Subjective well-being and engagement in arts, culture and sport

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Abstract

This paper explores the relationship between engagement in arts, culture and sport, and subjective well-being, contributing to our understanding of the leisure experience, and cultural value, of these activities. Ordered probit analysis of UK data from wave 2 (2010-11) of *Understanding Society*, provides evidence in support of a wide range of cultural goods generating positive leisure experience, reflected in overall (life, general happiness) and domain (leisure) satisfaction. Frequency of engagement is central to certain activities: only regular participation in arts activities and sport generates positive effects. In contrast, arts events are positive irrespective of frequency. The findings also indicate even less frequent engagement in activities exhibiting cultural characteristics, e.g. museums/historical sites, has positive association with satisfaction. Finally, although employment has a negative association with leisure satisfaction, engagement in leisure activities is not found to spillover into job satisfaction (with the exception of certain sports). This suggests individuals consider work and leisure (including quality of leisure time) separately.

Keywords: Subjective well-being, job satisfaction, cultural value, leisure time, arts and culture, sport.

1 Introduction

This paper explores participation and engagement in arts, cultural and sporting activities, reflecting on the leisure experience, and cultural value, of these activities with reference to UK subjective well-being (SWB) data. SWB, referring to an individual's self-assessment of their overall well-being (Diener et al, 1999), has become the focus of an expanding range of research within the social sciences. The extant literature has centred on improving our understanding of:

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(1) what individuals value, and; (2) the factors affecting their well-being (see Clark et al, 2008; Dolan et al, 2008; MacKerron, 2012). This body of literature has been partly driven by acknowledgment of the limitations of relying solely on economic data, including gross domestic product, which is arguably the single most important economic statistic in public discourse, as measures of welfare (Hicks et al, 2013:74). These economic measures, never intended as complete measures of progress, have been criticised for not accounting for all relevant production, income, and wealth, and failing to capture the value of relationships, health, and happiness (Weijers and Jarden, 2013:1-2). In respect of cultural goods including arts events, museums, historical sites and certain sporting activities gross domestic product has limited relevance as individuals participate in these activities for a range of reasons, both economic and cultural. In recent years there has been a significant public debate about the role of gross domestic product and its profile in policy making processes, prompting attempts to construct alternative measures of economic performance and well-being: the UK Office for National Statistics now reports on well-being.

From a measurement perspective there is an important distinction between objective and subjective measures of well-being (see Galloway et al, 2006, 19-22). Objective measures of well-being typically take the form of a basket of indicators or a composite index such as the Measure of Domestic Progress (Cobb and Daly, 1989) and its successors. They generally capture material conditions that influence well-being. These measures adjust GDP in a number of ways that attempt to capture non-market activities (e.g. adding the value of domestic labour or subtracting costs associated with crime). Arts, cultural and sporting activities, as cultural goods, exhibit certain characteristics which generate cultural value. Aspects of these activities are, therefore, unmeasurable on a monetary scale (Throsby, 2001:32). Calculating shadow prices is problematic with the potential for significant bias (Fujiwara, 2013). Measures of SWB,

in contrast, capture how people experience the quality of their lives, and incorporate emotional responses and cognitive judgements. SWB, though, has been the subject of significant debate, not least in regard to its use as a substitute, or complement, to long-standing revealed preference and income-based welfare measures (Kesebir and Diener, 2008).

SWB measures provide a proxy for 'utility' and there is a large body of literature exploring potential arguments for this proxy utility function (Frey and Stutzer, 2002:405). This 'experienced' utility is empirically measured using either a 'single-item scale' or 'multi-item measures' (Downward and Raciute, 2011:333). The two most common single-item scales focus on 'happiness with life' and 'satisfaction with life' (Dolan et al, 2008), measures which have been shown empirically to generate largely consistent responses (Smith and Exton, 2013). As stated preference measures, SWB measures capture how individuals feel about their life on 'aggregate' or 'overall' (life satisfaction or happiness), and in regard to individual satisfaction with different domains of life termed 'domain satisfaction' (van Praag et al, 2003:30) e.g. job and leisure satisfaction. Measures of SWB tend to be derived from survey questions, of the form "*All things considered, how satisfied are you with your life as a whole these days*", where responses are provided on a Likert scale usually comprising either five, seven, or eleven categories ranging from 'not at all' or 'completely unsatisfied' to 'completely satisfied' (Hicks et al, 2013:78; Helliwell et al, 2015). This paper considers both 'overall' (life satisfaction and a measure of general happiness) and domain satisfaction (job and leisure satisfaction). This paper aims to assess the relationship between these measures and participation and engagement in arts, cultural and sporting activities. A further contribution of the paper is to extend the findings of the extant literature by considering a wide range of these activities, comprising 70 activities in total, using data extracted from the UK *Understanding Society* survey. Specifically, this paper seeks to answer the following research questions: (1) do empirical measures of SWB

support the hypothesis that cultural goods — including arts activities and events, museums, historical sites and sporting activities — generate positive leisure experience and are a source of cultural value; (2) does the frequency of participation and engagement in arts, cultural and sporting activities have relevance to SWB, and; (3) is there a domain spillover between satisfaction with leisure and satisfaction with other aspects of life (job, life, general happiness)?

