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# Social media and social class

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## 0 Abstract

*Background:* This paper explores the relationship between social class and social media use, and draws upon the work of Bourdieu examining class in terms of social, economic and cultural capital. The paper starts from a prior finding that those who predominantly only use social media formed a higher proportion of internet users from lower socio-economic groups. *Data:* Drawing on data from two nationally representative UK surveys the paper makes use of the Ofcom Media Literacy survey ( $n \approx 1800$  per annum) and the Department of Digital, Culture, Media and Sport Taking Part survey ( $n \approx 10,000$  per annum). *Methods:* Following Yates, et al. (2015a), five types of internet behaviour and eight types of internet user are identified utilising a principal components analysis and k-means clustering. These internet user types are then examined against measures of social, economic and cultural capital. Data on forms of cultural consumption and digital media use are examined using multiple correspondence analysis. *Findings:* The paper concludes that forms of digital media use are in correspondence with other social, cultural and economic aspects of social class status and contemporary social systems of distinction.

## 1 Introduction

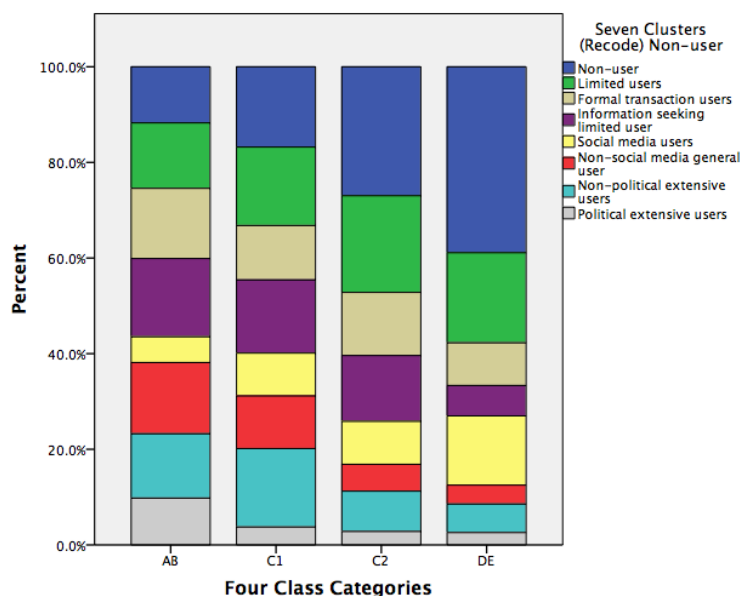
To what extent are digital activities, engagements and practices integral to social class status? Is use of digital technology as much a function of social status and context – “habitus” (Bourdieu, 1990) – as other social, economic and cultural activity? This paper seeks to explore these questions through the examination of social media use. Social media was selected as it was noted in prior work (Yates, et al. 2015a) that the narrow use of social media alone notably varied by class; as compared to being part of a mix of other digital technologies. This result implied the possibility of differences in citizens’ digital “habitus”.

Discussions of class and digital media have predominantly focused on issues of digital inequality as measured by access and skills (van Dijk, 2005; van Dijk and Hacker, 2003). This touches on a range of policy issues (see Yates, et al. 2015b; 2014) and is key to many governmental digital strategies in UK, USA and Europe (Mawson, 2001). The goals of such policy work remain improving access and skills. These have been called the first (access) and second (skills) levels of the digital divide. The goal in this paper is to re-orientate the question of digital inequalities away from access and skills towards understanding the inequalities in the *uses* of digital literacy (cf. Hoggart, 1957). Drawing on Helsper’s (2012) argument that digital inequalities have to be understood as being in correspondence with other ‘fields’ of social, cultural and economic inequality, this paper seeks to explore the use

of social media amongst those who are considered to be 'digitally included'. As *social media users* they have both access to technology and the skills to use it (to a greater or lesser extent). Understanding inequality in relation to digital production and participation as opposed to just consumption (Hargittai and Walejko, 2008; Witte and Mannon, 2010) is also critical to assessing media use in our increasingly networked society (Castells 2010). As has become apparent over recent years, digital media use is becoming intrinsic to political and civic life (Vargo and Hopp, 2017). Representations within the digital public sphere matter and lead to questions of equality - especially if elite voices dominate in the digital public sphere (Schradie, 2012).

### 1.1 Starting point

The starting point for this analysis were findings from prior work on data from the Ofcom Media Literacy Survey of 2012-13 and replicated here for 2014-15 (Yates, et al. 2015). These analyses found that NRS social class groups D and E (see Table 1) had proportionally more users focused on *social media* as compared to other class groups (see Figure 1). This result implied that social media use was a primary focus of social class D and E users within a context of lower overall internet use. This implies that individual forms of internet use cannot be understood in isolation from each other – much like other forms of cultural consumption. This leads to questions of how and to what extent social media use and inequality intersects within corresponding fields (Helsper, 2012) and with social class.



A Chi-square indicates a significant association between NRS Social Class and User Types, ( $\chi^2 (21, n=1890) = 241.092, p < 0.000$ , medium to large effect size Cramer's V = 0.211)

Figure 1: Types of internet user and NRS social class (Ofcom MLS 2012-13)

## 2 Bourdieu, social class and the digital

Defining and measuring social class is a complex task. Importantly the impact that a growing digital economy may have on contemporary social class has recently become the focus of academic debate. This includes Bourdieu (1984; 1991; 1997) based approaches (Savage, et al. 2013, 2014; Rollock, 2014; Bradley, 2014; Savage, 2013, 2014, 2015). There is not space

in this article to review the full detail of this broad debate on class, but this work aligns with Savage and colleagues' argument that any contemporary view of class must consider Bourdieu's (1984; 1997) argument that social status is driven by three forms of exchangeable capital:

- Economic capital: as generally understood in material terms of money, assets, and property.
- Social capital: "the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (Bourdieu and Wacquant 1992, p. 119).
- Cultural capital: predominantly an aspect of education and socialisation that allows individuals to demonstrate aspects of cultural consumption, knowledge and practice that differentiate them from other social groups, importantly different forms of cultural capital engender greater possibilities of exchange for other forms of capital.

Recent work on access to and uses of the internet have made similar arguments. Grant (2007) clearly argues that economic capital alone is not a sufficient explanation of why people do or do not meaningfully engage with technology. Clayton and Macdonald (2013) drawing on Graham (2002) and Selwyn (2003) summarise this position as follows:

"The various forms of economic, social and cultural capital (Bourdieu 1997) individuals bring to technology in terms of their own socio-economic positions and internalized dispositions or habitus, is key in influencing the way in which technology might (or might not) be used as well as perceptions of benefits gained" (Clayton and Macdonald, 2013, p.948).

## 2.1 Social class and social media

There are limited empirical studies taking a fully Bourdieu based perspective on digital media use. But there is work that has separately explored the economic, social and cultural differences in the types and levels of digital media use. Recent reports by the Good Things Foundation<sup>1</sup> based on work by Yates et al. (2015a), identified over 13 million UK citizens who were limited or non-users of the internet; with the majority being from lower income households. Socio-economic positions therefore influence access to what Selwyn (2003) calls the 'opportunity structure' of digital technologies. This reaches beyond just access to broader digital literacy, highlighting that there are a range of experiences for those categorised as 'digitally included' (Clayton and MacDonald, 2013). We therefore seek to explore this through examining the use of social media in the context of Bourdieu's three types of capital.

