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An Evidence Based Methodology for Cultural Institutions Seeking to Identify and Profile their Local Populations

Community is a term utilised in policy to describe a collective target audience for public services. Political requirements mean that delivering direct and indirect benefits to local people is regarded as essential to obtaining public sources of funding for cultural organisations. Regardless of any external pressure, cultural organisations strive to be conscious, receptive or inclusive of the views of the public. This paper summarises how a robust approach was developed to identify and profile groupings of residents within an area in relation to their local civic museum (UK). This method resulted in a nuanced understanding of a museum's local population, identifying groupings upon which to base its future plans. Crucially, the methods outlined in this paper are transferable to cultural institutions in different settings worldwide. Our discussion contributes to the wider endeavour of evidencing impacts of museums on variously defined communities.

Keywords: community; museums; management; impact; cluster analysis

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Introduction

This paper explores the question of how 'local community' might best be defined and identified in researching museum impacts. Demonstrating local community impacts has become ever more crucial for museums in the UK in recent years (Evans 2012; Kendall 2013; Morse and Munro 2015). Measuring local community impacts is of special concern to museums receiving funding from, or seeking to engage with, local governments. Evidence of museums' direct and indirect local community impacts, also helps museums make their case for national sources of public funding as well as in-kind and financial support from volunteers, individual donors, companies and foundations. In contexts where governments are following policies of austerity, the museums sector recognises the need to diversify all these sources of support (Lindqvist 2012). To be

sustainable financially, museums have to be pro-active in public consultation and engagement (Weil 2003) and there is a widespread consensus that museums receiving public funding ought to increase their role in society (Lynch 2011; Museums Association 2013).

Watson and Waterton (2010, 1) have argued that political requirements placed on the heritage sector have ‘celebrated the value of community without ever examining its definition or content’. When the term ‘community’ is applied in the context of museum impact assessment, for example, the question of how to define and identify ‘community’ (as a singular entity), or ‘communities’ (plural) is seldom answered. In reaction to grey literature published about museums’ impacts for the public, academic debates often remain theoretical. Articles examine the tensions within the museums sector, emphasising a division of practitioners in ‘collections based’ or ‘public focused’ roles (McCall 2012). Theoretical pieces question whether the cultural sector should account for its impacts; which impacts are instrumental or intrinsic; and which roles are central or peripheral to modern museum practice (Gibson 2008). Commissioned reports that attempt to fill the void in empirical research use the term ‘community’ loosely (Dean et al. 2010).

In the interests of the museums sector, we urge a more nuanced and transparent approach when employing the term ‘local community’ and commissioning any form of community consultation, evaluation or impact assessment. In this paper we provide an achievable framework for museums uncovering intra-urban variations based on a blend of behaviour and opinion. We provide an empirical example of how this can be operationalised. First, we outline the various conceptualisations of ‘community’ present in museum-related literature. Second, we present popular ways museums group people within their vicinities. Third, we suggest our own approach for museums to segment

their local populations with application to a specific case. Fourth, we discuss the findings within a broader framework that reflects upon the social construction of 'local community' through our method. Lastly, we draw conclusions that highlight the advantages and limitations of our methodology.

Conceptualising Community

The term 'community' is open to multiple definitions with different usages dominating a variety of contexts and academic disciplines (Tuan 2002). Given this ambiguity, there is a danger that public policy aimed at museums will be guided by a diffuse view of the nature of community, leading to ill-defined attempts to evidence community impacts by the sector.

In academic papers relating to museum impacts, 'community' is largely undefined and can have multiple interpretations, including: those with shared historical and cultural experiences; people with specialist knowledge; groupings according to national, regional and local affiliations; age or gender similarities; demographic concentration or socio-economic situation; those defined by their exclusion from other communities; and those grouped together as a community of visitors (Guetzkow 2002).

The discourse of 'community' within museums' practice is neither unique to the UK, nor a particularly new development. Certainly since the 1960s the international museum sector has witnessed a rise in emphasis on the social benefits of museums and the part they can play in helping alleviate major societal problems (van Mensch 1995). New Museologists argued that traditional museums often portrayed an elite, authoritarian and non-negotiable view of the world when they should have encouraged many perspectives and represented multiple publics (Mayrand 1985; Simpson 1996).

Point five of the Santiago Declaration (ICOM 1972), which marked the acceptance and subsequent mainstreaming of New Museology or socio-museology by

wider international museum practice, stated ‘museums should establish systems of evaluation in order to verify their effectiveness in relation to the community’. In practice, this declaration called for the employment of evaluation practices, while using the term ‘community’ in the singular rather than recognising the plurality of ‘communities’.

In fact, ICOM used ‘community’ to symbolise the general population living near to institutions, rather than more affluent groups for whom patronage and support of a museum was a component of maintaining an elite status (Davies 2011). Ever since, prominent figures in international museology have urged for museums to derive their legitimacy from what they do with their collections for wider public benefit (Weil 2000). There is still concern that museums need to be much more proactive in widening participation to include communities that have historically been marginalized in society and are found to be under-represented in museum audiences (Sandell and Nightingale 2012).

