

Abstract

There has been for some time a significant and growing body of research around the relationship between sport and social capital. Similarly within sociology there has been a corpus of work that has acknowledged the emergence of the omnivore-univore relationship. Surprisingly relatively few studies examining sport and social capital have taken the omnivore –univore framework as a basis for understanding the relationship between sport and social capital. This gap in the sociology of sport literature and knowledge is rectified by this study that takes not Putnam, Coleman or Bourdieu but Lin's social network approach to social capital. The implications of this article are that researchers investigating sport and social capital need to understand more about how social networks and places for sport work to create social capital and in particular the changing dynamics of social class. The results indicate that social networks both facilitate and constrain sports participation, whilst family and friendship networks are central in active lifestyles, those less active have limited networks.

Key words

Social capital has been conceptualised and operationalized in a number of ways (Bourdieu, 1984; Coleman, 1988; Putnam, 2000; Nan Lin, 2001). There are many reasons why social capital has attracted so much attention over the past thirty years or so: the assumption that civil society and democracy depend upon it; that some of the important features that contribute to social life such as networks, norms and trust have been diminishing; that civic engagement, volunteering, and community networks, public service have all been under threat and that the means or the resources for developing shared human objectives and capabilities have been challenged as a result of changing individual and societal priorities.

As scholarly interest in the concept of social capital has flourished, the relationship between sport and social capital has gained greater prominence, primarily through the seminal contributions of Jarvie (2003), Delaney and Keaney (2005), Coalter (2007), Nicholson and Hoye (2008), and more recently, Widdop and Cutts (2012a) and Nichols, Tacon and Muir (2013). This body of work has at its core some or all of the following themes: the extent to which sport contributes to the bridging and/or bonding aspects of social capital; the relationship between sports participation and social capital; the role of sport in fostering different aspects of communitarianism; and the role of sport in the development of not just human capabilities but community life as suggested by a former UN Secretary General for Europe who asserted that “The hidden face of sport is also the tens of thousands of enthusiasts who find in their football, rowing, athletics and rock climbing clubs a place for meeting and exchange but above all the training ground for community life” (Jarvie and Thornton, 2012: 255).

Yet, despite the saliency of sport in the scholarly work of Bourdieu (1984) and calls by cultural sociologist Richard Peterson (2005) to examine omnivore-univore habits across the cultural spectrum, including sport, such studies investigating these relationships with sport remain rare. Similarly, little attention has been paid to how resources embedded in social networks – as measured by an individual’s position in the social structure, diversity and homophily of an individual’s network and the strength of ties in the network - influence sport participation.

It is precisely these gaps in the sport literature which this article seeks to fill. More specifically, the article is premised upon testing certain propositions in relation to sports participation and social capital. Firstly, an exploration of the key theories of participation enables us to examine whether sport participation patterns are segmented into different typologies or classes that closely match with the omnivore-univore thesis. Second we examine how social capital, through resources embedded in networks, is a vital mechanism within these theories of participation. Our findings provide a first and original insight into how sport participation is structured in England and details how salient larger diverse networks and the strength of these ties account for omnivorous as opposed to other behaviours.

While our specific research questions associated with the evidence base in this article are outlined later the key questions which this article addresses are:

- How is sport participation structured in England - does it adhere to the omnivore –univore framework?
- How does this framework contribute to the existing body of work on sport and social capital?
- How can this be examined using a quantitative analysis of sports participation data from one country?

The Omnivore-Univore Framework

To put this into context we must first discuss the omnivore thesis, as this is the position from which network effects will be explored. Up until the early 1990s, the path-breaking work of Pierre Bourdieu's 'Distinction' represented the most comprehensive theoretical understanding and explanation of the apparent interrelationship between cultural and social hierarchies, through cultural capital (Bourdieu, 1984). The existence of a homology in cultural stratification, that people belonging to the dominant classes had more levels of cultural capital, affirmed through their higher social status through the consuming of highbrow culture while those with lower social status preferred and consumed lowbrow culture, became the orthodoxy for twenty years or more. However, by the last decade of the twentieth century, scholars began to question whether Bourdieu's theory still reflected contemporary social reality (Lamont and Lareau, 1988; Van Eijck, 1999; Stichele and Laermans, 2006). In a number of important articles, Peterson and his colleagues reformulated the relationship between status hierarchy and cultural taste (Peterson, 1992; Peterson and Kern, 1996; Peterson and Simkus, 1992). Put simply, high status groups had a broader cultural repertoire, appreciating more middlebrow and lowbrow activities than the orthodoxy suggested. These were labelled 'omnivores'. Whereas the lower status groups were restricted in their consuming patterns to only the mainstream or popular culture, and were, therefore, coined 'univores' (Peterson, 2005; Peterson and Kern, 1996; Peterson and Simkus, 1992). Following this ground-breaking work, numerous scholars have sought to classify cultural preferences in a broadly similar way, with many supportive, although not exclusively so (Bryson, 1996; Van Eijck, 1999; 2001; Sintas and Alvarez, 2002; Van Rees et al, 1999; Chan and Goldthorpe, 2005).

Most scholars in this field have observed the existence of an omnivore group and claim that greater socio-cultural heterogeneity reflects the rise in social mobility over recent decades (Peterson, 2005). Scholars also stress the growth of the mass media, advancement in online technology, the development of the leisure industry and easier access to higher education as other important drivers (Peterson, 2005; Stichele and Laermans, 2006; Widdop and Cutts, 2012a). Nonetheless, numerous empirical findings suggest that the omnivore group is relatively small in number and that its socio-

economic make-up does not purely reflect the relationship between economic class and patterns of participation (Sullivan and Katz-Gerro, 2007; Katz-Gerro, 2006). Generally, studies have found that higher education, higher income and higher occupational status are strongly associated with omnivorous cultural preferences (Van Eijck, 2001; Sintas and Alvarez, 2002). However, the effects of gender and age are contested. Whether gender is strongly associated with omnivorism depends upon the domain of activity selected for the analysis, as shown by the differentiated gender effects found in a number of studies (Van Eijck, 2001; Sintas and Alvarez, 2002, Warde and Gayo-Cal, 2009). Similarly, age effects have been contested, with some scholars suggesting that younger age cohorts are more inclined to be omnivores (Widdop and Cutts, 2012; Stichele and Laermans, 2006; Van Eijck, 2000), whilst others disagree (Warde et al, 2007; Warde and Gayo-Cal, 2009; Van Eijck et al, 2002). But apart from the odd study (Widdop and Cutts, 2012a), the existence of omnivores and other participation patterns in the sporting field have been under-researched. Moreover, if they resemble other cultural fields, what determines their existence remains a source of considerable debate.

