

Analyzing Perceptions of Inequalities in Rural Areas of England Using a Mixed-methods Approach

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ABSTRACT: *This paper describes the findings of the Social and Environmental Inequalities in Rural Areas project which investigated both dataset and methodology development to investigate this issue from an interdisciplinary viewpoint. The research utilised mixed methodologies to examine how rural residents experienced and perceived conditions in the 21st century English countryside. These included a rapid appraisal participatory mapping to generate a baseline of local concerns and recruit participants for in-depth discussion groups. The group meetings then combined vignette techniques from social qualitative research to investigate local knowledge of inequalities and adapted them to include participatory mapping to capture participant understandings in a spatial framework. The stakeholder supplied information was then analysed in a participatory geographic information system and qualitative software to investigate whether place plays a role in perceptions of unfairness or injustice and how residents are differentially affected by rural conditions. These novel mixed participatory methods are described and linked to highlights of the findings of the participatory geographic information system analysis of local stakeholder's perceptions of inequalities in rural England.*

INTRODUCTION

Tickamyer (2000) conceptualises space in three ways: As *place* – a specific locale comprising a hybrid of biography and topography (Hall, Lashua, & Coffey, 2006); as *relational units* developed to organize our ideas of place including comparing between them; and as *scale* – the size of these relational units used to make comparisons. By comparing places using different relational unit's inequalities between locations operating at a variety of scales can be identified. The term 'inequality' in this case (as used in this paper) refers simply to the spatial dispersion of a distribution, following precedents set by Litchfield (1999) and Kokko et al. (1999).

Why do we give precedence to inequality resulting from gender, race or class but fail to give equal consideration to spatial categories (Tickamyer, 2000; Dorling, 2011) "type": "article-journal", "volume": "29", "uris": ["http://www.mendeley.com/documents/?uuid=3e5680c8-4445-45d0-bad6-e9e2fd2d160a"] }, "mendeley": { "manualFormatting": "(Tickamyer, 2000; Dorling, 2011) The achievement of sustainable rural development implicitly depends on the spatial distribution of social, economic, and environmental goods and services that are needed to maintain, reinforce, or improve the vitality of rural areas. The need to understand inequalities in the distribution of environmental conditions across different social groups is highlighted in the UK Government Sustainable Development Strategy (HM Government, 2005) and plays a key role in the work of the Environment Agency and other government bodies (Warburton, 2006; Coleman and Duarte-Davidson, 2007; Defra 2008). There is a growing recognition that to achieve real improvements in rural conditions it is not sufficient simply to consider levels of poverty and environmental quality. The gaps between rich and poor, and between good and bad are at least as important (Boyce, 2007; Hills et al., 2009; Wilkinson and Pickett, 2009). However, there is

little research to date that investigates specifically rural inequalities from the necessary interdisciplinary perspective.

A society can be considered well-ordered when designed to advance the good of its residents and effectively regulated by a shared public conception of what is considered just. The challenge in identifying concepts of justice is whether they are based on the actual distributions of resources or instead derived from normative principles of what should or could be (Jasso & P.H. Rossi, 1977). That is to identify whether the unequal distribution of a resource only identifies a difference in location or rather implies unfairness or injustice (Le Grand, 1991). The use of participatory geographic information system (PGIS) methods offers the potential to investigate, in a spatial framework, how actual distributions of resources interact with resident's normative principles of a fair or just allocation of goods and services (Dorling, 2010; Soja, 2010).

This paper reports on the findings from a project that attempted to look at concepts of place across relational units at different scales to identify both quantitatively and qualitatively the distribution, magnitude and effect of spatial inequalities on rural residents of England in the 21st Century. This research is used to illustrate the development of novel mixed method approaches incorporating the use of PGIS techniques to help identify perceptions of injustice that may be applicable in a wider range of contexts, places and communities.

A QUANTITATIVE ANALYSIS OF INEQUALITIES

The Social and Environmental Inequalities in Rural Areas (SEIRA) project (www.sei.se/relu/seira) was organised in inter-linked phases. Initially, spatial datasets of social, economic and environmental conditions in rural England were derived from

existing national datasets and then this information was used to identify and measure inequalities quantitatively.

Rural England was identified according to the official UK government rural-urban definition (Bibby and Shepherd (2004)) which was based on population density and linked to settlement morphology. The definition was generated for spatial units called Lower Layer Super Output Areas (LSOA) that were used to analyse the outputs of the 2001 national census. LSOAs are consistent in terms of population size (with a mean of 1596 residents) but vary dramatically in spatial extent in rural England with an average area of 18.3km² but a maximum size of 683.7km² (National Statistics Online, 2007). In total there are 6027 rural LSOAs in England representing approximately 3.9 million households. LSOAs are ideal for analysing social and economic information which is made available for these spatial units, but represent methodological challenges when incorporating environmental data collected on a different geography (Huby, et al, 2009).