Since the 1990s, the idea of a singular ‘local community’ has been superseded by the recognition that communities are becoming ever more plural and diverse as processes of globalization and technological innovation have led to greater connectedness, mobility and cultural exchange (Collins 2010). Museums with digitised collections or records may now be said to have virtual and online communities too (Hermon and Hazan 2013). We acknowledge that in practice museums can fulfil multiple roles, providing services which can benefit non-local audiences (Jacobsen, 2013). But even taking into consideration museums’ many international and national links, their connection with the ‘local’ is still central to museum practice (Reel 2015). We argue that local foci are now encouraged by funders in the UK and correspond with international socio-museological sentiments (Hutchison 2014).

A recent review of UK museum publications reveals ‘community’ often refers to groups of people living in a museum’s geographical locality with different interests, life circumstances and behaviour towards the museum (Hutchison 2014). Indeed, the geographical boundary that constitutes a locality is left to interpretation. It is rare for a study to explain what it means by ‘local’ and where an artificial boundary has been drawn (Hutchison 2014). This consideration of the spatial aspects was given due consideration in our research.

Reflecting upon a conference session specifically focused on community engagement in 2008 Watson and Waterton (2010, 1) observed that ‘‘community’ seems to have ossified into a set of assumptions and practices that were now rarely examined’. Our cursory review demonstrates that in the intervening years a normative meaning of ‘community’ has yet to emerge in the sector. Nevertheless, checking that museums are delivering ‘impacts’ to ‘communities’ is presented almost universally as a worthwhile pursuit to determine whether museums are delivering in a socially responsible way (Weil 2000). For example, Sandell (1998) favourably describes a process of museums producing impacts at individual, community and societal levels.

This paper is supportive of museums working to benefit communities, however defined, and follows the sentiments of socio-museology. There is a clear need for museums to more adequately understand, include and involve self-defined communities or those identified with specific demographic characteristics. However, this paper departs from previous scholarship by focusing on a method for museums to better understand linkages between the impacts of their general service and the impacts derived by the general population living locally. This gap in the research emerged from a review of the extant literature (Hutchison 2014). Rather than ask whether local communities have a museum, we sought to ask whether a museum has ‘communities’?

The members of these museum ‘communities’ may not have a common bond beyond their interaction with the museum, but may constitute distinctive local groupings that share a similar relationship to the museum. We argue that identifying these local groups is beneficial in advancing museums’ attempts to understand their impact and introducing techniques they could employ to give substance to their use of the term ‘local community’.

Common Approaches to Eliciting Local Community Views

Museums in the UK with connections to local government sometimes have community stakeholder panels at their disposal (Economou 2015). These panels are designed to be representative of the demographic characteristics within a political boundary and rely on the availability of volunteer participants in giving feedback (Watters and Biernacki 1989). This is a relatively easy way for museums to get an impression of the opinions of a heterogeneous group of people comprising different genders, ages and socio-cultural status. Importantly, the people on the panel are not necessarily ‘users’ of the museum but as local residents may support it indirectly through taxes. However, it is not possible to generalise using data gathered from these panels because of limited sample sizes and because community panels are only representative of people regarding their geographical residence or some aspects of their demographic characteristics at best.

Another resource is general population studies being conducted by consumer research bodies. The growth of marketing expertise and audience development roles in the museums sector has placed an onus on identifying groups or segments to aid targeted programming and promotion. This trend – of identifying lifestyle clusters that can predict consumer behaviour – can also be found in consumer research (Ryan 1995). Indeed, commissioned consultants frequently use groupings derived from general population studies and lifestyle surveys to create recommendations for museums.

By collecting postcodes of visitors, UK museums have a relatively easy way of ascertaining where their visitors reside. They can then profile these visitors through reference to indexes of deprivation or lifestyle categories relating to postcodes, for instance ACORN or MOSAIC. These techniques are an important first step in the analysis of social inequalities; for example, establishing whether certain visitor categories are over or under represented in their current audiences compared to the general population. However, these postcode analyses only give a partial picture. They present a profile of a museum's current visitors in relation to pre-determined lifestyle segments or one dimension of socio-cultural status. The postcode analysis is unfortunately divorced from any other museum-specific data about people's views and experiences of the museum which can make it meaningful.

Non-departmental public bodies have tried to help individual cultural organisations classify their public to help management and planning. For example, Arts Council England produced *Audiences Insight* (2008), presenting groups based on their participation in the arts. This has since been further developed by the Audience Agency in England. The segments utilised in these studies are arguably more relevant for marketing than general lifestyle segmentations, as they are based on the nation-wide *Taking Part Survey* (Department of Culture, Media and Sport 2011). *Taking Part* measures attendance to museums and galleries, capturing demographic data and other relevant lifestyle data. However, it is questionable whether a tool based on national-level data is appropriate for use by a cultural organisation, given that segments may or may not be meaningful to their local situation. Its use would also imply that museums across the country offer cultural participation in uniform ways. Furthermore, this approach concentrates on how to effectively market existing provision rather than informing service planning in relation to different target groups. This segmentation of

groups, by how involved they are with cultural organisations, belies the diversity of relevance, relationships and involvements between museums and their local populations (Hutchison 2014).