2 Subjective well-being and arts, culture and sport

Leisure represents a complex human need, of variable definition, which is fulfilled through the consumption and production of leisure experiences (Ateca-Amestoy et al, 2008:64). It is not simply free time, but is a product of personal perception of what is discretionary, enjoyable, pleasurable and satisfying (Kelly, 1982). Leisure experiences are both social and cultural in nature (Iwasaki, 2007:257-8). Participation and engagement in cultural goods, including arts events, museums, historical sites and certain sporting activities, form leisure experiences, where *"…..leisure is recognised as an action that takes place at a given time, is an activity that we can identify and, more importantly, brings pleasant experiences to the person involved in that action"* (Ateca-Amestoy, 2011:54-5). Moreover, these activities are sources of both cultural and economic value. Cultural value in this context refers to certain activities and products associated with the 'intellectual, moral and artistic aspects of human life' (Throsby, 2001:4; 2006). Cultural value is distinct from economic value. For example, Throsby (2001:32) argues that some characteristics of cultural value are not measurable on a monetary scale as they do not generate any value for which there would be willingness to pay. Cultural value is generated through 'cultural characteristics' derived from an activity/asset, specifically: (1) aesthetic; (2) authentic (referring to originality of value); (3) historical; (4) spiritual; (5) social (connecting to others), and; (6) symbolic (acting as repositories/conveyors of meaning) (Throsby, 2001:28-9). Importantly, cultural value is derived from positive characteristics (Throsby, 2001:27). Cultural goods including arts events, museums, historical sites and certain

sporting activities exhibit a number of these characteristics, but the cultural value associated with each remains difficult to measure. Definitions and the relative outcomes enjoyed by those consuming these leisure experiences, though, differ between individuals i.e. one individual may enjoy participating in sport, while another attends a concert (Ateca-Amestoy, 2011:54-7). Common to these definitions is the need for a time input to spend in leisure activities, but distinctions exist in other factors including the necessity of the presence of others and individual materialism which may influence both the way leisure is enjoyed and the value given to experiences (Ateca-Amestoy, 2011:57). While the time input is necessary, it has been argued that the use of leisure time (referred to as the 'quality of leisure time'), rather than simply the quantity experienced, is central to deriving positive experiences and effects on SWB (Wang and Wong, 2011:1816; 2014:100). Positive leisure experiences may, for example, be garnered from 'togetherness' involved in group or team activities (Hamermesh, 2002). This may have particular relevance when considering engagement in various sports. Evidence is indicative of positive leisure experience enhancing quality of life (Ateca-Amestoy et al, 2008).

The public investment awarded to arts, culture and sport may be evidence, in part, of the (at least implicit) perceived value of arts, culture and sport. For example, in the UK the Arts Council of England was allocated £1.04bn of funding for arts and culture for the period 2012-15 (Arts Council, 2013). Meanwhile, £400m of UK government funding will be invested, through Sport England, into national governing bodies (NGBs) of sports in England between 2013 and 2017 (Sport England, 2013). Marsh et al (2010:9-10) identify a range of benefits at individual, community and national levels. These include learning benefits generated through engagement in the arts, increased community cohesion, and potential health benefits (for example application of the arts in the treatment of depression, and mental/physical benefits of sport and recreational fitness). An emerging area of research in the sub-discipline of cultural

economics, has begun to capture the potential relevance of these leisure activities to SWB, although these findings are not without conflict and limitations.

For example, Fujiwara (2013) uses data extracted from the UK *Taking Part* survey. This research, funded by the Arts Council of England, attempts to quantify the monetary value of the SWB benefits of museum visits, participation in the arts, being an audience to the arts, and participation in sports. Using a CBA framework, applying a non-standard willingness to pay valuation method, the findings estimate net well-being benefits of approximately £3,200, £1,500, £2,000, and £1,500 respectively per person per annum. While offering useful insight, the challenges associated with attempting monetary valuation of SWB limits these findings. Work undertaken by the Scottish Executive in 2005 explored quality of life and well-being in the context of measuring the benefits of culture and sport, but concluded that evidence demonstrating a link is scarce (Galloway et al, 2006). In contrast, Wang and Wong (2011:1816; 2014:100), using data from the ISSP *Leisure Time and Sports Survey*, report a number of benefits although differences are observed between activities. Activities which include social elements, e.g. spending time with relatives, and activities providing self-fulfilment, such as listening to music, reading for pleasure and shopping, increase individual happiness. However, some activities, e.g. using the internet, may have a negative correlation with happiness. The UK Department for Culture, Media and Sport (DCMS), in the context of understanding the value of engagement in culture and sport, published results based on analysis of the *British Household Panel Survey* (BHPS) for the periods 1996-2000 and 2002-2007 (Marsh et al, 2010). Findings revealed that the positive effect of engagement in cultural activities increases with the frequency of engagement. But, Marsh et al (2010) also acknowledge the limited scope of their analysis due to the inclusion of only a narrow range of cultural activities in the BHPS. The DCMS research was extended in Marsh and Bertranou (2012) again using the BHPS. However,

they suggest that the impact of engagement in culture may be overestimated in research and, further, that it is important to consider other factors including income. Other research, considering a range of measures of both overall and domain satisfaction (Michalos and Kahlke, 2010; 2008), found arts activities to have relatively little impact on overall life satisfaction. They qualify their findings in that the size of these effects is 'relative' to other factors commonly found to have significant impact e.g. health and financial position, highlighting the relevance of their inclusion to analyses of SWB.

2.1 Arts and culture

A number of studies have presented results suggesting positive impacts from engagement in arts and culture. For example, recent research considering access to cultural activities (measured broadly in terms of number of times engaged per year) found cultural access to be second only to health status in factors affecting well-being (Grossi et al, 2012). Other recent research making use of momentary well-being measures[2] reported on a number of activities that fall within the umbrella of arts and culture. Bryson and MacKerron (2013:9), focusing on experiences of work, note that among 39 types of activity, 'theatre, dance, concert' and 'exhibition, museum, library' are ranked second and third behind intimacy and love-making, among activities which increase happiness (relative to not doing these activities). As activities which exhibit cultural characteristics, visiting historical sites and museums may provide well-being benefits (Fujiwara, 2013). It has also been noted that those in higher socio-economic groups are more likely to visit museums and heritage sites (Marsh et al, 2010:16). Lack of

[2] 'Momentary' well-being measures are conducted while the respondent is participating in an activity, capturing feelings experienced whilst engaged in the activity. These contrast 'reflexive' measures which consider experiences in the present/recent past, usually presented in terms of 'these days' or 'nowadays' (see Bryson and MacKerron, 2013). The latter are used in the majority of research and in this paper.

accessibility to some heritage sites may limit engagement, and therefore the potential well-being benefits, of certain groups less likely to have access to a car e.g. social housing tenants, older individuals (Marsh et al, 2010:19). Other research has identified positive associations between satisfaction and playing music, crafts, and purchasing works of art (Michalos, 2005; Creech et al, 2013). However, it has also been identified that while frequency is important in determining the satisfaction obtained from certain arts activities (consistent with the DCMS findings) a more nuanced understanding is required: greater frequency does not always equate to greater satisfaction (Michalos and Kahlke, 2010, 2008; Michalos, 2005).

