability of their locale in light of their social trajectory (Bennett et al., 2008). Here we used a dummy variable to reflect those considered 'new' to an area (less than 5 years), with 1 = more than 5 years, 0 otherwise.

Social network resources were measured using Lin's (2001) position generator measures, which also measure social capital. This instrument asks people about the occupational positions in their network and considers these positions as good indicators of the network resources (Verhaeghe & Tampubolon, 2012). In this study, respondents were asked whether they know friends, relatives or acquaintances who have jobs from a list of eleven occupations. All eleven occupations are salient in British society, ranging from factory workers to university/college lecturers (Verhaeghe & Tampubolon, 2012). In this paper, the position generator is used to calculate the volume of network resources by counting the number of different occupations accessed by respondents, thus is related to an individual's network size (Van der Gaag, 2005). We use three separate variables to distinguish the network volume of friends (*Fri_volume*), family (*Fam_volume*), and acquaintances (*Acq_volume*), which is an absolute count. See Tables 2 and 3 for descriptives.

Control variables

We included various control variables to account for other factors influencing gambling behaviour. To capture cultural capital, we used education (Bennett et al., 2008), coded into 4 classifications. To capture social class, we used the National Statistics Socio-economic Classification; we distinguished between the salariat class, referring to managerial and professional occupations and the intermediate class, referring to intermediate, lower supervisory and technical occupations. Other variables included gender using a *Female* dummy variable (1=Yes, 0 otherwise), *Age* (continuous) and *Age*² to mediate the curved relationship of age (this allowed us to model the effect at differing ages, rather than assuming the effect is linear for all ages). See Tables 2 and 3 for descriptives.

Statistical analysis

To investigate how gambling is a latent concept, we used latent class analysis, which follows similar research from the problem gambling perspective (Chamberlain et al., 2017; De Luigi et al., 2018; Studer et al., 2016). Latent class analysis is a data-driven finite mixture modelling approach, identifying subgroups – latent classes – that share similar item response patterns. We used the common classify-analyse approach to latent class analysis. Firstly, we used the poLCA (Linzer & Lewis, 2011) within the R environment (R Core Team, 2020) to fit the measurement part of the latent class model to our data set, as outlined in Figure 1.

Where $U_1, U_2, U_3 \dots U_n$ refers to the binary response variables for gambling activity, and C refers to the underlying class based on a respondent's participation in gambling activities. To establish the optimal number of latent classes in the dataset, we specified multiple latent class models from 1-class to 7-classes, using 10 dichotomous gambling-related variables from Table 1. The Akaike information criterion (AIC; Akaike, 1973), the Bayesian information criterion (BIC; Schwarz, 1978), the adjusted BIC (ABIC; Sclove, 1987), the consistent version of AIC (CAIC; Bozdogan, 1987), the log-likelihood ratio (LLR), and absolute entropy (Linzer & Lewis, 2011) were assessed to select the most appropriate model; with lower scores indicating better model fit. We opt for these model fit indices as they weigh fit and parsimony. Since BIC is the most widely used and statistically robust fit index, we opt for a model with a lower BIC value (Asparouhov & Muthen, 2006; Widdop et al., 2016) while in the context of the other indices (i.e. minimal improvements).

Once the most appropriate measurement model is identified, an individual's posterior probabilities of belonging to each latent class can be obtained using Bayes' theorem (Bray et al., 2015; Lanza et al., 2007), expressed as;

$$P(C = c|Y = y) = \frac{P(C = c)P(Y = y|C = c)}{P(Y = y)} \quad (1)$$

where C represents the latent class with $c = 1, \dots, K$ latent classes, and Y represents an individual's response vector, y , to the gambling activity indicators. As posterior probabilities for each individual belonging to each class are provided by equation (1), we use the maximum-probability assignment rule, which assigns class membership to the highest probable class (Goodman, 2007; Nagin, 2005). Once assigned, we analyse the related sociodemographic, social capital and social network influences on class membership. To model the covariates in Tables 2 and 3 on class membership, we specify the following multinomial logistic regression using the nnet (Venables & Ripley, 2002) package in the R;

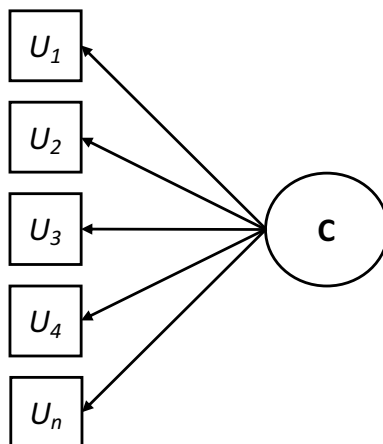


Figure 1. Latent class measurement model.