Conversely, visitor studies of museums have been conducted which derive groups by motivation type (Falk 2009; Kranz et al. 2009). These have been criticised for neglecting to explore the way these groups correspond to visitors' geographic origin, demographic or socio-economic characteristics. For example Falk's model identifies types of 'identity motivation' but does not explain who belongs to the different types through conducting profiling of the people within each category (e.g. demographics of visitors), beyond their motivations (Dawson and Jensen 2011). Instead, Falk (2009) grounded his attempt to create typologies of visitors with the intention that these should be useful in shaping museum programming.

As we shall demonstrate, there is validity in considering groupings both in correspondence with socio-demographic characteristics and behavioural motivations. In addition, in an era of performance management and community-focused service design, the groupings should also be married to evidence of museum impacts on community groupings, including visitors and non-visitors.¹ The research reported in the next section of this paper is such an attempt.

¹ Similar to 'community', the meaning and definition of 'impacts' are also varied, with assumptions more typical in the sector than justifications for the adoption of specific measures of impact. The limitation on space in this paper means that our critique of museum 'impact' research is reserved for a subsequent publication.

Methods

The research reported here is a quantitative component of a mixed-method research design, specifically a questionnaire administered in a cross-sectional survey (Hutchison 2014, Appendix 5).

Case Study Location

In order to test our approach to identify and profile groupings of residents within an area in relation to their local civic museum, we chose a case study in Exeter, the Royal Albert Memorial Museum (RAMM). This was appropriate given RAMM is one of approximately 700 museums run by local authorities in the UK (Museums and Galleries Commission 1994, 99). Although museum services are not statutory provision in the UK, these museums are particularly dependent on local government funding allocations for their core budgets and in this case the museum staff were employees of Exeter City Council (Lawley 2003). Similarly to many UK civic museums, RAMM's diverse collection was brought together in the nineteenth century and its recent acquisition policy became increasingly focused since then on enhancing collections with local connections.

Between 2007 and 2011 RAMM's main building in the centre of Exeter was closed to the public. This allowed for a £24 million redevelopment project, mainly funded by the Heritage Lottery Fund. Meanwhile, Exeter City Council funded a new museum store to hold items safely during and following the redisplay of the permanent galleries.

As a recipient of public money for running costs and capital development, RAMM's local and national funders sought accountability and evidence of its impact on its 'local community' after re-opening its doors. The museum did receive accolades for its redevelopment, including *Museum of the Year* Art Fund Prize 2012. Also, RAMM

had previously commissioned economic impact assessments, ACORN analysis of postcodes and various studies into the role of the museum within the city of Exeter. Even so, the museum management desired more in-depth research to identify intra-urban variations to utilise in programming decisions. They wanted extensive research which went beyond advocacy, beyond marketing, beyond justification of spend, to gain an in-depth understanding which could be drawn upon for various management purposes. Importantly, the museum saw this research as the start of their journey to better understand, include, involve and impact local communities over the coming years.

Primary Data Collection from the Surrounding population

As already mentioned, the definition of ‘local’ requires interpretation. The political boundary of Exeter City Council was adopted as the boundary between local and non-local, given that the core museum budget came from Council Tax payers who are resident within this boundary. On a background population of 91,971 residents aged 16 years and over, we used a strato-random sampling approach to obtain a representative sample across the city of Exeter (Hutchison 2014). The data was derived from a representative sample from a household survey distributed to addresses within this local political boundary using a drop and collect distribution method.

Our goal was to derive a representative sample of the population in the city, to provide greater validity to the results, as they demonstrated the impacts of RAMM on local residents. In other words, we were not just targeting people we knew were more likely to value the museum (Hutchison 2014).

The survey instrument asked questions relevant for people living in the local area, not restricted to museum visitors (Hutchison 2014). Instead of focussing on one aspect of museum studies, for example motivation for visiting, the questions covered a

number of topics to provide sufficient variables for statistical analysis. Respondents were asked about their behaviour towards RAMM before and after its redevelopment and motivations for visiting. All participants responded to statements to reveal their attitudes towards museums in general and RAMM in particular. Two question banks asked respondents directly about potential impacts of RAMM. One question was composed of a series of eight variables relating to impacts which could apply to everyone living near RAMM, not only people who had visited. Later, a series of 22 variables were grouped to explore views corresponding to impacts derived through the experience of visiting RAMM; relating more to what have been termed in the literature as ‘cultural’ or ‘intrinsic’ impacts (Hutchison 2014, 23-75). For these impact question banks, respondents had to indicate their levels of agreement on a four-point Likert scale, with strongly disagree coded as 1 and strongly agree as 4. The survey ended with a socio-demographic section.

Cluster Analysis Procedure

Our methods were also designed to deliver statistically and conceptually valid groupings, useful for museum management purposes. Cluster Analysis has been used as a way of discovering underlying patterns by indicating expedient clusters of cases that are not distinguishable through other multivariate techniques (Hair et al. 2009).

However, Cluster Analysis is not commonly employed to derive segments in museum studies. The only instance of a detailed description of it having been done so was by Kranz et al. (2009) with three US museums. They employed K-means clustering, with clustering variables focusing on visitor motivations. We were inspired by this previous work, but we chose a different form of Cluster Analysis suitable for our nominal clustering variables, which incorporated dimensions of behaviour towards the museum and impressions of the RAMM’s impact.