The omnivorousness literature now spans much of Europe, Australia and North America, and even some countries in South America (Alderson et al, 2007; Torche, 2007; Van Rees et al, 1999; Van Eijck, 2000; 2001). These studies have established that omnivorousness is related to high status (Chan and Goldthorpe, 2006; 2007a; 2007b; 2007c), class and education (Peterson and Simkus, 1992; Peterson and Kern, 1996; Sintas and Alvarez, 2002; 2004; Chan and Goldthorpe, 2007a; Tampubolon, 2008; Bryson, 1996; Erikson, 1996; Van Eijck, 1999), gender and age (Erikson, 1996; Van Eijck, 2001; Sintas and Alvarez, 2002, Warde and Gayo-Cal, 2009; Widdop and Cutts, 2012a; Stichele and Laermans, 2005; van Eijck, 2000), and place (Widdop and Cutts; 2012b). One area that is under-researched is the relationship between participation, networks and social capital in the rise of omnivorism. Both Erikson (1996) and Van Eijck (1999) claim that omnivores benefit from a broader and more diverse social network where they can display knowledge gained from interaction with individuals in different social circles which reinforces social approval within these circles. As Erikson (1996) claims, 'the most powerful teacher of cultural variety is contact with people in many different locations'. Omnivores, therefore, benefit from resources embedded in networks as a basis for forging social capital. But such claims have yet to be discussed or tested within the sport and social capital literature.

Sport Participation, Social Capital and Social Networks

As we highlighted earlier, since the late 1980s the development of social capital has been viewed as a way of renewing democracy. In this sense it is referred to as the network of social groups and relationships that fosters co-operative working and community well-being. We suggested two reasons why social capital attracted so much attention (Jarvie, 2003, 2006; Jarvie and Thornton, 2012). On the

one hand civil society and communities depend upon it (Auld, 2008; Jarvie, 2008; Jowell, 2005). On the other hand democracy depends upon social capital. This is true in one very obvious sense, that democracy depends upon everyone trusting that everyone else will operate the system constructively. When that trust breaks down – for example, as a reaction to certain screening practices aimed at the control of drugs in athletes or the failure to deliver sustainable sporting and economic benefits for deprived inner-city urban ghettos, or the adequate funding arrangements for sport in universities or local authorities – the result is cynicism about democracy in general. But the systematic critique of the concept or the potential role of social capital as a basis for understanding social networks and much more remains profound.

The reviews of existing UK evidence on the relationship between sport and social capital are to some extent best represented by Delaney and Keaney's 2005 review of the British statistical evidence on sport and social capital (Delaney and Keaney, 2005; Halpern, 2003). The former compare the level of social capital and sporting participation in Britain with the rest of the EU and examine the links between different types of sporting participation and individual measures of social capital. While it is ill-advised to make causal inferences from this type of analysis, the findings do provide valuable benchmarking information as a background to more experimental studies. The 2005 results demonstrated substantial correlations between measures of social capital and measures of sporting participation, both at the national level and, within Britain, at the individual level. Further analysis, controlling for several different types of individual characteristics, yields a more complex picture, with sports club membership positively affecting well-being and sociability but having little effect on political participation and personal trust.

The types of social capital associated with sport are varied and yet the exact mix of social capital and the exact outcomes remain open to question (Coalter, 2010; 2013). At an individual level sport may provide a basis for an individual to form a friendship base, provide goals and foster well being. Sport may also absorb pro-social motivations and utilise the talents of diverse individuals. At a local-community level sport may provide a basis for the building of local networks. Through interacting with children's sports, parents' networks may form in such a way as to have potentially beneficial effects. Sport may provide a basis for bringing different sections of communities together. At a national level sport may provide a basis for common shared norms and conversational points as well as providing a basis for collective memory. It can act to transmit pro-social values such as fairness and rule following. Sport may also act as a vehicle for citizens to engage with other countries (Cha, 2009; Murray, 2013; Murray and Pigman, 2013).

Yet the relationship between sport participation and the development of social capital is not straightforward. Delaney and Keaney (2005) concluded that British people are more likely than the

average European to belong to a sports club and participate in a sport and are about as likely as the average European to volunteer in sports, but there is still a long way to go before reaching Scandinavian levels of sports participation. Sport is the most popular type of group activity in the Britain, and sports organisations do better than most other types of organisations in building and sustaining friendships and networks. However the most popular activities are ones that are often carried out alone and so are less likely to generate certain types of social capital.

A diverse number of positions are adopted within the existing research literature that examines the relationship between sport and social capital. The premise behind the notion of social capital is rather simple and straightforward in that it is premised upon the notion of investment in social relations with expected returns. The sport and social capital literature tends to draw upon three main theories of social capital as reflected in the work of Bourdieu (1980, 1986, 1990) Coleman (1988, 1990) and Putnam (1983, 1995a, 1995b, 2000). While acknowledging the contribution that social capital has made to forms of social intervention, development and public policy the term itself has recently been brought into question. Renard (2006) has highlighted in relation to international aid efforts that there are potential cracks in the new aid paradigm of social capital. The scrutiny is now very much upon the complexity of social capital, forms of social capital, the extent to which different forms of bridging or bonding or both work, the different contexts and the differential outcomes which inform or realize how, why and if social capital works. Perhaps surprisingly the sport and social capital literature has said less about the contribution made by Lin (1995; 1999; 2001) and social network theory. This tends to explain social capital in terms of access to the use of resources that are embedded in social networks.

Social Networks and Sports Participation

Although limited, there have been studies that have shown that participation benefits from a broader and more diverse social network. Here individuals can display knowledge gained from interaction with others in different social circles which in turn reinforces social approval within these circles (Lizardo, 2006; Kane, 2004; Warde and Tampubolon, 2008; Relish, 1997; and Erickson, 1996). These studies all observe that the network structure and an individual's position within that structure have a key impact upon the resources available to them for participation behaviour. Put simply, it is somewhat of a mediating factor in their construction and socialisation of cultural preferences and participation patterns. But do the two concepts of the network structure, the diversity of network and type of ties, impact upon sports participation?