Table 4. LatEnt class model fit indices.

Model	BIC	ABIC	AIC	CAIC	Likelihood Ratio	Entropy(A)
Model 1	77165.19	77130.23	77083.00	77176.19	21449.20	
Model 2	59788.15	59715.05	59616.29	59811.15	3958.49	2.29
Model 3	57763.89	57652.66	57502.37	57798.89	1820.57	2.21
Model 4	57249.20	57099.84	56898.02	57296.20	1192.22	2.19
Model 5	57111.34	56923.85	56670.50	57170.34	940.70	2.18
Model 6	57153.91	56928.28	56623.40	57224.91	869.60	2.17
Model 7	57267.57	57003.81	56647.40	57350.57	869.60	2.17

$$\begin{aligned}
 \text{Gambling}_{\text{Class}} = & \beta_0 + \beta_1 \text{Age} + \beta_2 \text{Age}^2 + \beta_3 \text{Class}_{\text{Intermediate}} + \beta_4 \text{Class}_{\text{Salarial}} + \beta_5 \text{Female} \\
 & + \beta_6 \text{Neighbour_Trust} + \beta_7 \text{Belonging} + \beta_8 \text{Relative} + \beta_9 \text{Friends} + \beta_{12} \text{Volume}_{\text{Friends}} \\
 & + \beta_{13} \text{Volume}_{\text{Family}} + \beta_{14} \text{Volume}_{\text{Acquaintance}}
 \end{aligned} \tag{2}$$

Where $\text{Gambling}_{\text{Class}}$ is a nominal variable, β_0 is a constant, and β_{1-14} are class predictor variables.

Results

Number of leisure gambling classes

Within the latent class analysis, we estimate the probability that an individual belongs to a particular typology given their gambling consumption based on patterns of 10 gambling variables. Here we are looking to identify the most parsimonious model that best fits the observed data. Table 4 shows the model fit indices for 1–7 class models. The 5-class model best suited the data on most indicators, but most importantly, the BIC, and provided a better interpretation of the different gambling classes. That is, underlying gambling participation lies a latent typology consisting of 5 different types of individuals based on their gambling behaviours.

Profiles of leisure gambling classes

To explore these latent classes, we can use the posterior probabilities to identify how these five latent classes are constructed. That is, what gambling activities load onto which latent class group? Table 5 presents the probabilities of participating in that gambling activity given the membership of a particular class. The first group is labelled the ‘Lottery Class’. This group, of which 36% of our sample resides, consumes the UK National Lottery and nothing else. The second group are termed ‘Inactives’, and 37.9% of the survey population are in this group. They refrain from any gambling activity. Next, we have the ‘Sports Class’ (7.7% of the population). This group are active gamblers;

Table 5. Latent class probabilities.

	Class 1 Lottery	Class 2 Inactive	Class 3 Sports	Class 4 Omnivore Gamblers	Class 5 Entertainment
Relative Size	36.32	37.91	7.71	1.77	16.29
Lotteries	100.0	0.0	58.1	92.8	75.4
Scratch	5.7	0.0	0.0	52.6	39.0
Coupons	1.9	0.0	8.9	33.5	3.0
Horse Racing	5.4	0.0	57.3	74.1	19.3
Greyhound Racing	0.1	0.0	10.8	46.7	4.7
Events	0.2	0.0	15.3	66.0	3.2
Table	0.3	0.0	8.2	40.6	3.7
Bingo	3.7	0.0	2.3	15.8	24.0
Machines	0.0	0.0	6.2	57.3	19.4
Private	0.1	0.0	8.6	40.1	2.5
None	0.0	100.0	0.0	0.0	0.0

indeed, they readily attach themselves and participate in traditional sport-type gambling events, namely; horse racing (57.8%), Dog racing (10.8%) and other events (15.3%), far greater than the general population. The next class are termed ‘Omnivore Gamblers’, who consume multiple (most) gambling activities, akin to Erickson’s (1996) omnivore distinction. Indeed, this group are voracious gambling consumers, making up 1.8% of the population. They differ from the Sport class because they consume all gambling formats, not just sports. Finally, the ‘Entertainment Class’, of which 16.3% of the population reside. This group is identifiable for participating in gambling activities associated with mass entertainment, such as Horse Racing, Bingo, Scratch Cards and Machines.