Wood and Smith (2004) explored live music performances at concerts, attempting to capture the well-being effects on performers (actively engaging) and audiences (passively engaging). They found well-being to be enhanced as musical performances are '*therapeutic in the broadest sense'*, providing immersion in the performance through the act of performing (for the performer) and emotional effects (for the audience). Other research is also indicative of the positive effects of listening to music (Wang and Wong, 2014:100), and playing instruments (Creech et al, 2013). Using UK case study evidence, Creech et al (2013) report positive effects from active music-making among the elderly which provides a sense of purpose, autonomy, and social interaction. Meanwhile, Daykin et al (2013) consider impacts of music on young offenders through a systematic literature review. Positive associations are present, but results are not conclusive. Both Creech et al (2013) and Daykin et al (2013), though, are limited in their narrow focus as they pertain only to specific groups of individuals and activities.

2.2 Sporting activities

Sport and recreational exercise have also been identified as potentially important in improving health and SWB (Taylor et al, 2015:31). A range of studies have shown sport and recreation

generate both physical and mental benefits (see Taylor et al (2015) for a full discussion). Individuals participating in these activities receive an increased sense of well-being derived from physical fitness (Kavetsos, 2011), and improved mental stimulation and satisfaction, in part associated with enhanced social networks (Gratton, 2004). Downward and Raciute (2011:344), further, identify that happiness is enhanced by participation in sports. This is especially prominent among those engaging in sports that require social interaction (i.e. team sports), consistent with the benefits of 'togetherness' (Hamermesh, 2002). Bryson and MacKerron's (2013:9) study, similarly, identified 'sports, running and exercise' as ranking highly (fourth) in their range of activities generating happiness. Kavetsos (2011) suggests that increased frequency of engagement in sports is associated with higher levels of happiness. Huang and Humphreys (2012) found close proximity to sports facilities to be a mediating factor, suggesting access is important in generating positive effects. Meanwhile, Baker et al (2005) found that being active is particularly beneficial for older individuals. Hecht and Boies (2009:421-22), further, examine non-work-to-work spillover on well-being at work using a survey of Canadian university employees. They suggest participation in sports, recreation and fitness may generate positive spillover between domains thus increasing well-being at work.

The findings in the extant literature are indicative of cultural goods, including arts events, museums, historical sites and certain sporting activities generating positive leisure experiences, providing significant benefits to health and well-being. However, the range of activities considered by a number of these papers is relatively narrow and/or their analyses are applied only to specific groups. This paper thus seeks to extend these findings through empirical analysis of a wider range of these activities, and using multiple measures of SWB.

3 Method

Empirical measurement of the impact of arts, cultural and sporting activities is complex. It has been argued that economic impact studies only offer a partial measure of the value of engagement in, for example, arts activities as they cannot capture cultural value (Snowball, 2008:39-42). Throsby (2001:29-30) suggests five methods of investigation: (1) content analysis; (2) contextual analysis; (3) expert appraisal; (4) psychometric measurement, and; (5) social survey methods. It has been asserted that the experience associated with engagement in leisure activities is most appropriately measured with reference to satisfaction levels (Ateca-Amestoy et al, 2008). Leisure experience is derived from the meaning of the activity to the individual, not from the activity itself. Leisure, and the experience of it, is therefore distinct to the individual and satisfaction derived from a leisure experience may be an important determinant of individual happiness (Ateca-Amestoy et al, 2008:65). Moreover, it has been argued that since leisure is a time-intensive activity, satisfaction with aspects of time-use is highly relevant in assessing relative outcomes (Ateca-Amestoy, 2011:61). This paper applies the latter approach outlined by Throsby, investigating engagement in arts, culture and sport using social survey data extracted from wave 2 (2010-11) of *Understanding Society*, alternatively titled the United Kingdom Household Longitudinal Study (UKHLS). Moreover, this data enables the analysis of domain satisfaction including aspects of time-use (e.g. leisure time) following Ateca-Amestoy et al (2008; 2011).

Understanding Society subsumed the *British Household Panel Survey* (BHPS) in 2009. It is a multi-topic longitudinal survey of a nationally representative sample of 40,000 households selected for inclusion in 2008. Face-to-face and telephone interviews capture data from each adult household member each year. The survey aims to improve understanding of social and economic change in Britain at household and individual levels (Understanding Society, 2012). Use of this large-scale data allows the inclusion of a range of control factors in the analysis

(Dolan et al, 2008:96; Brown et al, 2012:1009), which would not be possible in small-scale primary data collection. Following initial descriptive analysis, ordered choice probit regression is applied. As there is an inherent ordering to the dependent variables, and an assumption that the same response by different individuals represents a similar level of satisfaction (van Praag et al, 2003:34), these models provide an appropriate method of analysis. For additional robustness multicollinearity tests were performed (*Tolerance Indicator* and *Variance Inflation Factor*). These confirm no strong correlations between independent variables, suggesting no significant multicollinearity issues are present.[3]

Within the extant literature SWB represents an umbrella term for a number of distinct measures of well-being (MacKerron, 2012:708). Some studies measure well-being as happiness (e.g. Blanchflower and Oswald, 2008), while others measure well-being using satisfaction measures including life satisfaction (e.g. Gardner and Oswald, 2006) and/or job satisfaction (e.g. Brown et al, 2012). *Understanding Society* allows for consideration of both satisfaction with life and general happiness where the prior is a measure of overall satisfaction linked to elements of work-life balance, and the latter a broader SWB question regarding general happiness which is distinct from common measures of happiness with life. As the activities being considered are undertaken during leisure time the analysis includes a measure of satisfaction with amount of leisure time. The dependent variables considered comprise reported satisfaction with life, amount of leisure time, job and a measure of general happiness, providing reflexive measures of well-being. The dependent variables are derived from responses to Likert scale questions, where 1 = completely unsatisfied, 2 = mostly dissatisfied, 3 = somewhat dissatisfied, 4 = neither satisfied or unsatisfied, 5 = somewhat satisfied, 6 = mostly satisfied, and 7 = completely

[3] Results of multicollinearity testing available upon request. Note that age and age^2/100 did show collinearity, but are retained in the final models as they offer reflection on the non-linearity of satisfaction with respect to age.

satisfied. General happiness is reported on a 1-4 scale where 1 = much less than usual, 2 = less so than usual, 3 = about the same as usual, and 4 = more so than usual.