The Two-step technique in SPSS v.19 was appropriate for the nature of the variables and the categorical data with a multi-nominal distribution (Norušis 2012, 394). Unlike non-hierarchical clustering options, Two-step can handle nominal variables by including the counts of each category (Hutchison 2014). Three hundred and seventy three cases out of a possible 384 answered all four required questions and could be included in the clustering procedure. This number of cases was advantageous because ‘larger samples increase the chance that small groups will be represented by enough cases to make their presence more easily identified’ (Hair et al. 2009, 519).

A five-cluster solution proved the most appropriate and statistically reliable (see Table 1). The solution had a cluster quality above 0.5, representing a ‘good’ solution (Mooi and Sarstedt 2011, 280). The influence of the clustering variables on the solution was checked to ensure that no one variable was dominating the others and all variables were important to the cluster formation (Hutchison 2014). Crucially, the solution had five clear, interpretable groups.

< INSERT TABLE 1 NEAR HERE >

A breakdown of the characteristics of each cluster was produced to check that differences were found between the five clusters for the clustering variables. This was another step in ensuring that the cluster solution was statistically valid. All four variables had significant differences between the five clusters according to Kruskal-Wallis tests at alpha level of 0.05. This breakdown was also used to check that the clusters made conceptual sense and to help name the clusters before presenting them to museum management.

Intra-urban Variations Revealed by Cluster Analysis

In relation to RAMM, groups were identified through Cluster Analysis and then profiled by other variables from the survey instrument. Instead of running through all the results and their implications (Hutchison 2014), this paper reports on examples of the analysis and conveys the potential of cluster profiling (Hutchison 2014). We provided the museum with an in-depth report and advice for boosting the impacts for these groupings based on our knowledge of their sites, exhibitions and the context of Exeter's location and population make up. At the end of each section we provide a taster of our recommendations. Table 2 shows the four clustering variables that were used.

<INSERT TABLE 2 NEAR HERE>

Cluster 1: Core Visitors

RAMM's current primary audience, with 35% of respondents, was named Core Visitors. This was due to their responses to the four clustering variables. Nearly everyone in this group had been to the museum before it closed for refurbishment and all had visited since it re-opened. At the time of the questionnaire, RAMM was actually the last museum they had visited. RAMM was seen to have a 'mainly positive' impact on its local community by this group.

The profiling by other survey variables revealed Core Visitors were more likely to have children in their household than the sample as a whole.² This community had a relatively large proportion of younger (16-34) respondents than the other clusters (14.0%) and a relatively low number of elderly (75 years and older) respondents (7.0%). The vast majority (94.6%) said museums were places to visit at home and on holiday.

² $\chi^2(6.33) > \alpha(3.84, p=0.05)$.

Core Visitors appeared to have a consistent relationship with RAMM, visiting more frequently before it closed in 2007 than other groups. In terms of motivation for their visit after RAMM re-opened, the highest response was for a desire to support their local museum (18.3%). Core Visitors usually selected 'strongly agree' for RAMM as somewhere for 'children and young people to benefit from', and somewhere to learn about 'the local area's history and culture' and 'the history and culture of the wider world'. This group had the highest mean scores out of all the groups for 'spend time with family' (3.33), 'escape from my routine' (3.10), 'learn about the local area's history and culture' (3.58), 'learn about the wider world' (3.53), 'appreciate our heritage' (3.40) and 'add perspective and meaning to my life' (2.83). Learning about the local area's history and culture had particularly high agreement amongst the 22 individual impact variables, with a modal response of 'strongly agree' for this variable.

RAMM was advised that to boost impacts for Core Visitors they should continue to provide opportunities for learning about Exeter and the wider world, continue to invest in their main museum site, and to support their front of house staff so RAMM continues to be an enjoyable place in which to spend social time.

Cluster 2: Museum Fans

Museum Fans were a small segment of the participants making up 8% of the sample. Although a proportionally small group, they are important for RAMM as they are used to visiting museums in general and could compare their local museum to others they had recently visited.

Again, the naming of this group corresponded to the patterns revealed in analysis of the clustering variables (see Table 2). All had been to RAMM since its redevelopment. A majority of respondents saw RAMM's impact as 'mainly positive'.

The main factor distinguishing this group from the Core Visitor cluster was that no members responded that RAMM was the last museum they visited.

Regarding the characteristics of Museum Fans, nearly half (40%) were in the 55-64 category, the highest proportion of all the cluster analysis groups. This group also contained the highest proportion of highly educated respondents (65.5%). Over 10% of Museum Fans resided in the most prosperous areas of the city (Local Futures 2008, 26). Museum Fans had high levels of central tendency for how many times they had visited a museum in the past twelve months. Indeed, the average number of times they visited a museum in a year was close to 7 times (5% trimmed mean), far higher than the 2 times the whole sample of respondents visited a museum. They had higher levels of agreement for going to museums ‘to learn new things’ (46.7%), ‘appreciating heritage’ (26.7%) and ‘to see objects up close’ (20.0%) than other clusters.