### 2.1.1 Economic capital

Quantitative data from the British Social Attitudes Survey 2015 was used by Sloan (2017) to explore the use of Twitter. Sloan compares class variations using the NS-SEC classification system (see Table 1) and found a higher proportion of Twitter users in the higher NS-SEC classes 1 and 2. Sloan also notes comparable results from prior analyses (Sloan, 2015) where

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<sup>1</sup> <https://www.goodthingsfoundation.org/research-publications/real-digital-divide>

NS-SEC categories are algorithmically derived from Twitter profile data. Problematically none of these data are subjected to statistical testing of interaction effects nor are relative effect sizes recorded. Unlike Yates et al. (2015) there is no comparison of Twitter use as a proportion of overall digital media use. Similar arguments are made by Blank (2012) and Blank and Lutz (2017) based on the OxIS (Oxford Internet Surveys) survey. Their results highlight the lack of social representativeness in data scraped from social media platforms. They demonstrate that all social media platforms are skewed towards content produced by younger, wealthier and better educated citizens. The results reinforce the point that socio-economic context is a major variable in which platform and to what extent citizens engage with social media.

### 2.1.2 Social capital

Social capital can be defined in terms of the value derived from a citizen's network of social ties (Son and Lin, 2008). The concept has two lineages, one that begins with Durkheim and which is embodied in the work of Putnam (2000). In this characterisation, social capital is understood as both a personal and community commodity that is linked to civic and political engagement and the formation of the public sphere (Brehm and Rahn, 1997; Son and Lin, 2008; Fischer 1982a, 1982b; Rainie and Wellman, 2012).

Bourdieu's model of social capital (1985) is notably different than that of Putnam (2000). For Bourdieu, social capital is focused on the opportunities for social enhancement and distinction that can be leveraged from the structure of interpersonal networks and ties. That is, the extent to which social capital can be translated into or exchanged for other forms of capital (economic or cultural). These two definitions of 'community' and 'distinction' based social capital clearly overlap and may not be mutually exclusive being based on how networks and ties add to citizens' lives (Burt 2005; de Zúñiga, Homero and Valenzuela, 2012).

The majority of work focusing on digital media has taken the 'community' view of social capital. For example, Phua et al (2017) comparatively analyse social capital within four social networking sites: Facebook Twitter Instagram and Snapchat. They apply 'uses and gratifications' theory, along with an approach drawing on Putnam's (2000) distinction between bridging (weak ties) and bonding (strong kinship ties). Their study of 297 social media users indicate that Twitter users had the highest bridging social capital followed by Instagram, Facebook and Snapchat. Whereas, Snapchat users had the highest bonding capital, followed by Facebook Instagram and Twitter. This result would indicate that different social media platforms offer, or are used to maintain, different forms of social ties.

Valenzuela, et al. (2009), again following Putnam, focussed on US student's civic and political engagement via Facebook. They found a positive and significant association between intensity of Facebook use, group membership and social capital as measured in terms of personal contentment, greater trust, and participation in civic and political activities. However, they could not determine if Facebook use and group membership drove this or if civically engaged students used Facebook more extensively. Facebook use could mark an intensification in a digital medium of respondents' existing social capital. Similarly, Ellison, et al.'s (2007) study of a small sample of undergraduate students in the U.S found that use of Facebook had a strong association with maintaining existing offline relationships.

Taking Bourdieu's approach to social capital, Clayton and MacDonald (2013) highlighted the importance of the accumulation of relevant (digital) social and cultural capital in understanding how citizens make everyday use of technology. They examined the extent that technology has been adopted by socially excluded neighbourhoods within the UK city of Sunderland. In terms of social capital their survey and interview work found far less evidence of the development of bridging ties and again reinforcement of existing bonding ties. They note:

"The character of the use of social networking in our qualitative sample also demonstrates a different set of practices to those of political participation and community development. Participants do not necessarily use technology to contact new people (...) or to engage in formal democratic processes, rather its use enables the maintenance of social relationships already established on a new and engaging platform" (Clayton and MacDonald 2013, p.954).

None of these studies can clearly fully evidence whether social media use drives the creation of social capital, or rather that it provides an additional digital layer to existing social capital. Yet they all highlight the possibility that different social media might function to support and potentially intensify network ties and therefore existing social capital.

### 2.1.3 Cultural capital

Bourdieu identified three main types of cultural capital (Bourdieu 1997; Bourdieu and Passeron 1990):

- Embodied cultural capital in the form of knowledge acquired over time through socialisation and expressed through one's habitus.
- Objectified cultural capital in the form of both owned and experienced cultural consumption that can be translated into other forms of capital and which may require appropriate embodied cultural capital to support their consumption.
- Institutionalized cultural capital the formal social and institutional recognition of a person's cultural capital.

Staubhaar et al. (2012) note that social class affects citizens' exposure to and willingness to invest in skills and knowledge and shapes their disposition toward and familiarity with technology. Clayton and MacDonald (2013) argue from their data that:

"Accumulation of legitimized forms of cultural capital, including knowledge, skills and customs which are invested in, inherited and embodied differentially by social groups, is crucial in determining the ability to appropriate technology for socially valued purposes (...) Without legitimate knowledge, connections or reasons to meaningfully engage, individuals may struggle to make what is seen to be appropriate use of technology within a society in which they do not dictate what is 'useful'" (Clayton and MacDonald 2013, p949).

In the discussions around technology use the term "information" or "digital" capital is invoked (Robinson, 2009). Whilst initially sympathetic to this idea, as discussed later, it may conflate categories and over emphasise the digital. There are a number of empirical studies that have used Bourdieu and the idea of information capital to explore ethnographic and contextualised cases. Robinson (2009, 2011, 2014) uses the idea of information capital to explore approaches to school and personal uses of ICT by US high school students. Robinson notes that their practices are "deeply rooted in the accumulation and internalization of

information capital” (p.533). Robinson points out how this mirrors issues raised in Bourdieu’s early work, especially “how school and home socialization relate to class reproduction” (p.522). Robinson’s work highlights how even among groups with access in the context of a digital media rich nation, key differences in information capital can accumulate. These differences lead to different educational and life experiences that have the potential to underpin long term variations in embodied, objectified and institutionalised cultural capital.

Similarly, North et al. (2008) report a three-year study focused on Australian 15 and 16 year olds, linking cultural capital, habitus, and cultural forms to digital inequality. They use case studies to illustrate the links between taste and ICT use and conclude that technology is a performative function which is embedded in power relations and serves the cultural and economic interests of individuals or institutions. They noted individual variations in practices using new technologies but the case studies in their work showed a consistency in digital tastes in those from similar social backgrounds (North et al. 2008, p.907).