Diversity in the Network

Network homophily and heterophily are important concepts in the network structure. Homophily works on the premise that people like people who are similar to themselves; birds of a feather flock together (Everett et al. 2013). Therefore a homophilous network consists of individuals who are similar in characteristics, such as social class, age etc. By contrast, network heterophily is indicative of a socially diverse mix of individuals in a network. Naturally these two network concepts impact upon sport participation, but both concepts have been used to explain behaviour. For Mark (1998) examining musical preference patterns, preferences are transmitted through homophilous network ties; similar people interact with each other and develop similar musical tastes. However, Erickson's (1996) study of cultural preferences in the workplace, noted that people with varied connections (heterophily) know more about different types of culture and sport, and, as a consequence, developed omnivorous tastes that allow them to respond in different social settings. For Erickson (1996) the most widely useful cultural resource was cultural variety and this is closely linked to network variety. The greater the diversity of the network, the greater the exposure is to different forms of culture, for which the individual must respond, stimulating omnivorous behaviour.

For Erickson (1996) personal networks are a major source of cultural resources and a more powerful source than class itself. High status people will certainly have a greater level of cultural capital, but this reflects not only their individual class position, but the extent to which they are embedded in diverse class based networks. Furthermore, Kane (2004) notes that omnivorous behaviours and diverse 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 participation and diverse networks are associated with high status. To that end one would expect to find that analogous to omnivorous behaviour, that a low status group would be characterised with low participation rates and restricted networks.

Types of Ties

Whilst diverse networks might be the key to unlocking the growing omnivorous patterns found in different cultural fields across Western Europe and American, who is in this network, might also be crucial. In this paper, sport participation is seen as a social act. An individual may consume or play sport on their own but inevitably they interact, communicate and consume physical forms of sport with family, friends and acquaintances. Therefore, as well as diverse networks, who you share sports with socially will be important; the types of ties in your social networks will mediate participation behaviours. For example sharing time with a diverse friendship network might be very different to having a diverse family network.

Granvetter's (1973) seminal strength of weak ties theory noted that new information into a network was more likely to occur in more heterogeneous networks, where weak ties are more preferable to strong binding ties. Whilst he was looking at the employment market the same rationale can be applied to sport participation. The network structure of weak ties allows individuals to tap into a greater variety of sport genres, and act as conduits for these sport sources otherwise removed from the individual (Kane, 2004; Granvetter, 1973). Therefore, under this framework, individuals with omnivorous behaviour are more likely to have looser less dense networks made up of more bridging types of contacts where new information about sport is more readily available. As a consequence, we would expect that omnivorous groups would be more reliant on diverse friendship and acquaintances networks, measured against less physically active groups who have more bonding ties characteristic of family ties.

Thus Nan Lin's (2001; 2009) approach to social capital as a network resources approach stresses how resources embedded in social networks are the crucial element of social capital. In the Nan Lin tradition (2001; 2009), emphasis is placed on an individual's position in the social structure, diversity and homophily of an individual's network and strength of ties in the said network. But is this the case in the sport? Is it more important for omnivores than other sport participation classes? Here we test several social capital perspectives in addition to Lin's (such as trust; social participation and belonging) to determine their importance on sport participation 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 omnivorous patterns in sport in England; (ii) whether omnivorous patterns are socially stratified (education and class), and influenced by other socio-demographic factors; (iii) assess the impact of cognitive/subjective social capital (shared norms, belonging and trust) on sport participation patterns; and (iv) examine the importance of family and friendship networks on participation in sport, specifically, whether omnivorous behaviours are more or less likely to be associated with larger diverse networks and the strength of these ties.

Empirical Research Questions

In this article, we set out to test several social capital perspectives to determine their importance on sport participation in England after controlling for other established individual level influences. One of the key innovations is to determine the extent to which omnivorous behaviours are more or less likely to be associated with larger diverse networks and strong ties. Thus within the more empirical part of this article we seek to address the following questions:

RQ1: To what extent are the lifestyle patterns found in the sport field distinctive? And do they concur with the framework laid out in the omnivore-univore thesis?

RQ2: What distinguishes sporting omnivore classes from other active and non-active classes?

RQ3: How important are social participation, trust and belonging on sporting lifestyle membership, after accounting for other established factors?

RQ4: Are certain sporting lifestyle groups such as omnivores more likely to have heterophily than homophilous networks?

RQ5: How important are different types of ties in a diverse network important when classifying participation in the sporting field?

Data and Methods

Data

The study uses Wave 3 of the Taking Part Survey (TPS) to examine the above mentioned research questions and the intersection between sports participation and social networks and social capital as formulated by Lin.

The TPS surveyed adults via face to face interviews, about their participation in sport and cultural activities, between July 2007 and June 2008. Households were drawn from the United Kingdom national postcode address file, and interviews were conducted with a randomly selected member of each household aged 16 or over. As part of the questionnaire design, questions on social capital and participation are only asked to a randomly taken sample of respondents. This sample consists of 12,991 respondents.

Sport Participation

To assess sport participation, respondents were asked a series of questions relating to their sport activities in the last 12 months (1 = Yes, 0 = No). To answer our research questions, a wide variety of sports that cross cut the perceived symbolic boundaries of sport are used in our modelling approach. A total of 25 sports from the data were used to represent eight sporting indicators: swimming (indoor and outdoor), health and fitness (keep fit and aerobics, health, fitness, gym or conditioning activities), cycling, football (5-a-side and 11-a-side), golf, water sports (rowing, yachting or dingy sailing, canoeing, windsurfing or boardsailing, water skiing and other water sport), racket sports (tennis, badminton and squash), and recreational sports (including orienteering, rambling, hill trekking or backpacking and climbing/mountaineering) (see Table 1). Some indicators are more attached to the masses (football 9%), while others are far more exclusive (racket sports 11%, water sports 4.3% and recreational sports 9.6%).