Gambling lifestyles: What are the key drivers of membership?

To identify the influence of sociodemographic, social capital, and social network variables on the likelihood of membership to one of the five classes, we ran the multinomial logistic regression estimation in equation (2) using the Inactive class as the reference group for the modelling procedure. We chose the Inactive class initially since it provides intuitive insight between those who do not participate in gambling activities and those who do, to differing extents. Table 6 presents the results of the multinomial logistic regression model expressed in equation (2) using the Inactive class as the reference group. Odds ratios (OR) are presented along with adjusted standard errors to increase interpretability. The intuition being odd ratios >1 demonstrates a positive effect, and <1 a negative.

Table 6. Odds-Ratio’s of class membership using inactive class as a reference.

	Dependent variable:			
	Sports (1)	Lottery (2)	Multiple (3)	Entertainment (4)
Education	0.957 (0.005)	0.822*** (0.0001)	0.734*** (0.002)	0.736*** (0.025)
Intermediate Class	1.577*** (0.029)	1.235*** (0.038)	2.171*** (0.008)	1.183*** (0.003)
Salariat Class	1.500*** (0.006)	0.983 (0.001)	1.708*** (0.007)	0.943*** (0.018)
age	1.015*** (0.025)	1.137*** (0.020)	1.041*** (0.003)	1.024*** (0.00004)
agesq	1.000*** (0.032)	0.999*** (0.018)	0.999*** (0.011)	1.000*** (0.017)
Female	0.313*** (0.011)	0.793*** (0.016)	0.093*** (0.003)	0.944*** (0.011)
volumefam	1.098*** (0.0004)	1.128*** (0.004)	1.229*** (0.001)	1.156*** (0.001)
volumefri	1.129*** (0.009)	1.046*** (0.0002)	1.250*** (0.0004)	1.077*** (0.007)
volumeacq	1.033 (0.031)	0.963** (0.005)	1.151*** (0.001)	1.027 (0.001)
neig_Trust	1.148*** (0.001)	0.925** (0.0003)	0.685*** (0.001)	0.871*** (0.023)
Belonging	1.193*** (0.012)	1.127*** (0.009)	1.024*** (0.004)	1.013 (0.00005)
Relative	1.173*** (0.016)	1.438*** (0.033)	1.180*** (0.017)	1.363*** (0.032)
Friends	1.823*** (0.023)	0.962*** (0.009)	1.026*** (0.011)	0.966*** (0.005)
Constant	0.064*** (0.0001)	0.044*** (0.002)	0.059*** (0.0003)	0.327*** (0.003)
Akaike Inf. Crit.	30,196.670	30,196.670	30,196.670	30,196.670

Note: *p**p***p<0.01.

Inactive class vs gambling classes

The results show that the Inactive class are more likely to be drawn from the lower educated cohort than the Lottery Class (0.822), Omnivore Class (0.734) and Entertainment Class (0.736) classes, but not compared to the Sport class. This result shows that those with levels of education and high social strata (which demonstrates higher levels of cultural capital, as used by Bennett et al., 2008) are likely to participate in leisure gambling, providing an application of Bourdieu's theory. Potentially, leisure gambling may offer symbolic violence, much like music, sports and arts consumption can. Mainly, this finding demonstrates that leisure gambling is structured along class divisions. Indeed all gambling classes are less likely to be drawn from the working class given the significant positive *Intermediate Class* odd ratios, especially the Omnivore Class (2.171) and the Sports Class (1.577). Both the Omnivores and Sports classes are more likely to comprise the higher salariat class 1.708 and 1.5, respectively. There is also a gender axis. Leisure gambling is stratified across gendered lines. Females are less likely to be in all classes except for the Entertainment class = (0.944). The Omnivore Class is exclusively male (0.093), while females are also considerably less likely to belong to the Sport Class (0.313),

Regarding the sociability and social capital variables, family ties are essential to embedded gambling leisure activities. All gambling classes are likelier to spend more time socialising with family than the Inactive Class (1.173–1.438)). This is especially true of the Lottery and Entertainment classes, who spend more time with family, 1.438 and 1.363, respectively. However, they are less likely to spend more time with friends than the Inactive group, 0.962 and 0.966, respectively. Friendship ties are more important to those in the Sports Class lifestyle (1.823) and, to a lesser extent, the Omnivore Class (1.026). However, they are more likely to spend time with family ties than friends ties. What is clear is that socialising with family and friends matters to participation.