The dependent variables are regressed against variables measuring engagement with arts, cultural and sporting activities, and relevant control variables. Control variables have been selected based on the findings presented in the SWB literature, including: (1) personal characteristics such as gender (Garcia et al, 2007; Philp and Wheatley, 2011); age (Blanchflower and Oswald, 2008), disability (Lucas, 2007); (2) elements of time-use, including working hours and overtime (Ateca-Amestoy et al, 2008; Philp and Wheatley, 2011); (3) relationships, for example the presence of dependent children (Garcia et al, 2007) which is separated into four age categories to allow consideration of the effects of school-age children; (4) social development characteristics including education (Dolan et al, 2008) and economic activity (Frey and Stutzer, 2002), and; (5) income which has been the focus of a significant portion of research within economics linked to welfare (see Clark et al, 2008). Government Office Region is also included as an 'external' factor which may affect well-being (Downward and Raciute, 2011:335).

The measures of engagement with arts, cultural and sporting activities are derived from questions of the variety, '*how often in the last 12 months have you been to events such as this?*' with possible responses for arts and cultural activities as follows: 'none'; 'once in past year'; 'twice in past year'; 'at least 3-4 times per year'; 'less than weekly, at least monthly', and; 'at least once a week'. For sporting activities possible responses are as follows: 'do not do any sport'; 'once in past year'; 'twice in past year'; 'at least 3-4 times per year'; 'at least once per month'; '1-3 times a week', and; '3+ times a week'. All of the arts, cultural and sporting activities were grouped within the *Understanding Society* survey, as follows: engagement with

arts activities (comprising 14 categories including dancing, singing, playing a musical instrument); arts events (14 categories including attending concerts, musicals/opera, cinema, reading for pleasure); visiting libraries, archives, museums (three categories total); visiting historical sites (7 categories), and; engagement in moderate sport (23 categories including football, basketball, tennis, golf) or mild sport (9 categories including snooker, pool or billiards, bowling, yoga/pilates, rambling/walking). A full description of the 70 activities included in these groups is included in Appendix 1. Each of these variables are entered into the regression models using dummies for each response, with 'none' and 'do not do any sport' as the references categories. In addition, variables considering other leisure activities are included in the analysis, including a measure of the frequency of internet use, and whether respondents have a drink/meal with friends or family at least once a month. The latter, acting as a proxy measure for spending time with relatives, has been suggested as having a positive association with happiness, while internet use has been found to have a negative association (Wang and Wong, 2014, 100). Measures of TV watching or listening to the radio, which have also been shown to have relevance to SWB (see Frey and Benesch, 2008), were not included in the main (adult) questionnaire of wave 2 of *Understanding Society* and thus are absent in the analysis.

4 Empirical evidence from *Understanding Society*

Initial analysis in Table 1 summarizes the distribution of engagement in each of the leisure activities considered. The data reveals quite stark differences in engagement levels between activities. For example, 67.9% of respondents report engaging in arts events, 51.5% in arts activities, and 57.7% in visiting historical sites. However, very few respondents report visiting archives (just 4.1%). Within the patterns of engagement frequency also varies considerably. Frequency of engagement in arts events including attending concerts and the cinema, for example, is most common around 3-4 times per year. This is also the case for historical sites.

Meanwhile, those engaging in arts activities, on average, do so with a higher frequency. This is likely to be driven by the nature of a number of these activities, including playing instruments and dancing, which may require lots of practice and a level of commitment in order to generate positive leisure experiences. Engagement in sports follows a similar overall pattern – 58.8% of respondents report engaging in moderate sport and 55.4% engage in mild sport – although those engaging in more intensive sports report more frequent engagement. Approximatively 31.5% report at least weekly engagement in moderate sports, compared with 21.1% in mild sports.

Table 1: Engagement in Arts, Cultural and Sporting Activities

	How often in the last 12 months have you been to events such as this …? (% respondents)							
	None	Once in past year	Twice in past year	At least 3-4 times per year	Less than weekly, at least monthly	At least once a week		n
Arts activities	48.5	11.8	7.1	2.0	1.1	29.5		31,239
Arts events	32.0	8.7	12.9	29.7	14.5	2.1		31,243
Library	68.6	2.2	4.3	10.0	10.7	4.3		31,242
Archives	95.9	1.6	1.0	0.9	0.4	0.2		31,243
Museum	65.2	9.4	10.7	11.3	3.0	0.4		31,242
Historical sites	42.3	12.1	12.5	23.5	8.1	1.5		31,240
	Do not do any sport	Once in past year	Twice in past year	At least 3-4 times per year	At least once per month	1-3 times a week	3+ times a week	
Moderate sports	41.2	2.1	3.2	9.9	12.1	18.2	13.3	31,143
Mild sports	44.6	2.8	4.8	12.5	14.2	12.2	8.9	31,243

Source: Understanding Society Wave 2, 2010-11.