## 2.2 Research question

Taking the work of Bourdieu and the findings discussed above the following argument can be made: *measures of the three forms of capital would appear in correspondence with digital media use, and in particular forms of social media use.* Given the lack of existent large-scale data sets covering all three forms of capital and digital media use – with well-established measures – the analyses below utilise data sets with a range of specific and proxy measures. This is therefore an *inductive* examination how these three forms of capital associate with specific types of digital media.

## 3 Methods

The analysis is based upon two data sets collected by UK statutory bodies: Ofcom and the Department for Digital, Culture, Media and Sport (DCMS). Both data sets are used to support policy and regulation and ‘top level’ results and cross-tabulations are presented by the relevant agencies each year. Detailed statistical models are not generally provided by either agency.

### 3.1 Data sets

The Ofcom Adults Media Literacy survey is an annual nationally representative sample (n ≈ 1,800) of adults aged 16 and over. The 2012-13 and 2014-15 surveys used here were conducted by Saville Rossiter-Base in-home using a Computer Aided Personal Interviews methodology between September and October 2015<sup>2</sup>. The Ofcom data provides one of the most extensive surveys of UK internet behaviour across both levels and types of digital media use. The DCMS Taking Part survey is a longitudinal study designed to yield a representative sample each year of 10,000 adults aged 16+ who are normally resident in England. The 2016 sample (n=10,171) is a mixed sample, evenly divided between fresh

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<sup>2</sup> Full details at: <https://www.ofcom.org.uk/research-and-data/media-literacy-research>.

sample cases and re-interview cases<sup>3</sup>. Both surveys provide a set of direct and proxy measures of the three forms of capital.

### 3.2 Measures of economic capital

In the UK there are two relevant measures of socio-economic status predominantly defined by position within the workforce. These are the *National Statistics Socio-economic classification (NS-SEC)* used by government and the *National Readership Survey classification of Social Grade (NRS Social Grade)* often used in academic, policy and media research. The outlines of both are presented in Table 1. NS-SEC is used in the UK census and is based on extensive academic work (see Erikson and Goldthorpe 1992; Rose and Pevalin 2003). NS-SEC is used in the DCMS Taking Part survey and NRS is used in the Ofcom survey. Other measures of economic status in both data sets include: household income; the index of multiple deprivation; and home ownership.

Table 1: NRS social grades and NS-SEC classifications

NRS social grades		NS-SEC classifications	
<b>A</b>	Higher managerial, administrative or professional	1	Higher managerial and professional occupations
<b>B</b>	Intermediate managerial, administrative or professional	2	Lower managerial and professional occupations
<b>C1</b>	Supervisory or clerical and junior managerial, administrative or professional	3	Intermediate occupations (clerical, sales, service)
<b>C2</b>	Skilled manual workers	4	Small employers and own account workers
<b>D</b>	Semi and unskilled manual workers	5	Lower supervisory and technical occupations
<b>E</b>	Casual or lowest grade workers, pensioners, and others who depend on the welfare state for their income,	6	Semi-routine occupations
		7	Routine occupations
		8	Never worked and long-term unemployed

#### 3.2.1 Measures of social capital

Social capital in Bourdieu's terms is best measured through the analysis of the number, types and social status of members of a citizen's social network. Unfortunately, such measures are not available in the two data sets used here. Though it is possible to identify relevant proxies. As noted in section 2.1.2 prior work on social capital and social media identified two key features. First, that the level of social media use may be a proxy for an active social network offline. Second, that different social media may be used for different types of social tie and interaction. Data from Ofcom Media Literacy survey can provide insight on level and type of social media use. The DCMS Taking part survey has data on the

<sup>3</sup> Full at: <https://www.gov.uk/guidance/taking-part-survey>



use of social media to support non-digital social and cultural activities – lining social and cultural capital.

### 3.2.2 Measures of cultural capital

Measuring cultural capital requires the identification of potential proxies for embodied, objectified and institutional cultural capital. Measuring embodied cultural capital via a questionnaire survey is challenging and the surveys do not contain simple direct proxies. Following Bourdieu’s own approach, the data includes different forms of cultural activity as a proxy for objectified cultural capital and to an extent, by implication, embodied cultural capital. The DCMS Taking Part Survey contains data on levels of attendance at a range of cultural activities such as opera, music or film. Institutionalised cultural capital may be best addressed through educational credentials or professional qualifications. This is therefore captured via level or extent of education, but also in part by our two mainly socio-economic measures (NS-SEC and NRS).

### 3.2.3 Measures of internet and social media use

Both data sets contain comparable UK standard measures of internet access at home. Both contain measures of levels of general social media use, with greater fidelity in the DCMS measure. The Ofcom data provides an extensive set of measures of levels and types of internet use. This data has been used to construct eight different user types following the methods outlined in Yates et al (2015a). The overall measures available are listed in Table 2.

*Table 2: Measures in the Ofcom and DCMS data sets*

MEASURE	DCMS TAKING PART	OFCOM MEDIA LITERACY
<b>LEVELS OF SOCIAL MEDIA USE</b>	<ul style="list-style-type: none"> <li>• Level/Frequency of use</li> <li>• Use in relation to arts consumption</li> </ul>	<ul style="list-style-type: none"> <li>• Level/Frequency of use</li> <li>• Derived measure from exploratory factor analysis</li> </ul>
<b>INTERNET ACCESS</b>	<ul style="list-style-type: none"> <li>• Access at home</li> </ul>	<ul style="list-style-type: none"> <li>• Access at home</li> <li>• Access outside home</li> </ul>
<b>TYPES OF INTERNET USE</b>		<ul style="list-style-type: none"> <li>• 30+ measures of Level/Frequency and type</li> </ul>
<b>TYPES OF INTERNET USER</b>		<ul style="list-style-type: none"> <li>• Eight types derived from cluster analysis.</li> </ul>
<b>SOCIO-ECONOMIC STATUS</b>	<ul style="list-style-type: none"> <li>• NS-SEC</li> </ul>	<ul style="list-style-type: none"> <li>• NRS</li> </ul>
<b>INCOME</b>	<ul style="list-style-type: none"> <li>• Scale measure</li> </ul>	<ul style="list-style-type: none"> <li>• Scale measure</li> </ul>
<b>DEPRIVATION</b>	<ul style="list-style-type: none"> <li>• Index of multiple deprivation</li> </ul>	<ul style="list-style-type: none"> <li>• Index of multiple deprivation</li> </ul>
<b>EDUCATION</b>	<ul style="list-style-type: none"> <li>• Highest standard UK qualification</li> </ul>	<ul style="list-style-type: none"> <li>• Age on leaving formal education</li> </ul>
<b>CULTURAL ENGAGEMENT</b>	<ul style="list-style-type: none"> <li>• Attendance and participation in arts and culture</li> <li>• Social media use to support attendance and participation in arts and culture</li> </ul>	

### 3.3 Analytic approaches

The analysis of the Ofcom 2014-15 data follows that of Yates et al. (2015a) and sought to re-confirm the findings in section 1.1. This began with an exploratory factor analysis using principal components analysis (PCA) across the 23 types of Internet behaviour measured by both the 2012-13 and 2014-15 surveys. All items were suitable, having correlation coefficients above 0.3 in the matrix and communalities above 0.3. The Kaiser-Meyer-Olkin value was 0.919, above the recommended value of 0.6 (Kaiser 1970; 1974) and Bartlett's Test of Sphericity (Bartlett, 1954) was significant ( $\chi^2(496) = 12957.811, p < 0.000$ ). The diagonals of the anti-image correlation matrix were all over .5, supporting the inclusion of each item in the factor analysis.