The consistently positive odd ratios for *volumefam* and *volumefri* variables (OR = 1.046–1.56, $p < 0.01$) demonstrate those gambling are more likely to have more diverse (heterogenous) family and friends networks. Interestingly, the Lottery Class are more likely to have more diverse family networks (1.128) than friends networks (1.046), likewise is the Entertainment Class, with family diversity (1.156) higher than friends diversity (1.1077). However, the Sports Class is likelier to have more diverse friends networks (1.129) than family networks (1.1098). The Omnivore Class are likelier to have similarly diverse friends (1.250) and family (1.229) networks. These results provide evidence of how gambling occurs within embedded social structures. Therefore, those with increased social capital are more likely to participate in gambling activities – so social structure matters. Moreover, the configuration of the social structure reflects what activities leisure gamblers are likely to participate in.

Except for the Sports Class (1.148), leisure gamblers are less likely to trust neighbours (social capital) than the Inactive Class, especially Omnivores (0.685) and the Entertainment Class (0.871). The Sports and Lottery Classes are likelier to feel they belong in their local community, 1.193 and 1.127. Sociability and social capital show a complex pattern. Humans are inherently social, participating and consuming as embedded actors, not isolated individuals. To that end, ignoring social structure in gambling research would seriously impact our understanding.

Discussion

The dominant logic within gambling research is to reduce gambling behaviour to a generalised concept so consumption levels can be scaled from non-gambling to compulsive/pathological/problem gambling. This scale remains essential in the health sciences to identify at-risk individuals and design interventions. However, this approach does not fit

well in social science. The dependent variable of non-problem to problem does not capture the complex and inherently social aspects of gambling or the different meanings attached to different forms. Indeed, our latent class analysis results demonstrate that there are five different types of gamblers whose consumption varies depending on social stratification. That is, society is not made up only of gamblers on a sliding scale, there are different types with different motivations for gambling, drawn from different sections of society, and all bearing the marks of sociability. To that end, leisure gambling is a stratified activity. The results demonstrate how leisure gambling participation can be typologies into five classes; Inactive; Lottery, Omnivore, Sport and Entertainment (RQ1; See [Table 7](#)).

Indeed, identifying these classes demonstrates the complex nature of gambling within British society. Their existence throws into question our current assumptions about gambling. The resulting probabilities indicate that gambling is a leisure activity and should be researched from a leisure perspective.

The identification of a latent construct of gambling behaviour is an important finding. RQ2 then asked what the discerning features of these latent classes would look like. In previous research on arts, sports, music and leisure, it was evident that these fields shared similar characteristics of participation being socially stratified. Indeed, our research supported that these latent classes of gambling participation were socially stratified in the Bourdieusian sense. Those with higher education and drawn from the higher echelons of society are much more likely to gamble. Indeed, the greater the cultural capital with a latent typology, the more likely that class will be high consumers of different forms of gambling. One group even adhered to the concept of cultural omnivores (Widdop et al., 2016). They were voracious consumers of all gambling activities.

Furthermore, our results support Bloch's (1951) claim that gambling leisure activities are a product of social class. Gambling lifestyles are stratified across social class lines, with all lifestyles likely to be from an intermediate class and Sports and Omnivore lifestyles more likely to be from a salariat class. The evidence suggests leisure gamblers participating in multiple gambling activities have higher levels of cultural capital and be drawn from the salariat and intermediate classes. Reith and Dobbie (2011, p. 490) have drawn a similar conclusion, recording gambling as 'imbued' with cultural capital.

In much empirical work on the determinants of leisure consumption, we often strip the individual out of contexts in which they live their daily lives. This is improbable, and we believe every social or economic activity is made within the constraints and opportunities of social structure and localised neighbourhood effects. To that end, RQ3 sought to explore how gambling behaviour was impacted by resources embedded in networks, amounting to social capital. The evidence identified that gambling is inherently social, in line with previous works (Fang & Mowen, 2009; Hope & Havir, 2002; Neighbors & Larimer, 2004; Neighbors et al., 2002). Shinaprayoon et al. (2017) identify socialisation's significance as a motivating factor in problem gamblers. Additionally, the evidence above suggests that leisure gamblers hold socialisation of equal importance. If socialisation is a principal factor for gambling participation, it must be embedded within social networks.

To gamble is to be social. It is this complexity that scholars of gambling and its impacts on society have failed to understand and truly explore. Gambling is a sociability embedded within

Table 7. The five leisure gambling typologies.