Table 2 summarizes the mean reported satisfaction levels among those engaging in arts, cultural and sporting activities, compared with those who do not. Consistent with, and extending, the findings presented in the extant literature, Table 2 suggests that engagement in the range of activities captured in *Understanding Society* is associated with (statistically significant) greater life satisfaction. This finding is present among those reporting engagement in arts activities, visiting libraries, archives, museums and historical sites, and those participating in mild sports. This finding is not present, however, when considering

engagement in arts events, and moderate sports. Satisfaction with amount of leisure time, in contrast, is greater among those engaging in all of the activities considered, providing some initial evidence of the positive leisure experience associated with these activities. Meanwhile, engagement in these activities similarly has a positive association with general happiness, with the exception of visiting archives. Differences between those engaging in arts, culture and sport and those who do not are, however, statistically insignificant with respect to job satisfaction. This is indicative of these activities not influencing satisfaction with work i.e. that positive spillover between domains is not experienced between work and leisure time. This finding provides evidence that is contra some of the findings reported by Hecht and Boies (2009) and Bryson and MacKerron (2013). The descriptive findings are indicative of a positive relationship between arts, cultural and sporting activities and life satisfaction and general happiness, but this effect is not present in regards to job satisfaction.

Table 2: Mean Satisfaction Levels among those Engaging in Arts, Culture and Sport

	Engagement with Arts, Culture and Sport							
Engage in arts, cultural or sport activities?	Satisfied with life (mean)		Satisfied with amount of leisure time (mean)		Satisfied with job (mean)		General Happiness (mean)	
	Yes	No	Yes	No	Yes	No	Yes	No
Arts Activities	4.86*** (1.65)	4.67*** (1.72)	5.30*** (1.43)	5.05*** (1.62)	5.39 (1.39)	5.31 (1.45)	2.95*** (0.54)	2.92*** (0.57)
Arts Events	4.80*** (1.63)	4.86*** (1.78)	5.32** (1.39)	5.01** (1.69)	5.35 (1.38)	5.33 (1.48)	2.96*** (0.53)	2.88*** (0.57)
Library	4.89*** (1.65)	4.78*** (1.68)	5.30*** (1.42)	5.21*** (1.51)	5.33 (1.40)	5.35 (1.40)	2.95* (0.55)	2.94* (0.54)
Archives	4.98*** (1.68)	4.81*** (1.67)	5.38*** (1.40)	5.23*** (1.49)	5.28 (1.48)	5.34 (1.40)	2.94 (0.56)	2.94 (0.55)
Museum	4.86*** (1.63)	4.79*** (1.69)	5.38*** (1.34)	5.15*** (1.56)	5.33 (1.39)	5.35 (1.41)	2.97*** (0.53)	2.93*** (0.56)
Historical Sites	4.85*** (1.63)	4.76*** (1.73)	5.35*** (1.37)	5.05*** (1.64)	5.35 (1.39)	5.33 (1.43)	2.96*** (0.53)	2.91*** (0.58)
Moderate intensity sport	4.79*** (1.62)	4.87*** (1.75)	5.34*** (1.38)	5.07*** (1.64)	5.34 (1.38)	5.35 (1.46)	2.98*** (0.53)	2.89*** (0.57)
Mild intensity sport	4.82*** (1.62)	4.81*** (1.74)	5.34 (1.38)	5.07 (1.62)	5.35 (1.37)	5.32 (1.46)	2.97*** (0.54)	2.90*** (0.56)
n	25,873		25,193		16,781		26,193	

Source: Understanding Society Wave 2, 2010-11.

Notes: Values are mean reported satisfaction levels where satisfaction with life, amount of leisure time and job are asked on a 1-7 Likert scale, and general happiness on a 1-4 Likert scale. Standard deviations are in parentheses. Between groups ANOVA significance levels of 1%, 5% and 10% are denoted by ***, ** and * respectively.

Extending the descriptive analysis, the results of the ordered probit models are summarised in Table 3. This analysis provides a series of results consistent with those found in other research, including the non-linear relationship between satisfaction and age. Satisfaction increases with age, but diminishes in the middle part of individuals' lives (see Blanchflower and Oswald, 2008). Consistent with this finding, those with school-age dependent children (in particular children aged 12-15) also report lower life and leisure satisfaction, and general happiness. The presence of dependent children creates additional time constraints which may have particularly negative impacts on leisure satisfaction (Garcia et al, 2007). Individuals who are married report greater job and life satisfaction, and to a lesser extent general happiness. Interestingly, single/never married individuals are the least satisfied with their jobs, perhaps reflecting their career stage, given this group are on average younger. Men report lower job and overall life satisfaction, consistent with other research. Important gender divisions are also present in other SWB measures as women report lower leisure satisfaction and general happiness, likely reflecting their greater household contribution (see Garcia et al, 2007). The presence of a long term illness/disability has a particularly strong negative association with satisfaction, consistent with the findings reported by Lucas (2007). Education provides less clear results, although those with degree or equivalent qualifications report greater life and leisure satisfaction. Regional variations reveal London as the most prominent outlier associated with lower life and leisure satisfaction, the latter likely driven by the lengthier working hours and commutes experienced in this region (Harvie et al, 2009).

In reference to elements of time-use longer working hours generally create dissatisfaction, as does overtime (see Philp and Wheatley, 2011). Meanwhile, income is positively associated

with job and life satisfaction. Consistent with this, and with the extant literature (Frey and Stutzer, 2002) economic activity variables suggest those in work, education, or retired are generally more satisfied than those unemployed or economically inactive. The magnitude of these effects is also particularly pronounced. An interesting exception to this result is that leisure satisfaction is lower among those working than those unemployed. This likely reflects the negative impacts of paid work on the availability of leisure time, resulting from long hours, travel-to-work, and employer requirements for flexibility (Wheatley, 2012). It also suggests that individuals may consider leisure separately from other aspects of their lives, given they report satisfaction with life, job and general happiness, but less so with leisure. This is further evidence that in some cases spillover between some SWB domains may not be present.