Table 1. Participation in Sport

	Percent
Swimming	35.8
Cycling	19.0
Health and fitness	20.1
Racket sports	11.1
Recreational sports	9.6
Football	9.0
Golf	8.9
Water sports	4.3

Individual Socio-Economic Characteristics

In the TPS, education is coded to the six official National Vocational Qualifications levels (England), ranging from degree level to no qualifications. It follows a near linear distribution so we treat it as a continuous variable. Following the National Statistics Socio-economic Classification, we distinguished between the salariat class (managerial and professional occupations), intermediate class (intermediate, lower supervisory and technical occupations, and small employers and own account workers), and working class ((semi-)routine occupations, long-term unemployed, and people who have never worked). Along with social class and educational attainment, other variables included gender (female dummy variable), age (continuous) and age squared to mediate the curved relationship of age (allows us to model the effect at differing ages, rather than assuming the effect is linear for all ages).

Social Capital Variables

We used a number of 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 (generally speaking, would you say that most people in your neighbourhoods can be trusted) into a 'distrust' category, including the answers 'you can't be too careful' and 'it depends', and a 'trust'-category. Social participation was measured by asking how often respondents meet up with friends (1), and with relatives outside the household (2). Response

categories were 'never', 'less often than once a month', 'once or twice a month', 'once or twice a week', and 'most days'. Participation with friends and family were dichotomised into low participation (Never or less often than once a month) and high participation (once or twice a month or more). We also controlled for an individual's sense of belonging to an area. Here we conceptualise belonging as a socially constructed, embedded process where individuals subjectively gauge the suitability of their locale in light of their social trajectory (Savage et al, 2005). In the sporting context, such an attachment may have an important bearing on their sporting participation patterns.

Social network resources were measured using the position generator, a measure of social capital developed by Nan Lin (Lin, 2001). This instrument asks people about their network members' occupational positions and considers these positions as good indicators of the network resources (Verhaeghe and Tampubolon, 2012). In this study, respondents were asked whether they know friends, relatives or acquaintances who have any of the jobs from a list of eleven occupations. All eleven occupations are salient in British society and range from factory worker to university/college lecturer (Verhaeghe and 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. This measure is related to the network size (Van der Gaag, 2005). Furthermore, this is split into three variables: volume of network resources that are friends; volume of network resources that are family; volume of network resources that are acquaintances. We split this variable into three as there may be different underlying processes at work which influence whether individuals invest in the different types of network ties (Verhaeghe and Tampubolon, 2012).

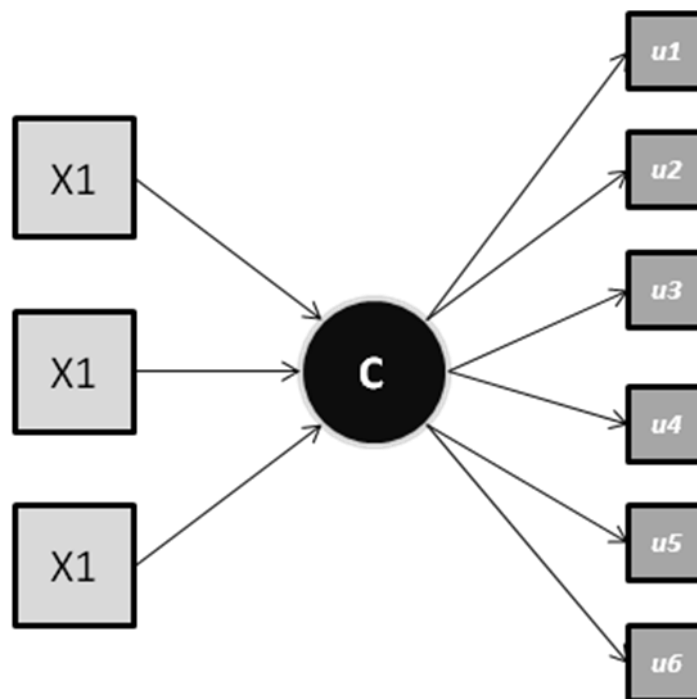
Analytical approach: Latent Class Modelling

Participation in one particular type of sport does not happen in a social vacuum, it is part of the wider cultural makeup of an individual. Rather than examine sport items as discrete components, individuals should be grouped on observed patterns of participation (Peterson & Kern, 1996; Chan & Goldthorpe, 2005; Sintas & Alvarez, 2004; Van Eijck, 1999). Here we assume that there are relatively well defined types of sporting participation who can be placed into lifestyle typologies based on their

engagement in different sports. This is executed through a latent class analysis (LCA) modelling approach.

The LCA identifies typology groups or classes whose sporting behaviour will be different depending on membership of these classes. Individuals form sporting patterns based on participating in sporting indicators “ $u_1 \dots u_n$ ” and can thus be assigned to different levels of a latent variable (class C in Figure 1). From this, it is possible to identify different types of sport participation groups. LCA usually assumes local independence and estimates two essential parameters, latent class probabilities (the probability of an individual being in a particular level or lifestyle group) and conditional probabilities. Conditional probabilities are akin to factor loadings and are the probabilities of an individual in class t of the latent variable C, being in a particular level of the observed variable (Magidson and Vermunt, 2004; Widdop and Cutts, 2012a). The LCA is traditionally termed the measurement part of the model.

Figure 1 Path diagram - latent class analysis and MIMIC model



In a latent class model, the standard chi squared measurement (L2) can be unreliable because of the number of sparse cells in the model. We therefore use alternative measures to determine the goodness of fit, including the Bayes Information Criterion (BIC), the Akaike Information Criterion (AIC), and the Consistent Akaike Information Criterion (CAIC). These measures are used because they weight both model fit and parsimony and are useful to compare models. The most widely used and statistically robust is the BIC where a model with a lower BIC value is preferred over a model with a higher BIC value (Asparouhov & Muthen, 2006; Widdop and Cutts, 2012a).

To introduce explanatory variables into the model we use a Multiple Indicator Multiple Cause (MIMIC) approach, which is presented in Figure 1. As mention earlier, the subscript 'u' defines a categorical variable of interest (i.e., football participation, swimming, etc.), the circle encapsulating the 'C' is an underlying latent class measure (can include 1, 2, 3 . . . n classes). Thus the indicator variables are seen as arising from the unobserved latent class measure and are subject to measurement error. This is the measurement part of the model or LCA. The X variables influencing the latent class measure are independent explanatory variables (i.e., social class, education). This second component adds structure to the model and allows investigation into the relationship between latent class groups and a set of theoretically informed explanatory variables. In its simplest form, a MIMIC model is a simultaneous method of latent class analysis and multinomial regression, or logistic regression when there are only two levels of the latent variable (two classes). We use the software Latent Gold for the models in this paper.