Museum Fans had relatively high means for all of the eleven attitude statements about RAMM, compared with the other clusters. For example, Museum Fans were the only cluster to usually select ‘strongly disagree’ for a suggestion that the money spent on the redevelopment should have been spent elsewhere. Within Museum Fans, the highest average score of the community-level impact variables were for children and young people benefiting (3.57). For the Individual-level impacts, Museum Fans tended to select ‘agree’ for all the 22 statements. Museum Fans had the highest means out of all the groups for ‘contemplate and reflect’ (3.14), ‘relax and de-stress’ (3.11), ‘inspire me to be more creative’ (3.13), ‘stimulate imagination’ (3.14), ‘read and listen to stories and information’ (3.28), ‘views taken seriously’ (2.89) and ‘I can get involved’ (2.90). Therefore, the more experiential impacts, relating to emotional responses and RAMM as somewhere to listen to them and cater for their input, applied most to this group.

Although the smallest group, Museum Fans, more than any other group, are aware of the relative standard of other museums across the country and the world. We advised RAMM would continue to satisfy them if it encourages their experiential responses to its collection, interpretation and space, and holds diverse temporary exhibitions.

Cluster 3: Latent Visitors

RAMM's third local grouping made up 31% of our sample. Latent Visitors had been to RAMM before the refurbishment but not since it re-opened. Despite not having been to RAMM recently, about a quarter of this group identified RAMM as the last museum they visited. Latent Visitors were also overwhelmingly positive about the impact of RAMM for its local community.

The profiling of this group revealed Latent Visitor's mean age was the highest of the clusters, at 58 years old. In fact, this cluster was the group with the largest proportion of retirees (44.3%). Furthermore, this cluster had proportionally the largest amount of people with no qualifications out of all the clusters: 26.1% as compared to 16.1% of the total sample with no qualifications. Our statistical testing found the Latent Visitors had a higher proportion of C2DE (National Readership Survey n.d.)³ than the sample as a whole.⁴

³ The NRS social grades are a system of demographic classification used in the United Kingdom. They were originally developed by the National Readership Survey (NRS) to classify readers, but are now used by many other organisations for wider applications and have become a standard for market research. Their definition is now maintained by the Market Research Society. The grades are often grouped into ABC1 and C2DE, these are taken to equate to middle class and working class, respectively. A (*upper middle class* /

For their attitudes towards museums in general, Latent Visitors usually selected the most positive answer option for all six semantic differentials. They had the highest mean, of all the clusters, for museums as places they could ‘trust to give a balanced view’ and ‘important public services’. Desiring to support their local museum was selected as a reason for visiting RAMM more than any other (9.0%). Latent Visitors had their highest means for the eleven attitude statements eliciting views of RAMM for ‘the re-development will be an asset for years to come’ (3.55). This result indicated that they thought about the longevity of the museum as a cultural institution (Williams 1997). Contrasting the means of Latent Visitors with the other clusters, they had the highest levels of agreement for RAMM working with community groups (3.16), schools and colleges (3.36) and not only catering for people in the mainstream of society (3.26). This indicated that they were more aware than other clusters of RAMM’s attempts to form partnerships and work outside its main museum building. Latent Visitors had the highest means, out of all the clusters, for ‘people of all ages can mix’ (3.45). The benefit of intergenerational interaction was seen by Latent Visitors as especially important, presumably relating to the older age make up of this group (Kelly 2006). This group were more likely to agree with RAMM’s impacts related to providing an inclusive institution for the whole community, than the other clusters. They displayed a particular

higher managerial, administrative and professional); B (*middle class* / intermediate managerial, administrative and professional); C1 (*lower middle class* / supervisory, clerical and junior managerial, administrative and professional); C2 (*skilled working class* / skilled manual workers); D (*working class* / semi-skilled and unskilled manual workers); E (*underclass* / state pensioners, casual and lowest grade workers, unemployed with state benefits only).

⁴ $\chi^2(6.5) > \alpha(3.84, p=0.05)$.

sympathy for the notion that museums work on a community-level as they bring people together in the one space (Museums Association 2013).

To enhance impacts for Latent Visitors we recommended RAMM to think of ways to make it easier for them to visit sooner rather than later. After all, nearly all of this group of older Exeter residents desired to visit the redeveloped museum. This group were also particularly interested in benefits derived through objects, therefore we knew RAMM could promote how it welcomes contributions to interpretations and correspondence about personal experiences with its collections. For this group the inclusion of their stories, for example through reminiscence and contributions to programming for younger visitors, should be especially welcomed.

Cluster 4: Unconvinced

The fourth group entitled Unconvinced made up 18% of our sample. The vast majority had been to RAMM before it closed in 2007 and under a third had visited since it reopened in 2011. More than half of this group had been to another museum besides RAMM as the last museum they visited. This group was identified as a distinct community as it was less favourable of RAMM's impact towards the local community than other clusters. Most felt RAMM had 'no real impact' and a few believed it had a 'negative impact'.

The profiling of the Unconvinced group helped explain behaviour and attitudes. None within this group stated their occupation was looking after their home or family during the week. This group also had the largest proportions of people between 45-54 years of all the clusters (30.3%). They most commonly had not visited any museum within the past twelve months. Therefore, visiting a museum was not an activity they undertook often. Indeed, out of all the clusters, this group had the highest proportion selecting museums as places to go only when they were away on holiday (17.9%). This

group also contained the highest proportion selecting museums were somewhere to go on a rainy day (14.9%), as compared to less than 5% of the total respondents.