Table 3: Ordered Probit Models: Satisfaction and Engagement in Arts, Culture and Sport

Ordered Choice Probit Models				
	Satisfaction with life	**Satisfaction with amount of leisure**	**Satisfaction with Job**	**General Happiness**
Age	-0.025***	-0.015***	-0.041***	-0.026***
$Age^2/100$	0.029***	0.022***	0.055***	0.025***
Male	-0.055***	0.102***	-0.127***	0.054***
Long term illness/disability	-0.373***	-0.221***	-0.150***	-0.321***
Highest educational qualifications: reference is no qualifications				
Degree or equivalent	0.044**	0.048**	0.035	0.029
A level	0.029	0.024	0.019	0.001
GCSE	0.025	0.020	0.039	0.007
Marital status: reference is single/never married or in civil partnership				
Married	0.190***	0.003	0.108***	0.042*
Separated/divorced	-0.071**	-0.098***	0.080**	-0.042
Widowed	-0.009	-0.013	0.211***	-0.052
Number of children in household aged 0-2	0.107***	-0.170***	0.024	0.081***
Number of children in household aged 3-4	-0.017	-0.169***	0.018	0.014
Number of children in household aged 5-11	-0.007	-0.116***	0.039***	-0.004
Number of children in household aged 12-15	-0.038**	-0.070***	0.040**	-0.041**
Government Office Region: reference is East Midlands				
North East	0.016	0.005	-0.075	-0.054
North West	-0.011	-0.036	-0.084**	-0.059
Yorkshire and the Humber	-0.034	0.000	-0.063	-0.100**
West Midlands	-0.054	-0.121***	-0.089**	-0.066
East of England	-0.025	-0.076**	-0.053	-0.096**
London	-0.153***	-0.152***	-0.085*	-0.067
South East	-0.042	-0.049	-0.059	-0.075**
South West	-0.014	0.022	-0.027	-0.089**

Wales	0.019	-0.026	0.040	-0.132***
Scotland	0.008	-0.044	-0.011	-0.120***
Northern Ireland	-0.008	-0.013	-0.013	-0.109***
Current economic activity: reference is economically inactive (unemployed, illness/disability, family care)				
Working (employed, self-employed, family worker)	0.275***	-0.234***	—	0.304***
Education/training	0.535***	-0.009	—	0.387***
Retired	0.507***	0.577***	—	0.297***
Annual Labour Income (£000s)	0.002***	-0.001	0.004***	-0.001
Working hours	-0.002**	-0.012***	-0.004***	0.002**
Overtime hours	-0.005***	-0.015***	0.002	-0.004**
Arts, culture and sport variables				
Frequency of arts activities: reference is none				
At least once a week	0.060***	0.077***	0.027	0.001
Limited weekly, but at least monthly	0.020	0.024	0.018	0.000
At least 3/4 times per year	-0.018	-0.030	-0.070**	-0.025
Twice in past year	-0.010	-0.087*	-0.091	-0.060
Once in past year	0.048	-0.033	-0.053	0.038
Frequency of arts events: reference is none				
At least once a week	0.043	0.126**	0.094	0.112**
Limited weekly, but at least monthly	0.075***	0.090***	0.003	0.086***
At least 3/4 times per year	0.059***	0.077***	-0.012	0.021
Twice in past year	0.080***	0.052**	0.002	0.029
Once in past year	0.033	-0.001	0.007	0.003
Frequency of library: reference is none				
At least once a week	-0.050	0.046	0.025	0.038
Limited weekly, but at least monthly	-0.045**	-0.003	-0.018	0.015
At least 3/4 times per year	-0.041*	-0.025	-0.048*	-0.011
Twice in past year	-0.090***	-0.033	-0.043	-0.021
Once in past year	-0.043	-0.025	-0.101*	-0.074
Frequency of archives: reference is none				
At least once a week	-0.025	0.045	0.003	-0.058
Limited weekly, but at least monthly	-0.037	0.044	-0.009	-0.099
At least 3/4 times per year	0.004	-0.024	-0.099	-0.128
Twice in past year	-0.013	-0.074	-0.010	-0.121
Once in past year	0.008	0.007	-0.004	0.027
Frequency of museum: reference is none				
At least once a week	0.316***	0.073	-0.080	-0.009
Limited weekly, but at least monthly	0.080*	0.025	-0.040	0.027
At least 3/4 times per year	0.043*	0.049**	-0.047	0.059**
Twice in past year	0.017	-0.006	-0.036	-0.011
Once in past year	0.016	0.023	-0.039	-0.037
Frequency of historical sites: reference is none				
At least once a week	0.020	-0.041	0.046	0.084
Limited weekly, but at least monthly	0.033	0.007	-0.002	0.036
At least 3/4 times per year	0.047**	0.002	-0.008	0.014
Twice in past year	0.065***	0.050**	0.005	0.083***
Once in past year	0.063***	0.013	0.009	0.042
Frequency of moderate intensity sports: reference is do not do any sport				
3+ times per week	0.156***	0.269***	-0.003	0.095***
1-3 times per week	0.060***	0.113***	0.007	0.026
Limited weekly, but at least monthly	0.034	0.065***	0.028	0.018
At least 3/4 times per year	0.027	0.035	-0.005	0.004

Twice in past year	-0.017	0.066*	-0.084*	0.009
Once in past year	0.037	0.073	0.021	-0.003
Frequency of mild intensity sports: reference is do not do any sport				
3+ times per week	0.157***	0.146***	0.054*	0.066**
1-3 times per week	0.131***	0.120***	0.045	0.029
Limited weekly, but at least monthly	0.056**	0.065***	0.020	0.033
At least 3/4 times per year	0.080***	0.048**	0.010	0.013
Twice in past year	0.003	0.034	0.027	-0.042
Once in past year	0.112***	0.010	0.126***	0.022
Other leisure activities				
Frequency of internet use: reference is every day				
Several times a week	0.008	-0.016	-0.004	-0.004
Several times a month	0.033	-0.009	-0.043	0.010
Once a month	-0.018	-0.108**	-0.045	0.010
Less than once a month	0.009	-0.021	0.009	-0.043
Never/no access	0.092***	0.000	0.101***	0.062**
Drink/meal with family/friends at least once a month	0.137***	0.103***	0.061***	0.076***
Model diagnostics				
-2 Log likelihood	73629.233	83194.232	47976.280	36229.716
Chi-square	2579.041	4896.841	487.577	1213.218
Sig.	0.000	0.000	0.000	0.000
Pseudo R-squares				
Cox and Snell	0.100	0.182	0.031	0.048
Nagelkerke	0.105	0.187	0.032	0.061
McFadden	0.034	0.056	0.010	0.032
Total Observations	24,376	24,342	15,637	24,643

Source: Understanding Society Wave 2, 2010-11.