Results

Number of Sporting Classes

A LCA enables us to estimate the probabilities that an individual belongs to a certain class/typology given their participation frequency patterns in the eight sporting variables. The initial aim is to determine the appropriate number of participation groups (classes) that exist in the population. In other words, the most parsimonious model that provides the best fit to the observed data. Table 2

identifies the model fit statistics for a 1-5 class solution. From our data a four class solution is the best model. Each goodness to-fit measure, reached its optimal point at a four-class solution.

Table 2. Model Fit Statistics

	<i>BIC(LL)</i>	<i>AIC(LL)</i>	<i>CAIC(LL)</i>
1-Cluster	89673.612	89583.9478	89685.612
2-Cluster	83718.4433	83546.5871	83741.4433
3-Cluster	82763.1384	82509.09	82797.1384
4-Cluster	82559.4126	82223.1721	82604.4126
5-Cluster	82598.3689	82283.9362	82654.3689

Profile of Sport Clusters

As Widdop and Cutts (2012a) found using earlier data (Wave 1 of the TPS), there are well defined underlying sport participation groups that share similar response patterns given membership of a given class. These four classes also emulate those found in other cultural fields (Chan and Goldthorpe, 2006; 2007a; 2007b; 2007c; Stichele and Laermans, 2005; Sintas and Alvarez, 2002; 2004; Tampubolon, 2008), whereby there is a large inactive group, a popular class group often referred to as ‘univores’, and two omnivorous groups separated by attachment to high and popular culture (lowbrow omnivores and highbrow omnivores). Table 3 presents the estimated size of the latent class clusters and the estimated conditional probability of consuming each of the eight sport indicators given membership in a latent lifestyle cluster.

The lowest populated group (7%) is Latent Class 1, which we label the ‘highbrow omnivores’. They are highly distinguishable from the other classes for its extremely active participation and sheer insatiable appetite for all the sporting items. These ‘highbrow omnivores’ not only have a high probability of consuming all of the sporting items, of all the lifestyle groups, they are the most likely consumers of highbrow sports which include, water sports (28%), racket sports (46%),

and recreational sports (53%). Interestingly, they are unlikely consumers of association football, that is, in the Bourdieusian tradition, they engage in legitimate culture but distancing themselves (aesthetically) from more popularised activities (Bourdieu, 1978; Peterson, 2005).

Table 3. Latent Class Probabilities

	Latent Class 1	Latent Class 2	Latent Class 3	Latent Class 4
Relative Size	7%	10%	41%	42%
	Highbrow Omnivores	Lowbrow Omnivores	Fitness Class	Inactives
Swimming	0.81	0.44	0.55	0.05
Cycling	0.66	0.38	0.20	0.04
Health, fitness, gym activities	0.48	0.33	0.28	0.04
Football	0.12	0.71	0.01	0.00
Golf	0.25	0.25	0.07	0.03
Water sports	0.28	0.06	0.03	0.00
Racket sports	0.46	0.29	0.10	0.00
Recreational sports	0.53	0.10	0.09	0.01

Latent Class 2 comprises 10% of the survey population, and is noticeably an omnivorous group in the traditional sense (Peterson 1996; Bryson 1996), but with a caveat. Whilst this class group consume all types of sport measured here, they are light consumers of those sports traditionally deemed as status defining sports (highbrow), namely water sports (6%) and outdoor recreational sports (10%). Members of this group have a 71% probability of being consumers of association football, a popular sport in Britain often associated with the working classes (although this has changed since 1993 and the introduction of the Premier League and opening up the game to the middle classes). Therefore we label this group ‘lowbrow omnivores’, a group also found by Stichele and Laermans (2006).

The remaining two classes have more restricted participation patterns, but make up 83% of the survey population. Latent Class 3 is labelled ‘*Fitness Class*’. Whilst they have relatively low participation of team and highbrow sports, when they do participate, it is in those sports most associated with health and body fitness. Latent Class 4 are the ‘*Inactives*’, omnipresent in research of this nature, they are differentiated from the other classes through their disengagement with sport.

Sporting Lifestyles: What are the key drivers of membership?

What is the individual socio-economic profile of each sporting class or lifestyle previously identified? Are certain social capital variables more important for membership of some sporting classes than others? Here we examine the individual profile of the latent classes and what influences membership. Table 4 presents the conditional probabilities of membership for each sport cluster by education, class, age, gender, size of networks, trust, social participation, and belonging. The findings provide an insight into the socio-economic make-up of each sport cluster, and also illustrate that social capital and networks play a significant role in determining the latent class membership beyond just class and education.

As mentioned previously, a MIMIC model is essentially a multinomial regression with a dependent variable that is latent or unknown. Like all multinomial regression models, the dependent variable, in our case the four latent classes, requires a reference category, whereby other categories of the said variable are measured against. In the models shown below we use the ‘fitness class’ as the reference (see Table 4). The justification for this is twofold; first it is comparable in size to the ‘inactives’ class; second, it allows us to compare an actively engaged group against other engaged and non-engaged classes. As a consequence, the information derived is much more meaningful, as opposed to using ‘inactives’ as the base (which other studies have done).

Firstly, we examine the key socio-economic variables. When measured against the ‘fitness class’, ‘highbrow omnivores’ have a greater likelihood of being highly educated (0.833), and significantly more likely to be from the salariat classes (0.422). Clearly, education and class play a significant role in differentiating between these two sporting classes. This not the case for ‘lowbrow omnivores’: when compared against the ‘fitness lifestyle group’, class and education are not significant, suggesting that there is little difference in the socio-economic profile of these two sporting lifestyle groups. As expected, the non-participant class (the ‘inactives’) are less likely to be educated (-0.493), and tend to be drawn from the lower working classes. There is, however, some distinction by age and gender. Both the ‘lowbrow omnivores’ and the ‘inactives’ tend to be from the younger age

cohorts (-0.172 and -0.054 respectively), while there is evidence that gender is also a salient predictor of group memberships. The findings suggest that women are much more prevalent in the ‘fitness lifestyle group’ than any of the other sporting lifestyle classes identified.