The PCA revealed the presence of five factors with Eigen values over 1.0 explaining 32.0%, 9.0%, 5.6%, 4.9% and 4.4% of the variance respectively and 51.6% in total. An inspection of the scree plot did not indicate a clear break in the reduction of Eigen values. The rotated solution indicated a relatively simple structure showing strong loadings and all of the variables loading substantially on only one component (>0.4). The five factors were meaningful and consistent in relation to known forms of digital media use. These five factors with Eigen values above 1.0 were therefore retained and factor scores were calculated using the Anderson-Rubin method to produce measures that are orthogonal, with a mean of zero and standard deviation of 1. Table 4 provides the pattern and structure matrix results for the analysis. This identified the same five factors as found by Yates et al (2015a):

1. Media consumption – music, TV, YouTube, games
2. Information seeking – health, public services, leisure
3. Political action – petitions, political communication
4. Formal transactions – banking, government services
5. Social use – social media

Using the saved factor scores respondents were hierarchically clustered using a squared Euclidean distance measure under Wards method via SPSS. Clear breaks in the rate of change of the cluster coefficients were noted at two, four and seven clusters. The two-cluster solution separated limited users from the rest of the sample. As with Yates et al. (2015a) seven clusters provided the most informative set of user types. The cluster analysis was re-run with the k-means cluster technique applied to the data with a target of seven clusters and iterations repeated until results converged. Table 3 presents the mean z-scores for our five factors at the centroids of the clusters and potential descriptors for these groups (note high media factor scores are negative in this case).

Table 3: Mean z-scores for five factors at cluster centroids

USER TYPES (7 CLUSTER)							
FACTORS	<i>Extensive</i>	<i>Limited</i>	<i>Limited info seeking</i>	<i>Social media limited/only</i>	<i>Non-media general</i>	<i>Non-political extensive</i>	<i>Social media general</i>
<b>INFORMATION SEEKING</b>	.680	-1.069	.336	-.998	.849	.392	.669
<b>SOCIAL NETWORKING</b>	.933	-.926	-1.234	.570	-.007	.589	.628

<b>POLITICAL</b>	2.366	-.250	-.325	-.497	1.592	-.060	-.455
<b>FORMAL</b>	1.091	-1.334	.076	-.204	.534	.553	.219
<b>MEDIA</b>	-1.573	.739	.486	.091	.312	-1.211	.408

‘Extensive users’ have high scores on all factors. ‘Non-political extensive’ users have high scores on all but the political factor. There are three forms of limited user who score below average on the majority of factors: ‘limited’ (below average on all), ‘limited info seeking’ (all but information use), and ‘limited social media users’ (all but social media). There are two types of general users who score above average on most factors, except media, with one group using above and the other below average levels of social media.

Cultural participation data is more challenging. Attendance at the majority of cultural activities is effectively binary. Individuals either attend or participate or they do not in any one year. Levels of participation in multiple types of cultural activity are limited, as is extensive repeated attendance. For example, though film attendance is one of the most common cultural activities, most respondents attend film less than once a year (52.4%). The next largest group (32.7%) attend 3 or 4 times a year, once a month (13.5%) and weekly 1.5%. In the case of Opera, 98.9% attend less than once per year with the remainder attending between 1 and 4 times per year. As a result, due to distributions, levels of attendance figures cannot be used in exploratory factor analyses.

This analysis therefore uses, akin to Bourdieu, multiple correspondence analysis (MCA) to explore the relationship between social media use, economic and cultural capital. MCA techniques allow for nominal categorical data to be examined in a manner akin to a principal components exploratory factor analysis. The results are graphical and can be used to inductively to detect and represent underlying structures in a data set (see Le Roux and Rouanet 2004; Blasius and Greenacre (eds.) 2006). SPSS was used for the ANOVA, Chi<sup>2</sup> and factor analyses. For the MCA the ‘mjca’ function within the ‘ca’ package of R was used in R studio.

Table 4: Pattern and structure matrix for factor analysis

Factor	Pattern Matrix					Structure Matrix					Communalities
	Information	Social	Politics	Formal	Media	Information	Social	Politics	Formal	Media	
Local news	<b>0.641</b>					<b>0.641</b>					0.620
Health information	<b>0.609</b>					<b>0.609</b>					0.489
Public services	<b>0.604</b>					<b>0.604</b>					0.633
News	<b>0.593</b>					<b>0.593</b>					0.552
Leisure time	<b>0.539</b>					<b>0.539</b>					0.551
Social networking sites		<b>0.817</b>					<b>0.817</b>				0.696
Chat and IM		<b>0.794</b>					<b>0.794</b>				0.698
Job opportunities		<b>0.591</b>					<b>0.591</b>				0.451
Job studies		<b>0.357</b>					<b>0.357</b>				0.395
Contact politician			<b>0.799</b>					<b>0.799</b>			0.542
Sign a petition			<b>0.68</b>					<b>0.68</b>			0.586
Politics and campaigns			<b>0.511</b>					<b>0.511</b>			0.574
Website or blog			<b>0.433</b>					<b>0.433</b>			0.484
Banking and paying bills				<b>0.781</b>					<b>0.781</b>		0.617
Buying things				<b>0.737</b>					<b>0.737</b>		0.581
Government process				<b>0.65</b>					<b>0.65</b>		0.589
Email				<b>0.568</b>					<b>0.568</b>		0.476
Radio					<b>-0.717</b>					<b>-0.717</b>	0.548
Music					<b>-0.657</b>					<b>-0.657</b>	0.651
TV or films					<b>-0.631</b>					<b>-0.631</b>	0.559
YouTube					<b>-0.566</b>					<b>-0.566</b>	0.640
Software					<b>-0.416</b>					<b>-0.416</b>	0.571
Games					<b>-0.355</b>					<b>-0.355</b>	0.357

## 4 Results

### 4.1 Economic capital

Undertaking a one-way ANOVA on the DCMS Taking Part social media variable, using the 9 levels of the NS-SEC scale reveals that class is a statistically significant independent variable ( $F(8, 78728.7)$ ,  $p < 0.000$ ). Average levels of social media use drop from over twice a week to less than once a week between the top and the bottom of the NS-SEC scales (see Figure 2). Though the overall effect size was small ( $\eta^2 = 0.015$ ) a Tukey HSD comparison found all levels of the NS-SEC variable to be statistically significantly different at  $p < 0.01$ . A far stronger effect is found for the independent variable of age ( $F(2, 10089536.4)$ ,  $p < 0.000$ ) with a very large effects size ( $\eta^2 = 0.314$ ). This would indicate that socio-economic class plays a part in levels of social media use but that it is not a sufficient explanatory variable.