Notes: Significance levels of 1%, 5% and 10% are denoted by ***, ** and * respectively. Missing values for income, working hours, and overtime entered as mean.

Of primary interest in this paper are the variables pertaining to arts, culture and sport. Engaging in arts activities is associated with greater satisfaction (although only statistically significant for life and leisure). This finding is only present, though, when these activities are engaged with at least once per week, reflecting the importance of regular frequency for these non-passive activities. The majority of these activities require active participation, e.g. playing an instrument, acting in a play. These activities are likely to provide cumulative benefits through the act of performing, feelings of purpose and social interaction (Wood and Smith, 2004; Creech et al, 2013). In contrast, more passive activities including attending arts events appear to have broader positive effects on life and leisure satisfaction, and to a lesser extent general happiness, irrespective of frequency. A number of the arts activities (singing, playing an instrument) and events (concerts, musicals/opera) considered are music-centric. This finding is

therefore consistent with, and extends, the extant research. Although the descriptive findings are indicative of greater life satisfaction among those visiting libraries and archives, this is not borne out in the regression analysis. The inclusion of controls suggests these activities may be negatively associated with satisfaction (although statistically insignificant for archives). The exact drivers of this finding remain unclear, but could reflect other factors influencing relative satisfaction of those visiting libraries and archives e.g. socio-economic status.

Museums and historical sites, which both exhibit a number of 'cultural characteristics', are associated with greater satisfaction. A positive relationship with life satisfaction is present when museum visits are frequent, although it should be noted that visiting museums at least 3-4 times per year is associated with greater life and leisure satisfaction and general happiness. Historical sites are also found to have positive impacts when visited less frequently (twice in the past year, and once in past year (for life satisfaction only)). This finding is also indicative of these heritage sites often being less frequently visited, consistent with the patterns observed in Table 1, in part as a result of limited accessibility of some sites (Marsh et al, 2010:19). Meanwhile, some of the strongest effects are present with respect to participation in moderate and mild sport. This suggests particularly positive leisure experiences are generated from these types of activity, extending the extant literature (Downward and Raciute, 2011; Bryson and MacKerron, 2013). In contrast to the other activities considered, engagement in mild intensity sport does have a positive association with job satisfaction, consistent with Hecht and Boies (2009). This is likely to reflect individuals participating in recreational sporting activities organized within the workplace which generate positive impacts on well-being through improving social networks and generating feelings of 'togetherness' (Hamermesh, 2002; Downward and Raciute, 2011). However, the analysis also suggests that the benefits of

moderate non-passive sporting activities are only realised when engaged with regularly (3+ times per week; 1-3 times per week, and; limited weekly, but at least once monthly).

Variables considering 'other' leisure activities, including the frequency of internet use and whether respondents entertain family or friends for a drink/meal at least once a month, provide some interesting additional insight into aspects of SWB. The presence of social networks, evident in the latter of the two variables, is associated with greater SWB, especially life and leisure satisfaction (evident in the magnitude of the effects). This likely reflects the benefit of regular human interaction and corresponds with Wang and Wong (2014) who identify social interaction as being associated with greater satisfaction/happiness. With respect to internet use significant associations are found between those who never use or have no access to the internet, and life and job satisfaction and general happiness. This is likely to reflect that the majority of this group are older individuals, shown to report greater satisfaction (82.9% of the *Understanding Society* sample reporting never/no access are aged over 50, with 43.8% aged 70 or over). The remaining associations for frequency of internet use are largely insignificant. The ordered probit models provide evidence in support of the suggested positive leisure experience generated from arts, culture and sport. The exception to this, however, is job satisfaction, where few positive associations are found with the exception of mild intensity sport. It may be inferred from this that there may be limited or no spillover from the majority of these activities into well-being at work. Mild sport, perhaps through strengthening social networks and 'togetherness' with colleagues, offers the exception. Remaining arts, cultural and sporting activities may be considered 'peripheral' or 'separate' to job satisfaction, perhaps indicative of divisions in the way individuals consider work and leisure time.

5 Discussion and conclusion

This paper has contributed to our understanding of the positive leisure experience (Ateca-Amestoy, 2011), and cultural value, derived from engagement in arts, cultural and sporting activities, measured with reference to SWB. Using large-scale UK data from wave 2 (2010-11) of *Understanding Society*, the paper also makes contributions through consideration of a wide range of leisure activities, and in the empirical analysis of associations with four different measures of SWB: (1) reported satisfaction with life; (2) amount of leisure time; (3) job, and; (4) general happiness. The key empirical findings are as follows:

(1) positive leisure experience is derived from participation in arts, culture and sport, evident in greater satisfaction with life and leisure, and general happiness;
(2) the characteristics of arts, cultural and sporting activities are important in understanding their relationship with SWB, including the effects of frequency of engagement;
(3) limited evidence, with the exception of engagement in mild sport, of spillover from arts, cultural and sporting activities into job satisfaction.

In respect of finding (1) the analysis identifies positive associations between satisfaction with life, amount of leisure time, and to a lesser extent general happiness, and those that attend arts events, visit historical sites and museums, and engage in moderate and mild sports. This corresponds with, and extends, previous research in this area, and is indicative of the positive leisure experience derived from these activities. There are some notable exceptions to these findings, however, including visiting libraries and archives being associated with lower satisfaction, although the exact drivers of this relationship remain unclear. Frequency, meanwhile, does require a nuanced interpretation. Those participating in arts activities and sports on a regular basis report greater satisfaction, as outlined in (2). These results are indicative of non-passive activities which require greater personal effort, and/or generate specific cumulative benefits, only delivering positive well-being effects when engaged with

frequently. Meanwhile less frequent engagement in more passive activities including visiting historical sites and museums, generates positive leisure experience. Attendance of arts events is found to have a positive relationship irrespective of frequency, perhaps indicative of the general benefit of these leisure experiences. These findings correspond with the notion that the use or 'quality' of leisure time, rather than simply quantity, has relevance in deriving positive experiences (Wang and Wong (2011:1816; 2014:100), and is indicative of activities, which exhibit a number of 'cultural characteristics' delivering benefits even when engaged with less frequently. Meanwhile in reference to finding (3), although employment has a negative relationship with leisure satisfaction, no evidence is found of spillover from engagement in these activities into job satisfaction. The only exception to this is regular engagement in mild sports consistent with some of the findings presented by Hecht and Boies (2009) and Hamermesh (2002). The analysis suggests that while employment status may have a significant relationship with satisfaction with other aspects of life, many leisure activities may not have an effect in terms of job satisfaction. Individuals separate aspects of time-use (including the quality of leisure time).