The group had the highest proportion of people who had visited as a child, expressing that they had mainly negative memories compared to the other clusters (10.0%). It should still be noted that half of the people who had been as a child had 'mainly positive' memories and the remainder (40.0%) had mixed memories. But the higher negativity associated with childhood experiences could have repercussions for their views of RAMM as an adult. Of those who have visited since the redevelopment, 15% said they would not visit again. Although this was the highest proportion selecting this option of the three clusters who had visited, it is still a small proportion of respondents.

Unconvinced displayed a tendency to disagree with RAMM building strong partnerships with local community groups and businesses in the area. For the set of community impact variables, Unconvinced and the total sample had significantly different distributions according to Kolmogorov-Smirnov tests ($p \leq 0.05$). This group had less positive responses compared to the sample as a whole. Indeed, Unconvinced had the lowest means out of all the clusters for all eight statements. The highest mean given by this cluster, related to children and young people benefitting (3.20) and the lowest mean referred to RAMM making them proud of where they lived (2.65). However, the most popular response of this group for the eight statements was, without exception, 'agree'. Therefore, their levels of agreement with impacts were relatively lower, but not especially negative.

Unconvinced's responses were found to be distributed significantly differently than the sample as a whole for all 22 individual level impact variables ($p \leq 0.05$). Again, in common with the community-level impact variables, Unconvinced were relatively

negative compared to the total sample. The highest mean given with the cluster was learning ‘how the past relates to the present’ (3.17) and the lowest for ‘my views are taken seriously (2.11). On the one hand, Unconvinced had the lowest means for all the statements of all the clusters, without exception. On the other hand, they tended to agree that RAMM delivered these impacts. Exceptions were RAMM helping them with personal development, adding perspective and meaning to their lives, taking their views seriously and getting involved. For these four variables, the modal response was ‘disagree’.

For Unconvinced, those who had visited RAMM were positive but were unsatisfied with the café. This demonstrates that attention to every element of the museum experience, including its facilities, are important to produce positive impacts. As this group tended to disagree that RAMM built strong partnerships with local businesses, we recommended RAMM ensure partnerships are mutually successful and sustained.

Cluster 5: No Experience

Making up 8% of respondents, this group were called No Experience as they had never been to RAMM before or since the redevelopment project. Interestingly, despite their lack of experience as visitors themselves, two-thirds described the museum’s impact as ‘mainly positive’. The profiling of this group helped RAMM understand why this group had never visited and stimulated them to think of ways to engage with them. No Experience contained the highest proportion of people stating they were still in education (16.1%). This group had a relatively high proportion of younger respondents, in categories 16-24 and 25-34 (29.0%), compared to the other clusters. The mean household income, at £25,555, was the lowest of all the clusters. No Experience usually disagreed with RAMM as a place ‘to meet up with friends’. The profiling of this group

encouraged the museum to think about how they could not only complement this group's formal learning, but create engaging programming with a low consumer cost which would appeal to this largely young grouping.

Encouraging impacts for residents in the No Experience category is important because they were often still in education, younger and with less disposable income. Therefore, we advised RAMM to target the institutions in which they study for promotion. Crucially, this could be maximised through involving young people themselves in the creation of museum experiences to give them a sense of connection, and indeed leave a legacy for future younger audiences. RAMM was already enabling this through its programming, but given the low disposable income of this group we advised efforts should be made for social activities to be free or low in cost.

Discussion

The findings reported in the methods section of this paper are particular to RAMM. However, they illustrate a method of data gathering that is not only transferrable to different research sites, but which also demonstrably yields information specific to the test site. Our method can be employed to generate bespoke findings for cultural institutions. In summary, we offer guidance on how museums can appropriately survey local residents, derive groupings from data on behaviour and opinion, profile these in more detail, and use this increased understanding of a large sample of people in their local area to inform management decisions. In this section we reflect on each of these aspects of our method in turn, including our contributions, relation to other studies, acknowledgement of our study's limitations and suggestions for further research.

Deriving Intra-Urban Groupings

Returning to the notion of ‘community’ Bryan (2006, 605) asked, ‘can a term used so broadly be of constructive analytical value?’ We acknowledge the danger of the sector becoming paralysed by the ambiguity of ‘community’. We argue that it can be a useful term as it reflects the desire of museum workers and volunteers to be of relevance and benefit to the general population. Indeed, in our survey instrument we used the concept of the museum impacting positively or negatively on a local community. In a broad sense we gathered evidence that RAMM was regarded as having positive impacts for its local community. However, it was the qualitative techniques we used later in our study which started to unveil peoples’ experiences and assumptions which underlay this opinion. We recommend more research into why people value museums or other cultural organisations to benefit a collective, often linked to a geographic or demographic categorisation.

In our case the groups identified through Cluster Analysis were bounded through a sample taken from a prescribed geographical area, the political boundary of Exeter. Following the example of this replicable study provides a means for any cultural institution to start to rigorously investigate, evidence and improve their impacts on their local population.