Class of Gambler	Definition
Inactive	Refrain from any gambling from the popular to the eclectic
Lottery	Lottery-centric gamblers are unlikely to participate in any other form of gambling.
Omnivore	Individuals who consume multiple (most) gambling activities akin to Erickson's (1996) omnivore distinction. This group are likely consumers of many gambling activities.
Sport	This group are active gamblers; they attach themselves and participate in traditional sport-type gambling events.
Entertainment	This class participates in gambling activities associated with entertainment, such as Bingo and Machines.

social networks. The findings suggest that each active gambling lifestyle typology is much more likely to socialise more generally with family and friends, relating to the lifestyle consumption community (LCC) identified by Gordon et al. (2015) within problem gamblers. Furthermore, there is an extra caveat and more profound complexity in that there is a suitable difference in consumption habits between those who socialise with friends and those more likely to socialise with family. Indeed, the Sports Class are more engaged with friendship networks. It is evident that gambling is embedded within friend and family ties and does not occur as an individual or isolated act. Therefore, treating gambling as devoid of context is to mis-specify the interdependence gambling has on social structure.

However, this only partly uncovers the complexity of leisure gambling's sociability. To fully explore the social context of gambling and the role of social capital, we operationalised the framework by Nan Lin. We tested for the social composition of these social structures (RQ4). The evidence shows that gambling is embedded within social ties and influenced by more diverse networks or social capital (Lin, 2001). More diverse social networks in terms of social class provide more access to social capital and are linked to more gambling activities. The findings are, in fact, clearer than this. Having more heterogeneous family or friend networks – individuals drawn from different sections of society – the more likely it is to predict a gambling lifestyle. Social capital matters and a more diverse social network opens access to different gambling participation forms and the cultural capital at play (Bourdieu, 1984). Gambling is inherently social, but it is also contingent on the type of social structures that exist. Future studies must understand how gambling is embedded in these social networks. Indeed, far from understanding the dangers of compulsive gambling, we have uncovered that gambling behaviour is complex and is a product of social networks, social class and access to social capital that an individual has.

Conclusions

Gambling represents a leisure pastime. To gamble is to be part of society. The study of gambling has increasingly become the focus of academic and practitioner studies from the health community. Nevertheless, as we have uncovered, gambling is a form of leisure; it follows similar trajectories as other fields of leisure in terms of its latent construct and social stratification. To that end, this is a call to leisure scholars to reclaim gambling as a leisure pursuit and undertake a social scientific approach using our discipline's tools and theoretical frameworks. We can complement the vital work happening in the health sciences around gambling. Furthermore, leisure sociology can add significantly to understanding how gambling behaviour is constrained and facilitated by the context in that individuals find themselves. Gambling does not happen in a social vacuum devoid of structure; it is embedded in ever-evolving social networks.

Limitations

As with any research, limitations exist. The main limitation within this work is the 2007–08 TPS dataset which may not accurately reflect current gambling participation in the UK. Other gambling-specific datasets exist, like the British Gambling Prevalence Survey (BGPS), which ran in 1999, 2007 and 2010. The 2010 BGPS demonstrated higher gambling participation than the TPS 2007–08 data, which may reflect a rapidly changing gambling participation or the BGPS specifically focussed on gambling. In contrast, the TPS focuses on a broad range of leisure activities. However, the TPS is the only dataset offering gambling-related consumption and social network variables, thus the only dataset allowing us to explore our research questions. A further limitation, and where future research should focus, is incorporating the online gambling activities prevalent in current society, especially newer areas like esports and other virtual spaces.

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Data statement

All data is publicly available on UKRI Data Service <https://beta.ukdataservice.ac.uk/datacatalogue/series/series?id=2000052>