Table 4 (Fitness Class as Ref)

	Highbrow Omnivores	Lowbrow Omnivores	Inactives
Education	0.833	-0.134	-0.493
lower middle	-0.121	-0.31	-0.801
Salariat Class	0.422	0.003	-1.24
AGE	0.023	-0.172	-0.054
AGESQ	-0.001	0.001	0.001
GENDER	-0.905	-4.043	-0.584
Volume of family networks	-0.002	0.091	-0.118
Volume of friends network	0.138	0.107	-0.178
Volume of Acquaintances	0.060	0.052	-0.119
Trust	0.673	0.266	-0.545
Belonging to an Area	0.092	0.431	0.086
Socialise with Relatives	-0.294	0.181	-0.294
Socialise with Friends	0.474	0.008	-0.689

Bold = Significant 95% level

Turning to the social capital variables, it is clear that neighbourhood trust is a key predictor of sport participation across groups. When compared against the ‘fitness class’, those individuals with higher levels of trust are significantly more likely to be members of either the ‘highbrow omnivore’ (0.673) or ‘lowbrow omnivore’ (0.266) groups. As expected, non-participants tend to exhibit lower levels of neighbourhood trust. By contrast, having a sense of belonging is integral to membership of the ‘lowbrow omnivore’ group (0.431) but it is not important for membership of the other sporting classes. The findings suggest that networks also play a role in distinguishing between groups. Even when controlling for socio-demographic characteristics both the ‘highbrow omnivores’ and ‘lowbrow omnivores’ are more likely to have a larger friendship network than the ‘fitness class’. The former are also less likely to socialise with family members. As expected, non-participants have less network ties, are significantly less likely to be trusting (-0.545), and less likely to report socialising with friends (-0.689) and family (-2.94), when measured against the ‘fitness class’.

Differentiating between Highbrow and Lowbrow Omnivores

But is there a significant difference in the structure between the two omnivore groups? By changing the reference group to ‘lowbrow omnivores’ and re-running the model we can determine how these groups are conceptually distinct. The findings are presented in Table 5.

Table 5 (lowbrow omnivores as Ref)

	Highbrow Omnivores
Education	0.967
intermediate class	0.189
Salariat Class	0.419
AGE	0.195
AGESQ	0.001
GENDER	3.138
Volume of family networks	-0.093
Volume of friends network	0.031
Volume of Acquaintances	0.008
Trust	0.407
Belonging to an Area	-0.337
Socialise with Relatives	-0.475
Socialise with Friends	0.466

Bold = Significant 95% level

Once more education and class are significantly different, ‘highbrow omnivores’ are drawn from salariat classes (0.419) and the highest educated (0.967) in society. ‘Highbrow omnivores’ are much more likely to be female, whilst age is not significantly different. However, the social capital variables do provide an interesting insight into the types of individuals who are members of the two omnivore groups. ‘Highbrow omnivores’ have significantly higher levels of trust (0.407), whilst ‘lowbrow omnivores’ are more inclined to report belonging to an area and socialising with kin. This finding suggests that both are reliant on networks but alternative mechanisms of social capital are in place. But there are no differences between the two groups in terms of networks by volume. Given the saliency of the friendship network for both omnivore groups (see Table 4), it is clear from these findings that this is not more important for membership of one group than the other. By contrast, ‘lowbrow omnivores’ are reliant on their social network of their local area, with a strong sense of

belonging to the area and socialising with family. 'Highbrow omnivores' portray a socially mobile group with reliance on less dense and looser networks (less belonging, less socialising with family).

Discussion and conclusion

Sport is complex and governments across Europe and elsewhere continue to relate sports participation to broader social concerns. A significant number of sport studies have also used social capital as a basis for framing arguments and policy about the social value of sport. Critics have put forward a number of arguments and concerns about value of social capital as a basis for framing and driving sporting interventions that testify to build a range of social benefits including trust. These have included a greater emphasis being placed upon the dark side of social capital as well as a continuing concern and call for evidence of how social capital works and in what ways and when. In view of this, this paper is timely in that it directly addresses cultural consumption as evidenced by sports participation patterns.

In terms of understanding social inequalities associated with patterns of sports participation, our findings suggest that it is important to both theoretically and empirically to continue to map patterns of sports participation on to the stratification order. There are not only distinct sporting lifestyle patterns, but the socio-economic profile of the lifestyle groups vary not only by class and education, but also age and gender.

The sport and social capital literature has largely ignored the omnivore-univore argument as a basis for advancing not only Lin's approach to social capital but moving the discussion of sport and social class from that of Bourdieu's notion of distinction to Lin's notion of network resources. Here not only were we able to further validate the existence of omnivorous patterns – the existence of two omnivore groups - in the sporting field, but it was possible to test the importance of networks along with other aspects of social capital, trust and belonging, on sporting lifestyle membership. Not only are the two omnivore groups distinguishable from each other on the basis of class and education, even controlling for these factors, trust, belonging and networks are key determinants of membership. For instance, 'highbrow omnivores' are far more socially mobile with far looser networks, less belonging and less socialising with family, while 'lowbrow omnivores' are considerably more reliant on their

social network of their locale, with a strong sense of belonging and attachment to place and significantly more likely to socialise with the family.

Our findings suggest that any critical politics concerning a contemporary discussion of any age of austerity might consider revisiting notions of social capital, social cohesion and social networks as part of a solution to what Klein and others have termed neoliberal disaster capitalism. The added advantage of a Lin's informed approach to both social capital and social network analysis lies in its ability to systematically map social relationships and in this study it is these social relationships and networks through patterns of sports participation that have enabled us to bring a more nuanced understanding back to the study of sport and social life.

References

Asparouhov T and Muthen B (2006) Robust chi square difference testing with mean and variance adjusted test statistics. *Mplus Web Notes*, No. 10.

Alderson AS, Junisbai A and Heacock I (2007) Social status and cultural consumption in the United States. *Poetics* (35):191–212.

Auld C (2008) Voluntary sports clubs: the potential for the development of social capital. In Nicholson M and Hoyer R (eds) *Sport and Social Capital*. London: Butterworth-Heinemann, pp. 143-164.

Australian Bureau of Statistics (2009) *Sport and Social Capital, Australia, 2006*. Canberra: Australian Government Printing Service.