The SEIRA project compiled a large number of social, environmental and economic datasets and then selected a subset of thirty-two individual variables for further analysis. Statistical techniques were then applied to this subset to extract underlying factors representing conditions of rural England. Four factors were identified (as seen in table 1): ‘Disadvantage’ incorporated income deprivation together with poor education and employment opportunities, mental well-being issues, fuel poverty and problems related to access to housing, such as affordability; ‘Remoteness’ was an indicator of areas further away from schools and leisure activities and where farming was often subsidised; ‘Richness’ indicated areas that had a high diversity in vegetation and wildlife and where house prices and business activity tended to be high; and, ‘Pollution’ was an indicator of where air quality was poor and crime problems existed. Inequalities in these factors between LSOAs in different administrative geographies, for example English counties, were then quantified (Huby, et al, 2009b).

RESIDENTS PERCEPTIONS OF INEQUALITY

However the spatial data and quantified measures of inequality only revealed differences between locations. Were the distributions of goods and services identified from the quantitative data distinguishable from personal experience? More importantly, did people living in rural England perceive an *unfair* or *unjust* distribution of social, economic and environmental resources? In short, could there be an *inequitable* distribution of resources (Walker, 2010) in rural areas? In order to answer these questions it was necessary to better understand the experience, knowledge and perceptions of rural residents.

To facilitate this discussion groups were organised in four counties distributed across England namely: Northumberland, South Yorkshire, Buckinghamshire and Devon (see Figure 1). The first three of these exhibited the highest levels of relative inequality among their LSOAs in terms of both environmental-ecological and socio-economic conditions. In order to include the perceptions of residents from southern England, Devon was also identified on the grounds that this county was the most unequal relative to the other counties in the South West. Within these counties specific locations where the LSOA factor data indicated relatively poor social and economic conditions but high variation in terms of the physical environment were identified as target communities for the qualitative fieldwork.

RECRUITING PARTICIPANTS: TRYING TO AVOID THE USUAL SUSPECTS!

The project wanted to encourage participation from a wide range of residents and avoid only speaking to the so called ‘usual-suspects’ (who are active in their local areas and typically come forward to represent their communities’ viewpoint). The researchers felt engaging with a potentially wider mix of views would increase the understanding of the various ways participants

Table 1. SEIRA quantitative factors and underlying variables

Factor 1 Disadvantage	Factor 2 Remoteness	Factor 3 Richness	Factor 4 Pollution
1a. Educational disadvantage 1b. Income deprivation 1c. Low mean incomes 1d. Poor mental well-being 1e. Low employment 1f. Fuel poverty 1g. Barriers to housing	2a. Further from primary school 2b. Environmentally sensitive agriculture 2c. Lot of farmland 2d. Further from secondary school 2e. Few sports and leisure activities 2f. Good quality rivers 2g. Little local work	3a. High probability of badgers 3b. High house prices 3c. High bat species richness 3d. High business activity 3e. High land-cover diversity	4a. High PM10 pollution 4b. High NO2 pollution 4c. High crime rates



Figure 1. Location of case study sites for discussion groups

understood and thought of the issues of unfairness in relation to rural inequality.

In order to identify participants for in-depth discussions a variety of approaches were tried, including contacting existing community groups (such as the Women's Institute, the community church organisations and local sports teams); putting up posters in the villages inviting people to contact the research team; and direct contact with people via recommendations from existing participants.

The project team also utilised a version of the Rapid Appraisal Participatory-Geographic Information System (RAP-GIS) methodology (Cinderby, 2010). This method was designed to engage with people who would not typically attend an organised meeting through barriers such as time, work or family commitments, disability, confidence and suspicion. The RAP-GIS approach involved taking the mapping to the community – rather than expecting them to come to a meeting. In this case the technique was taken to the street at local markets in the fieldwork villages.

In each market the research team set up a stall with a colour A0 sized map of the local area mounted on thick foam. Passers-by were encouraged to come across for five minutes and share what they thought of the local area. The project was introduced by the researchers and participants were each given two numbered coloured flags (yellow and blue – to avoid issues of colour blindness) and asked to identify one location they would recommend or thought was good in the local area and another (using the alternate coloured flag) they felt had a problem or something



Figure 2. RAP-GIS mapping being undertaken at markets to aid participant recruitment

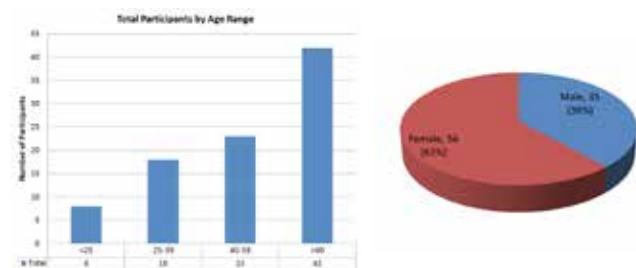


Figure 3. RAP-GIS participants age and gender profile combined from two events

they would like to see changed or improved. Participant's comments (numbered to match the flags) were recorded on clipboards alongside their demographic and contact details. This 'off-map' recording of comments meant that future participants could not be overly influenced by previously supplied information, although obviously the colour of existing flags indicated thematic clusters of 'goods' and 'bads'. RAP-GIS in progress on one of the markets can be seen in Figure 2 above.