References

- Akaike, H. (1973). Maximum likelihood identification of Gaussian autoregressive moving average models. *Biometrika*, 60(2), 255–265. <https://doi.org/10.1093/biomet/60.2.255>
- Bennett, T., Savage, M., Silva, E. B., Warde, A., Gayo-Cal, M., & Wright, D. (2008). *Culture, Class, Distinction* (1st ed.). Routledge. <https://doi.org/10.4324/9780203930571>
- Binde, P. (2005a). Gambling across cultures: Mapping worldwide occurrence and learning from ethnographic comparison. *International Gambling Studies*, 5(1), 1–27. <https://doi.org/10.1080/14459790500097913>
- Binde, P. (2005b). Gambling, exchange systems, and moralities. *Journal of Gambling Studies*, 21(4), 445–479. <https://doi.org/10.1007/s10899-005-5558-2>
- Binde, P. (2013). Why people gamble: A model with five motivational dimensions. *International Gambling Studies*, 13(1), 81–97. <https://doi.org/10.1080/14459795.2012.712150>
- Bitanirhirwe, B. K., & Ssewanyana, D. (2021). Gambling patterns and problem gambling among youth in Sub-Saharan Africa: A systematic review. *Journal of Gambling Studies*, 37(3), 723–745. <https://doi.org/10.1007/s10899-021-10001-w>
- Bloch, H. (1951). The sociology of gambling. *The American Journal of Sociology*, 57(3), 215–221. <https://doi.org/10.1086/220938>
- Bourdieu, P. (1984). *Distinction*. Routledge.
- Bozdogan, H. (1987). Model selection and Akaike's information criterion (AIC): The general theory and its analytical extensions. *Psychometrika*, 52(3), 345–370. <https://doi.org/10.1007/BF02294361>
- Bray, B. C., Lanza, S. T., & Tan, X. (2015). Eliminating bias in classify-analyse approaches for latent class analysis. *Structural Equation Modeling: A Multidisciplinary Journal*, 22(1), 1–11. <https://doi.org/10.1080/10705511.2014.935265>
- Casey, E. (2008). Working class women, gambling and the dream of happiness. *Feminist Review*, 89(1), 122–137. <https://doi.org/10.1057/fr.2008.2>

- Chamberlain, S. R., Stochl, J., Redden, S. A., Odlaug, B. L., & Grant, J. E. (2017). Latent class analysis of gambling subtypes and impulsive/compulsive associations: Time to rethink diagnostic boundaries for gambling disorder? *Addictive Behaviors*, 72, 79–85. <https://doi.org/10.1016/j.addbeh.2017.03.020>
- Cotte, J., & Latour, K. A. (2009). Blackjack in the kitchen: Understanding online versus casino gambling. *The Journal of Consumer Research*, 35(5), 742–758. <https://doi.org/10.1086/592945>
- Crossley, N. (2010). *Towards Relational Sociology*. 1st. Routledge. <https://doi.org/10.4324/9780203887066>.
- De Grove, F. (2014). Youth, friendship, and gaming: A network perspective, youth, friendship, and gaming: A network perspective. *Cyberpsychology, Behavior and Social Networking*, 17(9), 603–608. <https://doi.org/10.1089/cyber.2014.0088>
- De Luigi, N., Gibertoni, D., Randon, E., & Scorcu, A. E. (2018). Patterns of gambling activities and gambling problems among Italian high school students: Results from a latent class analysis. *Journal of Gambling Studies*, 34(2), 339–359. <https://doi.org/10.1007/s10899-017-9694-2>
- Erickson, B. H. (1996). Culture, class, and connections. *American Journal of Sociology*, 102(1), 217–251. <https://doi.org/10.1086/230912>
- Fang, X., & Mowen, J. C. (2009). Examining the trait & functional motive antecedents of four gambling activities: Slot machines, skilled card games, sports betting & promotional games. *Journal of Consumer Marketing*, 26(2), 281–286. <https://doi.org/10.1108/07363760910940483>