Bennett, T, Savage M and Silva E et al (2009). *Culture, Class, 635 Distinction*. London: Routledge.

Bottenburg VM, Rijnen, B and Van Sterkenburg J (2005) Sports Participation in the European Union: Trends and Differences. Hertogenbosch – Nieuwegein: W.J.H. Mulier Institute- Arko Sports Media.

Bourdieu P (1980) Le Capital Social: Notes Provisoires. *Actes de la Recherche en Sciences Sociales* (3):2-3.

Bourdieu P (1984) *Distinction: A Social Critique of the Judgement of Taste*. Harvard University Press: Cambridge- MA.

Bourdieu P (1986) The forms of capital. In Richardson JG (eds) *Handbook of Theory and Research for the Sociology of Education*. Westport CT: Greenwood Press, pp. 241-258.

Bourdieu P (1990) *The Logic of Practice*. Cambridge: Polity.

Bourdieu P and Wacquant L (1992) *Réponses*. Collection libre examendu Seuil: Paris.

Bryson B (1996) Anything but heavy metal: symbolic exclusion and musical dislikes. *American Sociological Review* . 61 (3) :884–899.

Brooks O (2011) *International Comparisons of Public Engagement in Culture and Sport*. London:

DCMS.

Cha V (2009) *Beyond the Final Score: The Politics of Sport in Asia*. New York: Columbia University Press.

Chan W (2010) *Social Status and Cultural Consumption*. Cambridge: Cambridge University Press.

Chan TW and Goldthorpe JH (2005) The social stratification of theatre, dance and cinema attendance. *Cultural Trends*, 14 (2) :193–212.

Chan TW and Goldthorpe JH (2007) Social stratification and cultural consumption: music in England. *European Sociological Review*, Vol. 23(1):1–19.

Coalter F (2010). Sport for development: going beyond the boundary. *Sport in Society*. 13 (9): 1374-1392.

Coalter F (2013) There is loads of relationships here: developing a programme theory for sport for change programmes.' *International Review for the Sociology of Sport*. 48 (5): 594-612.

Coleman JS (1988) Social capital in the creation of human capital. *American Journal of Sociology* 9 (1) : S95-4S121.

Coleman JS (1990) *Foundations of Social Theory*. Cambridge-MA: Harvard University Press.

Cushman G. Veal A and Zuzanek J (2005) *Free Time and Leisure Participation: International Perspectives*: Sydney: CABI.

Delaney L and Kearney E (2005). *Sport and social capital in the United Kingdom: Statistical evidence from national and international survey data*. London: DCMS.

Donnelly P et al (2012) Sport participation in Canada: Evaluating measurements and testing determinants of increased participation. Paper presented to Centre for Sports Policy: University of Toronto. Canada.

Erickson BH (1996) Culture, class and connections? *American Journal of Sociology*. 102 (1): 217–251.

- Eurobarometer (2007) *European Cultural Values 64:3*: The European Commission: Brussels.
- Eurobarometer (2010) *European Cultural Values 72:3*: The European Commission.
- Field J (2008) *Social Capital*. London: Routledge.
- Granovetter MS (1973). The strength of weak ties. *American Journal of Sociology* 78 (4) :1360–80
- Gruneau R (2010) Trends in Community Sports Participation and Community Sports Organizations since the 1990s: Implications for West Vancouver. Occasional Paper: Centre for the Study of Sports Policy: University of Toronto. Canada.
- Jarvie G (2003) Communitarianism, sport and social capital. *International Review for the Sociology of Sport*, 38 (3) : 139-153.
- Jarvie G (2008). Narrowing the gap through sport, education and social capital? In Nicholson M and Hoye R (eds) *Sport and Social Capital*. London: Butterworth-Heinemann, pp 93-110.
- Jarvie G and Thornton J (2012) *Sport, Culture and Society: An Introduction*. London: Routledge.
- Jowell T (2005) Tackling the poverty of aspiration through rebuilding the public realm. *People Changing Politics*. London: Demos.
- Kane D (2004) A network approach to the puzzle of women's cultural participation. *Poetics* 32 (2) : 105-127.
- Katz-Gerro T (2006) Comparative evidence of inequality in cultural preferences: gender, class, and family status. *Sociological Spectrum*. 26 (3): 63–83.
- Lamont M and Lareau A (1988) Cultural capital: allusions, gaps and glissandos in recent theoretical developments. *Sociological Theory*. 6(2): 153-168.
- Lin N (1999) Building a network theory of social capital. *Connections*. 22(1): 28-51.
- Lin N (2001) *Social capital: a theory of structure and action*. London: Cambridge University Press.
- Lin N and Erickson, BH (2008) Theory, measurement, and the research enterprise on social capital. In

Lin N, and Erickson BH (eds) *Social capital. An International Research Programme*. Oxford: Oxford University Press, pp. 1-26.

Lizardo O (2006) How cultural tastes shape personal networks. *American Sociological Review*. 71(5): 778-807.

Lowell G, Higley J and Field J. (2012). *Elitism*. London: Routledge.

Magidson J and Vermunt JK (2004) Latent class models. In Kaplan, D. (ed), *The Sage Handbook of Quantitative Methodology for the Social Sciences*. Volume 10, Thousand Oaks, CA: Sage pp. 175–198.

Mark NP (1998) Birds of a feather sing together. *Social Forces* 77 (2) :453–85.

Murray S (2013) Sports diplomacy. *The Hague Journal of Diplomacy* (8): 191-102.

Murray S and Pigman, A (2013) Mapping the relationship between international sport and diplomacy. *Sport in Society* (published online 18 November- DOI:10.1080/17430437.2013.856616).

Nichols G Tacon R and Muir A (2013) Sports clubs' volunteers: bonding in or bridging out? *Sociology* 47 (2): 350-367.

Nicholson M and Hoye, R (eds). (2008a). *Sport and Social Capital*. London: Butterworth-Heinemann.

Nicholson M and Hoye R (2008b) Sport and social capital: an introduction. In Nicholson M. and Hoye R (eds) *Sport and Social Capital*. London: Butterworth-Heinemann. pp 1-18.

Nicholson M and Hoye R (2012) Life at the track: country social clubs and social capital. *International Review for the Sociology of Sport*. 47 (4) :461-474.