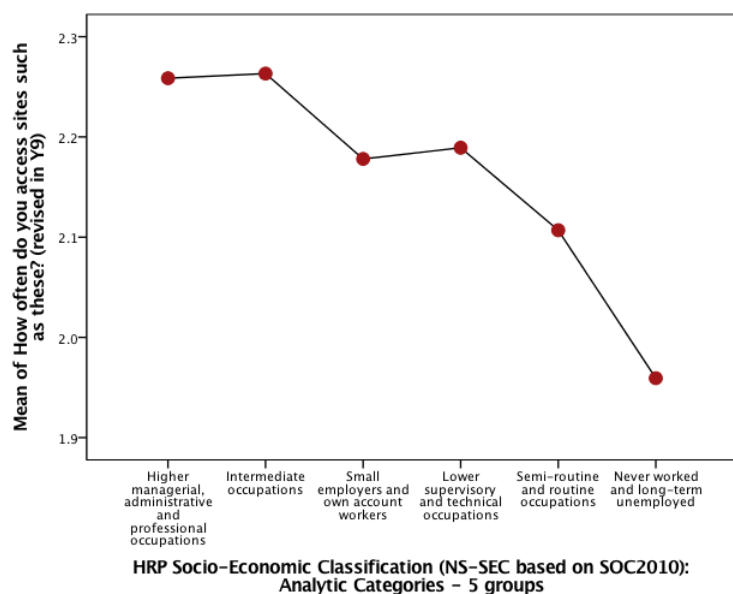
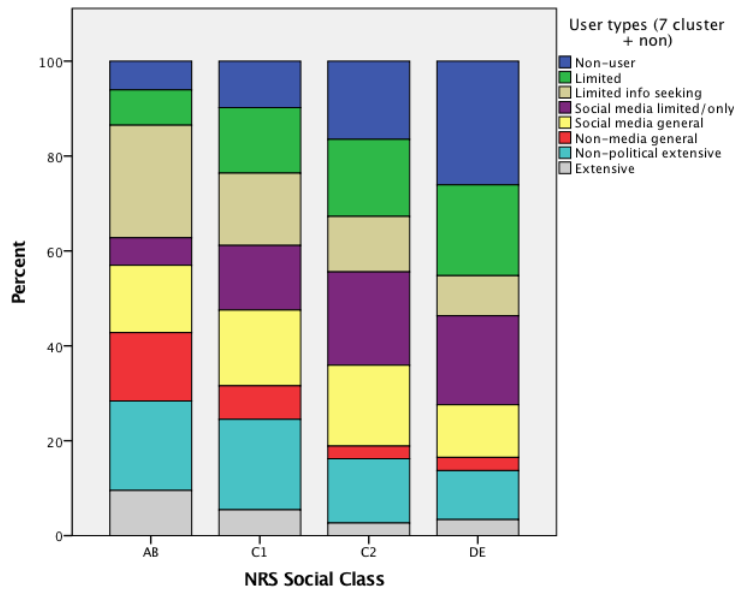


Figure 2: Mean of frequency of social media use by social class (NS-SEC)

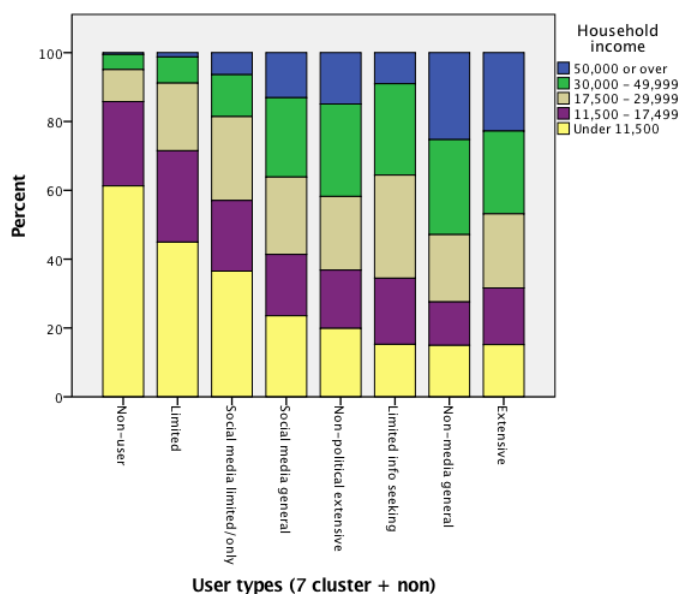
But the, key question has to be how social media use fits within broader use of digital media – citizens digital habitus. In identifying seven Internet user types and an eighth category of non-users from the Ofcom data it can be argued that there are eight broad forms of digital “habitus” - from the extensive user to the non-user. In the same sense that one might have a proxy measure for different forms of cultural consumption – for example, people or groups with greater levels of “high” or “popular” arts consumption.



A Chi-square indicates a significant association between NRS Social Class and internet user types, ( $\chi^2$  (21, n=1890) = 286.689,  $p < 0.000$ , medium to large effect size Cramer's V = 0.225)

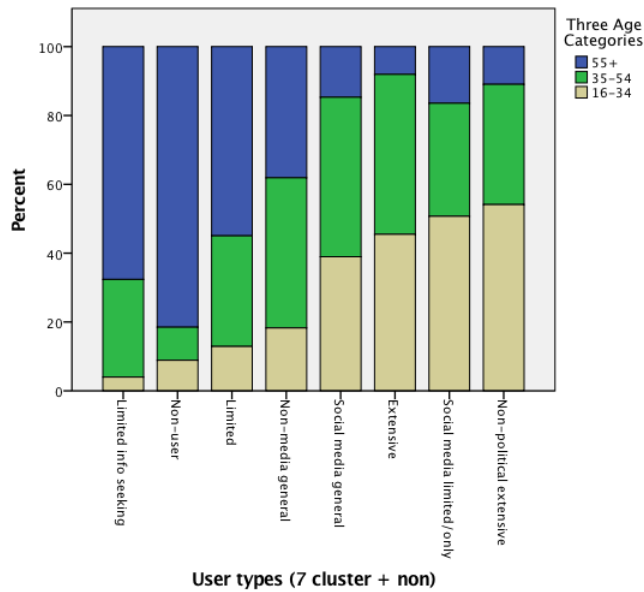
Figure 3: Type of internet user by social class (NRS)

As was noted in section 1.1 there is an almost identical result in the 2014-2015 data as in the 2012-13 data. Those in NRS social classes C2 and DE are most likely to be offline, or one of the limited user types. In the case of social class group DE this is close to 70% of citizens. Looking at the same clusters by household income the data indicates that limited and limited social media only users are unlikely to be from higher income backgrounds (see Figure 4). Considering this in purely economic terms the results show that 'social media limited users' are from poorer households, with the majority from below national average incomes. Looking at the same categories by age, non-users and limited users tend to be over 55 years of age, but that limited social media users are predominantly under 55. This indicates that limited social media users are predominant among the younger poor. These results mirror Blank (2016), Blank and Lutz (2017) and Robinson's (2009) case studies.