- Goodman, L. A. (2007). 1. On the assignment of individuals to latent classes. *Sociological Methodology*, 37(1), 1–22. <https://doi.org/10.1111/j.1467-9531.2007.00184.x>
- Gordon, R., Gurrieri, L., & Chapman, M. (2015). Broadening an understanding of Problem Gambling: The lifestyle consumption community of sports betting. *Journal of Business Research*, 68(10), 2164–2172. <https://doi.org/10.1016/j.jbusres.2015.03.016>
- Gordon, R., & Reith, G. (2019). Gambling as social practice: A complementary approach for reducing harm? *Harm Reduction Journal*, 16(1), 64. <https://doi.org/10.1186/s12954-019-0342-2>
- Granovetter, M. (1973). The strength of weak ties. *The American Journal of Sociology*, 78(6), 1360–1380. <https://doi.org/10.1086/225469>
- Granovetter, M. (1982). The strength of weak ties: A network theory revisited. In P. Marsden & N. Lin (Eds.), *Social structure and network analysis* (pp. 105–129). Sage Publications.
- Gupta, R., & Derevensky, J. L. (2000). Adolescents with gambling problems: From research to treatment. *Journal of Gambling Studies*, 16(2/3), 315–342. <https://doi.org/10.1023/A:1009493200768>
- Hombas, V. C., & Baloglou, C. P. (2005). Gambling in Greek antiquity. *Chance*, 18(2), 49–50. <https://doi.org/10.1080/09332480.2005.10722721>
- Hope, J., & Havir, L. (2002). You bet they're having fun!: Older Americans and casino gambling. *Journal of Aging Studies*, 16(2), 177–197. [https://doi.org/10.1016/S0890-4065\(02\)00043-9](https://doi.org/10.1016/S0890-4065(02)00043-9)
- Johansson, A., Grant, J. E., Kim, S. W., Odlaug, B. L., & Gøtestam, K. G. (2009). Risk factors for problematic gambling: A critical literature review. *Journal of Gambling Studies*, 25(1), 67–92. <https://doi.org/10.1007/s10899-008-9088-6>
- Kane, D. (2004). A network approach to the puzzle of women's cultural participation. *Poetics*, 32(2), 105–127. <https://doi.org/10.1016/j.poetic.2004.02.003>
- Kim, K., & Altmann, J. (2017). Effect of Homophily on network formation. *Communications in Nonlinear Science & Numerical Simulation*, 44, 482–494. <https://doi.org/10.1016/j.cnsns.2016.08.011>
- Kwon, S. -W., & Adler, P. S. (2014). Social capital: Maturation of a field of research. *Academy of Management Review*, 39(4), 412–422. <https://doi.org/10.5465/amr.2014.0210>
- Lamont, M., & Hing, N. (2020). Sports betting motivations among young men: An adaptive theory analysis. *Leisure Sciences*, 42(2), 185–204. <https://doi.org/10.1080/01490400.2018.1483852>
- Lanza, S. T., Collins, L. M., Lemmon, D. R., & Schafer, J. L. (2007). PROC LCA: A SAS procedure for latent class analysis. *Structural Equation Modeling: A Multidisciplinary Journal*, 14(4), 671–694. <https://doi.org/10.1080/10705510701575602>
- Lazarsfeld, P. F., & Merton, R. K. (1954). Friendship as a social process: A substantive and methodological analysis. In M Berger (Ed.), *Freedom and control in modern society* (pp. 18–66). New York: Van Nostrand.
- Lin, N. (1999). Social networks and status attainment. *Annual Review of Sociology*, 25(1), 467–487. <https://doi.org/10.1146/annurev.soc.25.1.467>
- Linzer, D. A., & Lewis, J. (2011). polCA an R package for polytomous variable latent class analysis. *Journal of Statistical Software*, 42(10), 1–29. <https://doi.org/10.18637/jss.v042.i10>
- Lizardo, O. (2006). How cultural tastes shape personal networks. *American Sociological Review*, 71(5), 778–807. <https://doi.org/10.1177/000312240607100504>
- Mark, N. (1998). *Culture and competition: A critical test of homophily and distinction explanations for cultural niches*. The University of Arizona.