The findings are also indicative of a range of cultural goods, including arts activities and events, museums, historical sites and certain sporting activities, acting as a source of cultural value. A number of these activities exhibit 'cultural characteristics' as identified by Throsby (2001) and the analysis suggests they generate positive experiences. Consumption of these activities may then generate a range of benefits (including learning and health benefits), acting as a source of cultural value (Throsby, 2001:27; 2006). It should be noted that, although generating positive leisure experience including spill-over to job satisfaction, the cultural value of certain sports (and other activities) remains questionable due to their inherent characteristics. Moreover, the relative magnitude of the cultural value of the activities considered requires further

investigation. Further research is also required to unravel the lesser satisfaction reported among those visiting libraries/archives. Meanwhile, the negative relationship with leisure satisfaction found among workers compared with those unemployed may be indicative of the reduction in amount (and quality) of leisure time experienced by working individuals. Questions could also be raised regarding causality in the relationships observed (consistent with debates raised in the extant literature, see for example Stutzer and Frey (2006:334-6)). Specifically, further investigation is required to unpick whether engagement in these activities drives satisfaction, or whether lack of access perhaps as a result of socio-economic factors is manifest in lower satisfaction. This follows the assertion by Ateca-Amestoy (2011:70) that access to cultural goods will increase quality of life as individuals have the option to use assets and also benefit from the 'symbolic' value of their existence. Moreover, as well as access an argument could be raised regarding the role of norms and expectations in determining relative satisfaction (Spencer, 2009, 130). As Schor (1993, 129) suggested, individuals tend to 'adapt' to their environments: their preferences, as such, adjust over time. Individuals may then, at different times, exhibit different happiness set-points i.e. those with a happier disposition may be more likely to participate in arts, cultural or sporting activities. Further analysis could be performed using mixed methods, as advocated by Brown et al (2012), to facilitate the capture of more detailed perspectives from those engaging in activities, as well as those involved in the funding and management of these sectors. This would provide a potentially rich source of data with which to further our understanding of the SWB effects of engagement with arts, cultural and sporting activities. Nevertheless, the analysis presented has contributed to our understanding of the impact of participation and engagement in a range of cultural goods including arts activities and events, museums, historical sites and sporting activities, evidencing positive leisure experiences measured empirically with reference to the SWB of UK residents.

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Appendix

The following table sets out in detail the activities that comprise the broad categories used in the regression analysis: (1) arts activities; (2) arts events; (3) libraries; (4) archives; (5) museums; (6) historic sites; (7) moderate sports, and; (8) mild sports.

Arts Events	**Arts Activities**	**Moderate Intensity Sports**
Film at a cinema or other venue	Dance (including ballet)	Health, fitness, gym or conditioning activities
Exhibition or collection of art, photography, sculpture or a craft exhibition	Sang to an audience or rehearsed for a performance (not karaoke)	Gymnastics
Event which included video or electronic art	Played a musical instrument	Swimming or diving
Event connected with books or writing	Written music	Football (including 5 or 6 a side)
Street arts or a public art display or installation	Rehearsed/performed in a play/drama, opera/operetta or musical theatre	Cycling, bmx or mountain biking (for sport or recreation)
Carnival or cultural specific festival	Taken part in a carnival/street arts event	Water sports, including yachting, dinghy sailing, canoeing, rowing, windsurfing
Circus (not animals)	Learned or practiced circus skills	Rugby (union or league) or American football
Play/drama, pantomime or musical	Painting, drawing, printmaking or sculpture	Track and field athletics
Opera/operetta	Photography, film or video making as an artistic activity	Jogging, cross country and road running
Classical music performance	Used a computer to create original artworks or animation	Hill-trecking, backpacking, climbing or mountaineering
Rock, pop or jazz performance	Textile crafts, wood crafts or any other crafts such as embroidery, knitting	Golf (including pitch or putt)
Ballet	Read for pleasure (not newspapers, magazines, comic)	Boxing
Contemporary dance	Written any stories, plays or poetry	Racquet sports (table tennis, tennis, badminton, squash)
African people's dance or South Asian and Chinese dance	Been a member of a book club where people meet up to discuss and share books	Martial arts
Library, Archive, Museum		Horse riding
Used a public library service		Basketball
Been to an archive centre or records office		Netball
Visited a museum or gallery		Volleyball
		Cricket
		Hockey (exc ice, roller or street)
Historical Sites	**Mild Intensity Sports**	Baseball, softball or rounders
A city or town with historic character	Snooker, pool or billiards	Ice-skating
A historic building open to the public (non-religious)	Darts	Skiing
A historic park or garden open to the public	Ten-pin bowling	Motor sports
A place connected with industrial history	Rambling, walking for pleasure or recreation	Angling or fishing
A historic place of worship attended as a visitor (not to worship)	Shooting	Archery (if age>64)
	Archery (if age<65)	Yoga or pilates (if age>64)
A monument such as a castle, fort or ruin	Yoga or pilates (if age<65)	Bowls (indoors or outdoors if age>64)
A site of archaeological interest	Bowls (indoors or outdoors if age<65)	Croquet (if age>64)
A site connected with sports heritage	Croquet (if age<65)	Other sporting activity such as fencing, triathlon, lacrosse orienteering