A Chi-square indicates a significant association between household income and internet user types, ( $\chi^2$  (42, n=1890) = 372.093,  $p < 0.000$ , medium to large effect size Cramer's V = 0.181)

Figure 4: Household income by type of social media user



A Chi-square indicates a significant association between age and types of internet user, ( $\chi^2(14, n=1890) = 697.389, p < 0.000$ , large effect size Cramer's  $V = 0.430$ )

Figure 5: Types of internet user by age

## 4.2 Social capital

There are also two other notable differences in social media use in the data sets. First, there is a statistically significant difference in the range of social media platforms used by the different class groups. Using the DCMS Taking Part data, a one-way ANOVA on the number of different types of social media platform used indicates that class is a statistically significant independent variable ( $F(5, 483749.875), p < 0.000$ ). The number of different social media platforms used drops from over 3 to just 1 between the top and the bottom of the NS-SEC scales (see Figure 6). Though the overall effect size was small to medium (eta squared = 0.05) a Tukey HSD comparison found all levels of the NS-SEC variable to be statistically significantly different at  $p < 0.000$ .

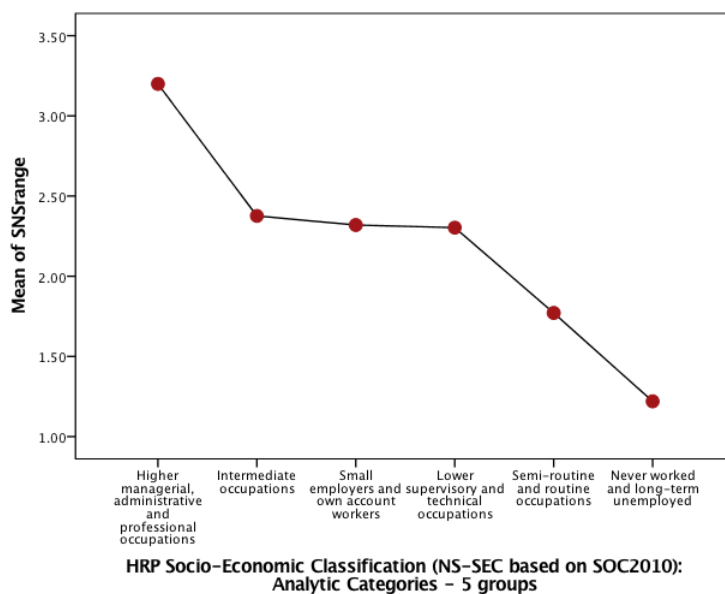
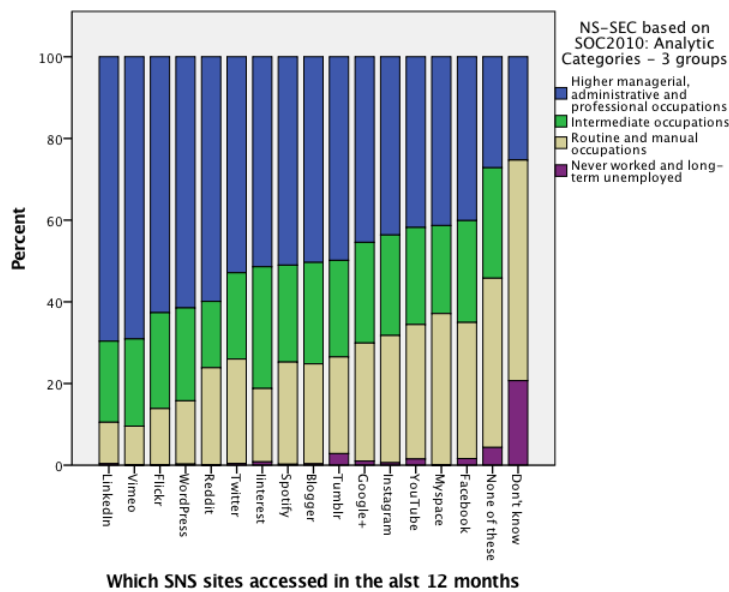


Figure 6: Mean number of social media platforms used by class

Second, the data indicates that types of social media used also vary by class. As may be expected social media platforms aimed at professionals (LinkedIn, Vimeo) are predominantly used by NS-SEC professional groups. Notably Twitter is more likely to be used by professionals than by other groups. Facebook and Myspace have a more even spread in use across the class groups, but still with an over representation of higher professional class groups (see Figure 7). In the specific case of Facebook it remains that the top 4 NS-SEC groups are over represented with a mixed picture for the lower 4 and very low levels of use for those who are unemployed ( $\chi^2 (8, n \text{ (weighted)}) = 40318650 = 452071.153, p < .000$ , small effect size  $\Phi = 0.106$ ).



A Chi-square indicates a significant association between NRS Social Class and types of SNS sites used (multiple response set), ( $\chi^2 (71, n \text{ (weighted)}) = 118,047,524 = 12175291.764, p < 0.000$ , medium to large effect size  $\text{Cramer's } V = 0.185$ )

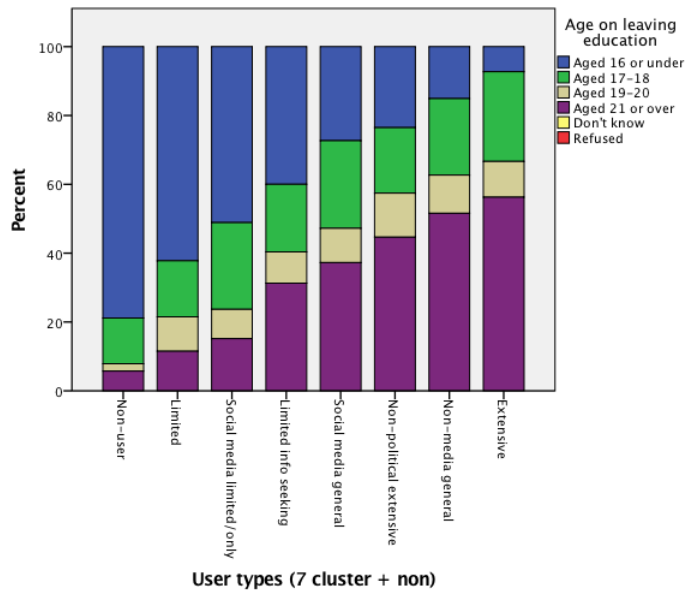
Figure 7: Social media platforms used by social class (NS-SEC)

### 4.3 Cultural capital

#### 4.3.1 Institutionalized cultural capital

Examining the eight Ofcom user types by level of education gives a very clear result, with both breadth and depth of internet use increasing with time in education. Over half of extensive user's being higher education graduates (Figure 8).





A Chi-square indicates a significant association between type of internet user and age on leaving education, ( $\chi^2$  (35, n=1890) = 445.106,  $p < 0.000$ , medium to large effect size Cramer's V = 0.217)

Figure 8: Types of internet user and age on leaving education

#### 4.3.2 Objectified and embodied cultural capital

The final analysis presents an inductive MCA analysis of the relationship between social media use, other forms of cultural consumption and economic capital. The MCA analysis was conducted on three sets of variables: attendance at a range of cultural activities; NS-SEC, deprivation, internet access and social media use.