- Mazar, A., Williams, R. J., Stanek, E. J., Zorn, M., & Volberg, R. A. (2018). The importance of friends and family to recreational gambling, at-risk gambling, and problem gambling. *BMC Public Health*, 18(1), 1080. <https://doi.org/10.1186/s12889-018-5988-2>
- McManus, P., & Graham, R. (2014). Horse racing and gambling: Comparing attitudes and preferences of racetrack patrons and residents of Sydney, Australia. *Leisure Studies*, 33(4), 400–417. <https://doi.org/10.1080/02614367.2012.748088>
- McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). Birds of a feather: Homophily in social networks. *Annual Review of Sociology*, 27(1), 415–444. <https://doi.org/10.1146/annurev.soc.27.1.415>
- Meisel, M. K., Clifton, A. D., MacKillop, J., Miller, J. D., Campbell, W. K., & Goodie, A. S. (2012). Ego-centric social network analysis of pathological gambling. *Addiction*, 108(3), 584–591. <https://doi.org/10.1111/add.12014>
- Millward, P., Widdop, P., & Halpin, M. (2017). A ‘Different Class’? Homophily and Heterophily in the social class networks of Britpop. *Cultural Sociology*, 11(3), 318–336. <https://doi.org/10.1177/1749975517712045>
- Moody, A. (2013). *Sports Betting Basics*. CreateSpace Independent Publications.
- Nagin, D. (2005). *Group-based modeling of development*. Harvard University Press.
- Neal, M. (2005). ‘I lose, but that’s not the point’: Situated Economic and Social Rationalities in Horserace Gambling. *Leisure Studies*, 24(3), 291–310. <https://doi.org/10.1080/02614360500116381>
- Neighbors, C., & Larimer, M. E. (2004). Self-determination and problem gambling among college students. *Journal of Social & Clinical Psychology*, 23(4), 565–583. <https://doi.org/10.1521/jscp.23.4.565.40310>
- Neighbors, C., Lostutter, T. W., Cronce, J. M., & Larimer, M. E. (2002). Exploring college student gambling motivation. *Journal of Gambling Studies*, 18(4), 361–370. <https://doi.org/10.1023/A:1021065116500>
- Peterson, R. A., & Kern, R. M. (1996). Changing highbrow taste: From Snob to Omnivore. *American Sociological Review*, 61(5), 900–907. <https://doi.org/10.2307/2096460>
- R Core Team. (2020). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. <https://www.R-project.org/>
- Reith, G., & Dobbie, F. (2011). Beginning gambling: The role of social networks and environment. *Addiction Research & Theory*, 19(6), 483–493. <https://doi.org/10.3109/16066359.2011.558955>
- Rogers, E. M., & Bhowmik, D. K. (1970). Homophily-Heterophily: Relational concepts for communication research. *Public Opinion Quarterly*, 34(4), 523–538. <https://doi.org/10.1086/267838>
- Saunders, D. M., & Turner, D. E. (1987). Gambling and leisure: The case of racing. *Leisure Studies*, 6(3), 281–299. <https://doi.org/10.1080/02614368700390221>
- Schwarz, G. (1978). Estimating the dimension of a model. *The Annals of Statistics*, 461–464. <https://www.jstor.org/stable/2958889>
- Sclove, S. L. (1987). Application of model-selection criteria to some problems in multivariate analysis. *Psychometrika*, 52, 333–343. <https://doi.org/10.1007/BF02294360>
- Shinaprayoon, T., Carter, N. T., & Goodie, A. S. (2017). The Modified Gambling Motivation Scale: Confirmatory Factor Analysis and Links With Problem Gambling. *Journal of Gambling Issues*, (37). <https://doi.org/10.4309/jgi.2018.37.5>
- Shinaprayoon, T., Carter, N. T., & Goodie, A. S. (2017). The Modified Gambling Motivation Scale: Confirmatory Factor Analysis and Links With Problem Gambling. *Journal of Gambling Issues*, (37). <http://dx.doi.org/10.4309/jgi.2018.37.5>
- Studer, J., Baggio, S., Mohler-Kuo, M., Simon, O., Daeppen, J. B., & Gmel, G. (2016). Latent class analysis of gambling activities in a sample of young Swiss men: Association with gambling problems, substance use outcomes, personality traits and coping strategies. *Journal of Gambling Studies*, 32(2), 421–440. <https://doi.org/10.1007/s10899-015-9547-9>
- Venables, W. N., & Ripley, B. D. (2002). *Modern Applied Statistics with S* (Fourth ed.). Springer.
- Verhaeghe, P. P., & Tampubolon, G. (2012). Individual social capital, neighbourhood deprivation, and self-rated health in England. *Social Science & Medicine*, 75(2), 349–357. <https://doi.org/10.1016/j.socscimed.2012.02.057>
- Volberg, R. A., & Banks, S. M. (2002). A new approach to understanding gambling and problem gambling in the general population. In Marotta, JJ, Cornelius, JA, & Eadington, WR (Eds.), *The Downside: Problem and pathological gambling* (pp. 309–323). Institute for the Study of Gambling and Commercial Gaming, University of Nevada.
- Welte, J. W., Wieczorek, W. F., Barnes, G. M., & Tidwell, M. C. O. (2006). Multiple risk factors for frequent and problem gambling: Individual, social, and ecological. *Journal of Applied Social Psychology*, 36(6), 1548–1568. <https://doi.org/10.1111/j.0021-9029.2006.00071.x>
- Widdop, P., Cutts, D., & Jarvie, G. (2016). Omnivorousness in Sport: The importance of social capital and networks. *International Review for the Sociology of Sport*, 51(5), 596–616. <https://doi.org/10.1177/1012690214541101>
- Zhang, C., Lu, T., Chen, S., & Zhang, C. (2017). Integrating ego, homophily and structural factors to measure user influence in online community. *Ieee Transactions on Professional Communication*, 60(3), 292–305. <https://doi.org/10.1109/TPC.2017.2703038>