Depending on the funding support of the organisation and the realistic reach of its services, they may follow our example of a political boundary, or choose drive time or topological boundaries. We recommend that whichever boundary is chosen is co-determined by the researchers and museum management, with the methods and results reported transparently. A cultural institution may not wish to only stick with a notion of ‘local’ if it has a regional or national remit. Indeed museums are now very conscious of their remote audiences who may be based in worldwide locations (Prosler 1995). One of

our recommendations for future research is to go beyond boundaries and see how far communities of like-minded people are spread across space and in multiple directions.

Our study employed drop and collect but the choice of survey administration can be adjusted depending on the resources available for data collection. Crucially though, we recommend that research employs a household survey. This mitigates the sampling bias of exit surveys or street surveys. To gain any real understanding of local communities, solely focusing on current visitors and their motivations is not advisable. It brings detrimental effects for museum practitioners. First, the categories combine visitors who are local and non-local residents. There is theoretical intuition that tourists having different motivations for visiting museums and derive different values from their visits than local residents, but this claim has yet to be empirically demonstrated (Packer 2004; Palumbo 2001). Second, it excludes the positive or negative value that the museum may hold for non-visitors, who are not motivated to visit, but who may nevertheless constitute an important political or financial stakeholder. The urgency, legitimacy and power of claims by non-visitors on the museum will obviously vary, but they should not be disregarded altogether. A third related point is that a strict focus on visitor motivations does not assist managers to develop programming with appeal for people living in their proximity, many of whom have not visited the museum and constitute a potentially important audience for museums with a strong focus on education and learning. Fourth, ascertaining why visitors have been motivated to make a visit on one occasion does not give an adequate indication of the various impacts the museum has as an organisation, and the cumulative impact of its programming.

In response, our method elicited views from a representative sample of Exeter's residents aged 16 years and older. Their inclusion in the sample was not dependent on use of the museum but was randomly determined based on their household address. In

this case, we did not have the capacity to design specific data collection tools for children. But we recommend that our method is enhanced by the testing of suitable techniques for eliciting views from a population aged under 16 years.

Cluster Analysis was our approach to grouping our final sample. It resulted in a more museum-related, replicable and transparent technique than utilising ready-made segmentations pertaining to socio-demographic or behavioural characteristics. As it derives groups from a number of variables, Cluster Analysis offered a way of forming groups from data analysis rather than starting with common ways of grouping the public, for example by age groups, socio-economic status or lifestyles (Hood 1991).

Our clustering variables and clustering technique were carefully considered and tested until we were convinced they provided credible results. Admittedly this stage of the process is subjective and hard to describe. Choices have to be made and defended throughout the process and as a result Cluster Analysis has been described as ‘more an art than a science’ (Hair *et al.* 2009, 561). Our confidence was aided by the research team having experience of Cluster Analysis techniques, our thoroughness in testing out different approaches, cross checking interpretation of results, sense checking results with the RAMM partners and validation of our work to external audiences. (Hutchison 2012).

We recommend that a cultural institution select clustering variables pertaining to behaviour and attitudes towards its impact. In addition, there are other hierarchical techniques available for variables measured on Likert scales. Researchers should review a range of cluster solutions and select the results with the greatest statistical and conceptual reliability (Mooi and Sarstedt 2011).

Profiling Intra-urban Groups

Our technique outlined the means to profile derived groups in terms of attitudes, behavioural patterns and socio-demographic characteristics. Therefore beyond cluster variables, we recommend the researcher should include sufficient variables in the survey instrument for this exploratory stage of analysis. Admittedly our survey instrument was somewhat myopic in concentrating on behaviour towards museums, attitudes towards museums and socio-demographic characteristics. For example, we did not include questions about other leisure time activities, sources of education or entertainment or general interests. In our defence, researchers always need to consider what length of survey is achievable and concentrate on essential variables to address research questions (Black 1993).

The profiling of our five derived communities, using other variables from our survey gave RAMM a deeper understanding of its five local communities. Anyone adopting our approach to profiling can also add details of behaviour, characteristics and attitudes. Variables were included in our survey to elicit classification of cases corresponding to NRS Social Grade System (n.d.). We do caution as to the interpretation of ABC1 and C2DE,⁵ but profiling by this gave another dimension to our interpretation of the cluster groups.

We recommend that profiles be enhanced by appropriate data visualisations, written and oral presentations. Research teams can be creative in their presentation of information and utilise marketing communication techniques, but ultimately the profiling should be based on results from descriptive statistics and bivariate tests (Hutchison 2014).

⁵ The NRS social grades are a system of demographic classification used in the United Kingdom. See note 3 for further explanation.

Increasing Understanding of Impacts on Local Communities

Replication of the techniques presented in this paper will be valuable for other researchers interested in forming groups of people in relation to the impacts they perceive from their local cultural organisation.

For museums, the idea of working to satisfy the entire population's needs will remain attractive: 'frequently, representatives of public services state that their mission is to provide services which satisfy as many people as possible' (Chapman 1999, 216). On the one hand, a museum can conceptualise its public in a specific way, an improvement on research where the museum is simply positioned as benefitting everyone, where the public as a mass entity. On the other hand, a museum gains a more nuanced view of its public, discovering patterns within a myriad of individuals with multiple views, experiences and characteristics. This meeting-ground was achieved for RAMM and cannot be branded as too general nor reductionist (Dawson and Jensen 2011).