Numerato N and Bagliani S (2012) The dark side of social capital: an ethnography of sport governance. *International Review for the Sociology of Sport*. 47 (5): 594-611.

Okayasu I Kawahara Y and Nogawa H (2010) 'The relationship between community sport clubs and social capital in Japan: a comparative study between the comprehensive community sport clubs and the traditional community sports clubs. *International Review for the Sociology of Sport*. 45 (1) : 163-186.

Peachey J, Cohen, A and Borland, J et al (2013) Building social capital: examining the impact of street soccer USA on its volunteers. *International Review for the Sociology of Sport*. 48 (1) : 20-37.

Peterson RA (1992) Understanding audience segmentation: From elite and mass to omnivore and univore. *Poetics*. 21(4): 243–258.

Peterson RA (2005) Problems in comparative research: The example of omnivorousness. *Poetics*. 33(5–6): 257–282.

Peterson, R. A., & Simkus, A. (1992). How musical tastes mark occupational status groups. In M. Lamont & M. Fournier (Eds.), *Cultivating differences* (pp. 152–86). Chicago, IL: University of Chicago Press.

Peterson RA and Kern RM (1996) Changing highbrow taste: From snob to omnivore. *American Sociological Review*. 61(5): 900–909.

Peterson RA and Simkus A (1992) How musical tastes mark occupational status groups. In Lamont M and Fournier M (eds.), *Cultivating differences*. Chicago Illinois: University of Chicago Press. pp152-186.

Putnam R (1993) *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton NJ. Princeton University Press.

Putnam R (1995a) Bowling Alone, Revisited. *The Responsive Community*. Spring: 18-33.

Putnam R (1995b) Tuning in, tuning out: The strange disappearance of social capital in America. The 1995 Ithiel de Sola Pool Lecture. American Political Science Association. September.

Putnam R (2000). *Bowling Alone: The Collapse and Revival of the American Community*. New York: Simon and Shuster.

Relish M (1997) It's Not All Education: Network Measures as Sources of Cultural Competency. *Poetics*. 25 (2):121–39.

Rosso E (2011) Taking the next step': the role of social capital in the development of women's football players in South Australia. Flinders University: South Australia.

Rosso E McGrath R (2013) Beyond recreation: personal social networks and social capital in the transition of young players from recreational football to formal football clubs. *International Review for the Sociology of Sport*. 48 (4): 453-470.

Savage M and Gayo-Cal M (2011) Unravelling the omnivore: A field analysis of contemporary musical taste in the United Kingdom. *Poetics*. 39(5): 337-357.

Schuster, J M (2007) Participation studies and cross-national comparison: proliferation, prudence, and possibility. *Cultural Trends* 16 (2): 99 - 196.

Sintas JLand Alvarez EG (2002) Omnivores show up again: the segmentation of cultural consumers in spanish social space. *European Sociological Review*. 18(3): 353–368.

Sintas JL and Alvarez EG. (2004) Omnivore versus univore consumption and its symbolic properties: evidence from Spaniards' performing arts attendance. *Poetics*. 32 (6): 463–484.

Skille EA (2011). Sport for All in Scandinavia: sport policy and participation in Norway, Sweden and Denmark. *International Journal of Sport Policy and Politics*. 3 (3): 327-339.

Spaaij R and Westerbeek H (2010) Sport business and social capital: a contradiction in terms? *Sport in Society*. 13 (9): 1356-1373.

Spaaij R (2011) *Sport and Social Mobility: Crossing Boundaries*. London: Routledge.

Stichele AV and Laermans R (2006) Cultural articipation in Flanders: testing the cultural omnivore thesis with population data. *Poetics*. 34 (1) : 45-64.

Sullivan O and Katz-Gerro T (2007) The Omnivore thesis revisited: Voracious cultural consumers. *European Sociological Review*. 23 (2): 123-37

Tampubolon G (2008) Revisiting omnivores in America circa 1990s: The exclusiveness of omnivores? *Poetics*. 36 (3) :243-264.

Theeboom M and Schaillee H (2012) Social capital development among ethnic minorities in mixed and separate sports clubs'. *International Journal of Sports Policy and Politics*. 4 (1): 1-21.

Torche F (2007) Social status and cultural consumption: the case of reading in Chile. *Poetics* 35 (1) 70–92.

Van Rees, K Vermunt, J and Verboord M (1999) Cultural classifications under discussion: Latent class analysis of highbrow and lowbrow reading. *Poetics*. 26 (30 : 349–365

Van der Gaag MPJ (2005) Measurement of Individual Social Capital. Rijksuniversiteit: Groningen.

Van Eijck K (1999) Socialisation, education, and lifestyle: How social mobility increases the cultural heterogeneity of status groups. *Poetics* 26 (3):309-328.

Van Eijck, K (2000) Richard A. Peterson and the culture of consumption. *Poetics*. 28 (3): 207–224.

Van Eijck, K. (2001) Social differentiation in musical taste patterns. *Social Forces*. 79 (3): 1163–1185.

Van Eijck, K and Lievens J (2008) Cultural omnivorousness as a combination of highbrow, pop and folk elements: The relation between taste patterns and attitudes concerning social integration, *Poetics*. 36 (2) :217-42.

Verhaeghe, P and Tampubolon G (2012) Individual social capital, neighbourhood deprivation, and self-rated health in England. *Social Science & Medicine*. 75 (2), 349–357.

Warde, A and Gayo-Cal M (2009) The anatomy of cultural omnivorousness: The case of the United Kingdom. *Poetics*. 37 (2), 119–145.

Warde, A and Tampubolon G (2008) Social capital, networks and leisure consumption. *The Sociological Review*. 50 (2): 155–180.

Warde, A, Wright, D and Gayo-Cal M (2007) Understanding cultural omnivorousness: Or, the myth of the cultural omnivore. *Cultural Sociology*. 1 (2): 143-164

Warde, A Wright, D and Gayo-Cal, M. (2008). The omnivorous orientation in the UK. *Poetics*. 36 (2–3): 148–165.

Widdop, PA and Cutts, D. (2012). The importance of place: A case study of museum participation. *Cultural Trends*. 21(1): 47-66.

Widdop, PA and Cutts D (2013) Social Stratification and sports participation in England. *Leisure Sciences*. 35 (2), 107-128.