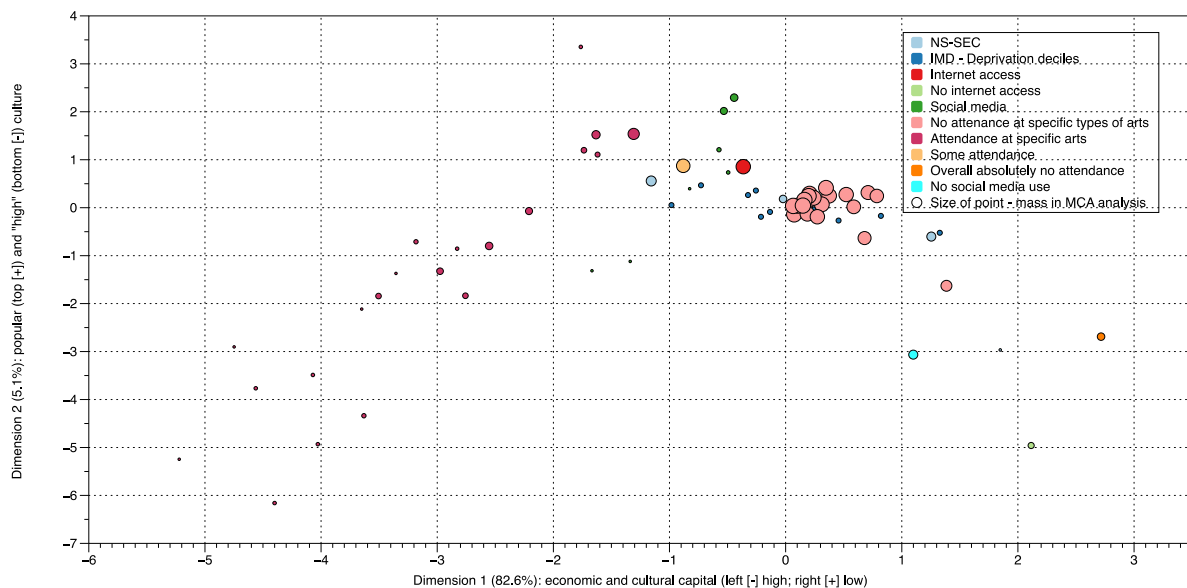


Figure 9: MCA analysis of cultural attendance, social class, deprivation and social media use

The results from the analysis are presented in Figure 9 to Figure 11. Figure 9 presents the overall result, with the first two dimensions explaining 82.6% and 5.1% of the variance. Dimension 1 explains the majority of the data along an axis that matches class, deprivation, cultural distinctions and internet access (Figure 10). Dimension 2 appears to differentiate between popular and what might be described as "high culture". An examination of the

plots points to four potential clusters. Three of these appear to mark out cultural distinction with one covering “high culture”, a second popular arts, a third popular culture. The fourth identifies those who are socio-economically, culturally and digitally excluded (Figure 11, and Table 5). All forms of cultural attendance sit towards the higher-class end of Dimension 1. High levels of social media use are situated closest to popular arts (Figure 11). It is interesting to note that levels of social media use follow a similar vector across the graph as that for the popular to “high” culture attendance. This would indicate an association between high levels so social media use and higher levels of objectified, and potentially embodied cultural capital.

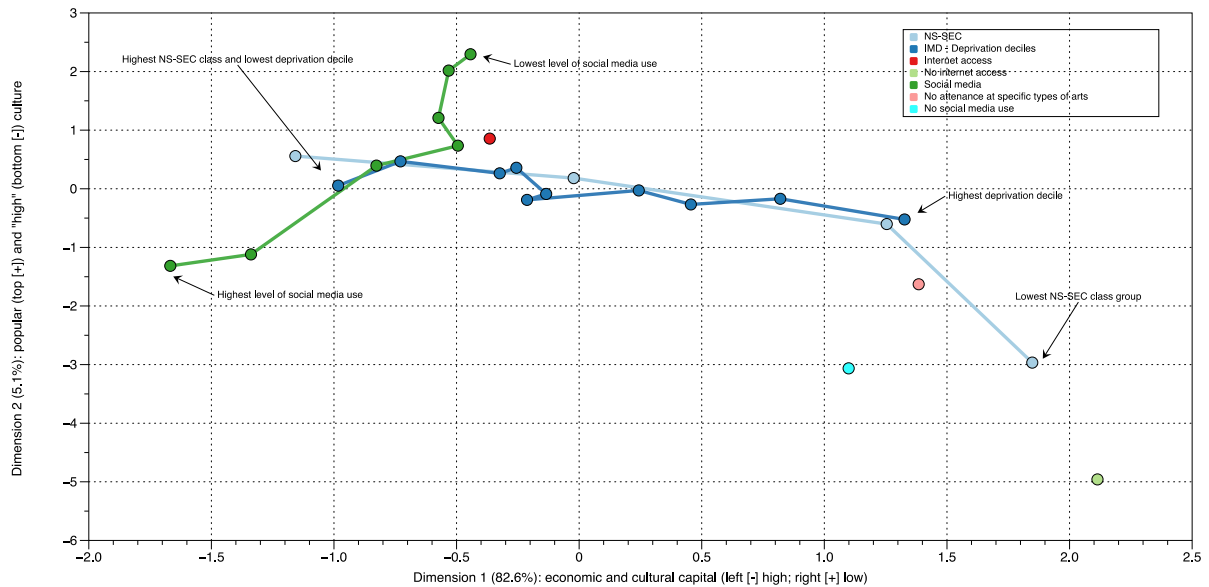


Figure 10: MCA analysis - detail of class, deprivation and social media vectors

Table 5: MCA Clustering of arts attendance

Group		
Popular culture	Popular arts	“High arts”
Carnival	Street performance	Digital arts exhibition
Circus	Cultural festivals	Jazz
Pantomime	Ethnic dance performance	Literary event
Film	Art exhibition	Classical music
Musical	Art and crafts event	Ballet
	Arts exhibition in public space	Contemporary dance
	Live music	Opera