The findings which resulted from this research were deeply valued by the case study museum. The research aims and approach were developed in dialogue with the museum and the project was explained to staff and volunteers. RAMM's results from the analysis were presented in a report and presentations were given to Council staff and Council members. The profiles of communities were accompanied by recommendations for how RAMM could maximise impacts for each. This research provided the basis for planning the future success of RAMM with programming that was grounded in views from five distinct groups within the local population characterised by their past behaviour towards the museum and their views of its impact for them and other Exeter residents. This final point emphasises the collaborative nature of University partnerships with museums and the importance of not only researching museums' impacts, but

facilitating the creation of those impacts through the generation of a credible, robust evidence base.

To clarify, our quantitative method described in this paper does not fully evidence the impact of RAMM on its local communities. However, the method led to increased understanding of the impacts of the museum for its local population in general. Our multivariate analysis derived groupings based on a combination of behaviour and opinion. This offers a far more robust and useful approach to techniques described earlier in this paper. Adoption of our quantitative method will elicit evidence of strengths and deficiencies in general service provision for the local population.

We recommend that in tandem with adopting our method, museums also continue to perform more conventional methods of impact assessment. By this we mean that they start with self-identified communities or groups with protected characteristics and ascertain ways to maximise positive impacts for them (*Equalities Act 2010*). This can be conducted formally through Equality Assessment procedures, common in public institutions. However, this can also be achieved through evaluation, action research and embedding self-identified community members in the design and delivery of targeted projects and programmes. In the case of this research, RAMM was very proactive in building up partnerships with community organisations and third sector groups. The techniques and methods described here provided RAMM with the basis to continue its work with partners to tailor its services for self-identified communities, because the survey findings revealed that a representative sample of the local population felt that the museum's impact on local communities was positive. The legitimacy bestowed upon a museum by demonstrating the impact on the local population, especially those accountable to local tax payers for their main source of regular income, is difficult to

quantify, but is likely to become more important in situations where competition for public sector funding is increasing.

By all means, museum practitioners, policy makers and researchers should still use the term ‘community’, but its use needs to be subject to more critical reflection and clear articulation of which community or communities are being referenced in their outputs. Even better, a museum can evidence and improve the impacts it has on ‘communities’ through a combination of two tactics. The first utilises the transparent statistical techniques outlined in this paper. We recommend they explore these statistically derived clusters further using qualitative techniques. In a context encouraging public consultation in public service provision, museums now have a population segmentation approach to follow, for example to inform selection of community panel members, evaluation or research participants. The second tactic is to work with self-identified communities to improve the inclusivity of their general service, thus broadening impacts to more people, and create more successful tailored programmes for self-identified communities.

Conclusion

The major contribution of this paper is the development of a method for cultural institutions which goes far beyond extant research in helping them to identify, profile, describe and further consult their local communities. The approach to data collection and analysis was appropriate given the complexities of the term ‘community’ and the context of RAMM.

We reiterate the importance of understanding the impacts of museums for their local population for three main reasons. Most cynically for political expediency; most idealistically to correspond to the New Museological ethos; and most practically to help the strategic and every day decisions of professionals.

Moreover, we encourage all stakeholders not to take the concept of ‘community’ for granted, but to explain which communities they are referring to in impact assessments, evaluations, promotional reports and journal articles. We urge museum managers and academic researchers to consider people not only as member of the groups that you as a museum, or society more generally defines, but to embrace how people create, define and identify with groups themselves.

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Table 1. Cluster Solution.

Cluster	Count	Proportion of respondents (%)	Name (Abbreviation)
1	129	34.6	Core Visitors (CV)
2	30	8	Museum Fans (MF)
3	116	31	Latent Visitor (LV)
4	67	17.9	Unconvinced (U)
5	31	8.3	No Experience (NE)

Source: Hutchison 2014, 265.

Table 2. Clustering Variables Results.

	1 (CV)	2 (MF)	3 (LV)	4 (U)	5 (NE)	χ^2
<i>Did you ever visit the RAMM before it closed for refurbishment in 2007?</i>						230.7
Yes	115(89.1)	27 (90.0)	116 (100)	66 (98.5)	0 (0)	
No	14 (10.9)	3 (10.0)	0 (0)	1 (1.5)	31 (100)	
<i>Have you visited the RAMM since it re-opened last December?</i>						315.9
Yes	129 (100)	30 (100)	0 (0)	20 (29.9)	0 (0)	
No	0 (0)	0 (0)	116 (100)	47 (70.1)	31 (100)	
<i>What was the last museum you visited?</i>						218.3
RAMM	129 (100)	0 (0)	30 (25.9)	28 (41.8)	0 (0)	
Not RAMM	0 (0)	30 (100)	86 (74.1)	39 (58.2)	31 (100)	
<i>In your opinion what do you think about the current impact of RAMM on its local community?</i>						301.3
Mainly positive	129 (100)	24 (80.0)	116 (100)	0 (0)	21 (67.7)	
No real impact	0 (0)	6 (20.0)	0 (0)	60 (89.6)	10 (32.3)	
Mainly negative	0 (0)	0 (0)	0 (0)	7 (10.4)	0 (0)	

Display shows n(%)

Kruskal-Wallis Test, χ^2 , 4df

Bold denotes significant difference at $p \leq 0.05$ level

Source: Hutchison 2014, 265.