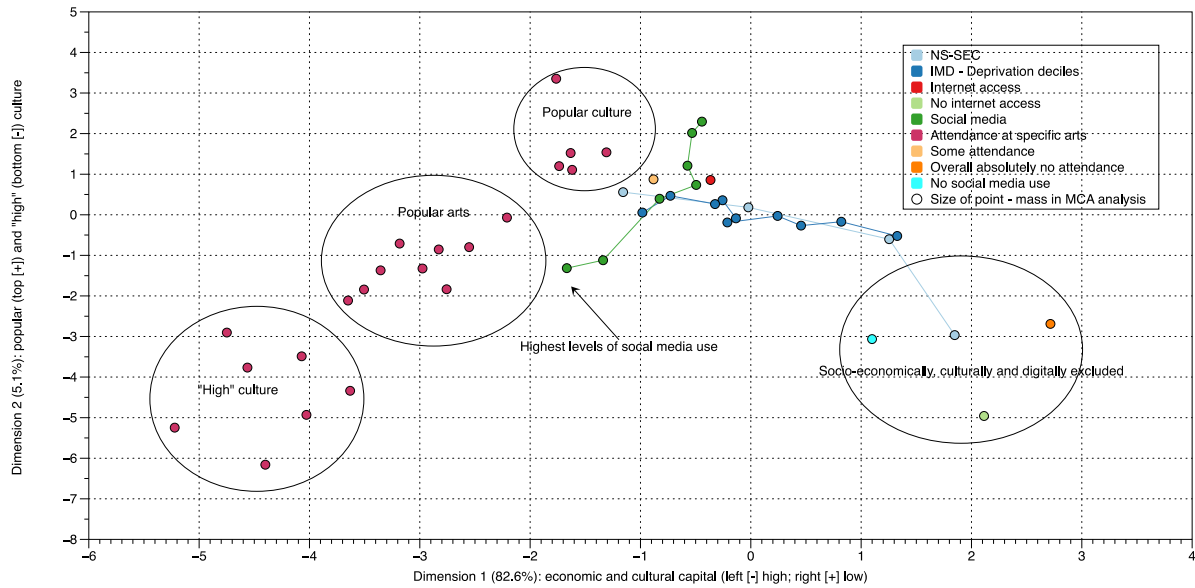


Figure 11: MCA analysis - overall results

Finally, examining the question of the use of social media to support cultural and personal activities indicates that social class plays a role in two ways. First, many of these activities are predominantly undertaken by citizens from professional class groups. Second, they are also statistically more likely to utilise social media to support these activities. Figure 12 details the use of social media to engage in activities that might be seen as supporting the development and maintenance of both social and cultural capital. Once again higher social class groupings predominate in all activities.

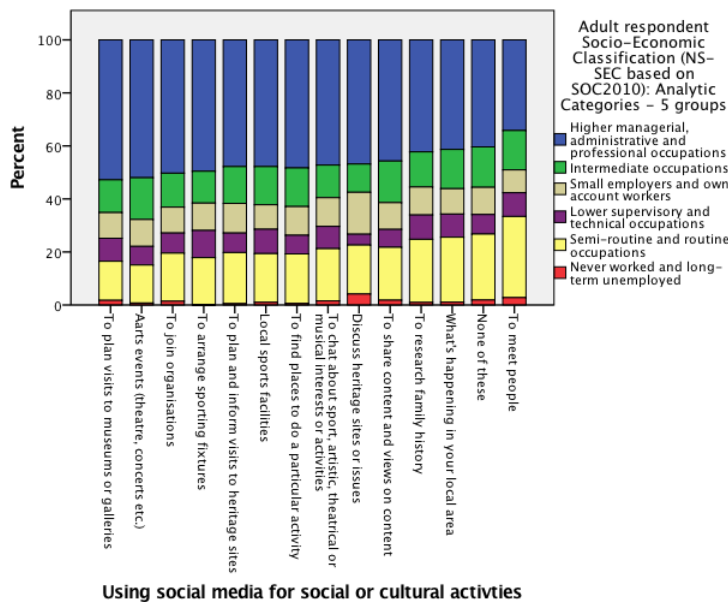


Figure 12: Social and cultural uses of social media by social class (NS-SEC)

A Chi-square indicates a significant association between NRS Social Class and socio-cultural uses of social media (multiple response set), ( $\chi^2$  (80, n (weighted) = 65,274,598) = 2082355.058,  $p < 0.000$ , medium to large effect size Cramer's  $V = 0.178$ )

## 5 Conclusions

The data indicates that social media use cannot be examined in isolation. It is part of a wider set of activities within people's digital and non-digital lives. Examining this across Bourdieu's three forms of capital makes this very clear. Economic capital has an influence on levels of social media use (see section 4.1). What is clearly influenced by economic capital, and potentially class in a wider definition, is the extent to which social media is one of the primary routes to engage with the digital. Importantly, limited internet users who are predominantly focused on social media are far more likely to have lower incomes and be members of lower socio-economic class groups (measured either by NRS or NS-SEC). In terms of social capital, the data shows that those in lower socio-economic groups have lower levels of social media use, even where it is the main form of digital media use. People in this group also make use of a smaller set of social media platforms, and are unlikely to use those platforms most associated with professional contexts. They are also unlikely to use social media in relation to other forms of non-digital cultural consumption. Facebook use appeared to have a broader user base, but it was still statistically significantly skewed towards higher NS-SEC categories.

In terms of cultural capital, this analysis points to three findings. First, social media focused, limited internet users, may also have lower levels of access to institutional cultural capital having left formal education earlier and predominantly lacking a professional occupation. Second, as indicated by the MCA analysis, higher levels of social media use, are associated with greater engagement with markers of embodied and objectified cultural capital. Third the use of social media in the context of social and cultural activities that are likely to reinforce social and cultural capital is predominantly undertaken by those in higher NS-SEC groups.

The analyses presented here are of course limited by the two data sets used, neither of which was designed specifically for this analysis. Future research, based on questionnaire tools tailored to an approach such as this, potentially supported by additional social network analysis, would provide a more robust basis result. But, the results of this analysis should not be surprising and they fit well with literature discussed in section 2. Digital technology use can be considered a social 'field' (Bourdieu 1993) therefore it is no surprise to see this field is marked by systems of distinction between different social groups and that some behaviours or access to certain technologies will carry greater cultural capital in that domain. This fits well with Helsper's (2012) idea of corresponding fields. Having both access to such systems and knowing how best to use these appropriately within any field may be key markers of relevant economic, social and cultural capital.

Ideas of a 'digital' or 'information' habitus and of 'digital capital' have been proposed by a variety of authors as a way of understanding the role of digital technologies in systems of class and distinction. Such ideas are helpful in focusing attention on the digital aspects of citizen's lives but such concepts pre-suppose a potentially artificial distinction between people's digital and non-digital activities. They also conflate economic, social and cultural capital often 'mirroring these' within the definition of information/digital capital. But as digital technologies become ever more embedded and ubiquitous then digital activities will be as much a part of user's habitus as books or fashion. As such the issue becomes how different uses of digital technologies are both markers of and constitutive of social distinction and it's lived manifestation in the habitus of individuals.

In focusing on the use of social media in the context of other digital activities and other markers of social, cultural and economic capital this work demonstrates how the uses of digital (cf. Hoggart, 1957) also function in the context of class distinctions. Such variations add another level of inequity and difference to the more basic ones of access and skills. There rightly remains a focus in policy research on access and skills, as addressing basic access and use is still important. But, as digital media become integrated into the full range of social, economic and cultural fields in which citizens operate, there is likely to be differences and divides in the breadth and depth of digital media use. These digital distinctions will not simply be about access to (economic capital) but also the skills to use (institutional and embodied cultural capital), the associated cultural uses of digital (objectified cultural capital) and likely routes to access social networks (social capital). The data presented here point to digital technologies being embedded in the contemporary habitus of citizens, and as with previous material and cultural features, providing markers of class distinction. Therefore, how digital technologies embed into, transform and possibly challenge existing socio-economic and cultural systems of inequality needs further empirical examination.

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