The technique proved useful for getting a wide demographic balance and large number of participants illustrated with data from two three-hour long events held in Buckinghamshire (see Figure 3). The project specifically did not attempt to engage with under-18 year olds due to the relative sensitivity of the inequality issue. This rapid data collection and engagement methodology provided an opportunity for the team to invite the passers-by to more in-depth meetings at later dates. Their contact details were collected and followed-up later with telephone calls confirming the dates and availability of people for discussion groups or in some cases individual interviews.

IN-DEPTH DISCUSSIONS OF UNFAIRNESS

From the outset, the aim of the fieldwork was to get a wide range of participants involved, but not a statistically representative

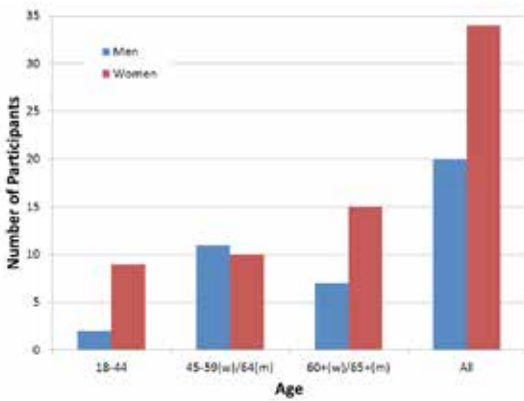


Figure 4. Age range of discussion group participants

sample. The intention was not to generate a survey of how the population of rural England thinks about inequity and injustice. Instead, rather it was to understand how the participants in this fieldwork expressed their ways of thinking and concepts around issues related to unfairness in the distribution of social, economic and environmental goods and services.

In total fifty-four people attended the discussion groups. Their gender and age breakdown can be seen in Figure 4. For most participants of the fieldwork the concepts of inequality and inequity were relatively alien to their everyday thinking and discourse. In order to guide people through the two-hour discussion groups, a three-step process, illustrated in Figure 5, was developed starting with an orientation exercise and leading to in-depth debates on the concepts of unfairness.

The orientation exercise simply asked participants to mark on a map where they lived, worked, shopped and went for leisure. It was designed to get them used to looking at, and comfortable with, marking locations on the supplied A0 British Ordnance Survey 1:50K topographic map centred on the village in question.

Let Us Tell You A Story...

Once participants had located themselves on the map the discussions moved onto identifying their knowledge and experiences of rural living through the use of vignettes linked to a participatory mapping activity.

Vignettes were originally conceived as a short description containing a controlled amount of information upon which interviewees responded (Nosanchuk, 1972; Wilks, 2004) but allowing them to build their own interpretation and meaning into those response (Finch, 1987). The narratives often took the form of moral dilemmas (Barter & Renold, 2000; Finch, 1987; Gould, 1996; Graves & Frederiksen, 1991; Hughes, 1998; Hughes & Huby, 2002; Jenkins, Bloor, Fischer, Berney, & Neale, 2010; Sim, Milner, & Love, 1998; Taylor, 2005; Wilks, 2004) with the vignette keeping the framing of these issues consistent and allowing some control and direction to be introduced by the researcher (Alexander & Becker, 1978) They have been used in a wide variety of contexts including large surveys where they are

used to generate consistent data that can be analysed quantitatively (Nosanchuk 1972; Rossi et al. 1974). In qualitative research they are designed to allow normative issues to be discussed in a way that is equivalent to the complexity of everyday life (Finch, 1987).

The vignettes used in the SEIRA project were constructed to gain comments on the options available to different rural residents housing and lifestyle needs. One involved a family moving from an urban area that had childcare and transport requirements. The other was constructed around the story of a young woman on a low income hoping to move out from their family home but wanting to stay in a rural location. The vignettes were built to incorporate aspects of the quantitative factors (described in table 1) that were important for determining patterns of inequalities.

These vignettes (seen in full below in table 2) were employed in order to allow people to discuss conditions in their locality in relation to the needs of hypothetical characters rather than having to describe their own personal situations. This has the advantage of making the questions less personal and broke away from the limitations of participant's personal experience and circumstances. The variety of different content in the two vignettes was designed to discourage participants from replying purely on their own experience but necessitate them to consider conditions from an alternative using their local knowledge of environmental, social and economic conditions.

The vignettes were read out loud by the research team to avoid any issues of literacy amongst the participants. There were also paper copies available for people to refer to during the mapping component of the vignette responses.

Can you mark that with a sticker?

Vignettes have previously been used in face-to-face interviews, focus groups, postal and self-administered questionnaires; and presented via video-tape, audio recordings, newspaper reports, rap music and through photographs (Hughes, 1998). Lieberman (1987) turned the approach on its head by getting participants to compose narratives she termed vignettes rather than respond to existing text. The novelty of the application of vignettes in this research was their combination with participatory mapping and GIS. Participants were requested independently (and without conferring) to identify and mark with a sticker places that might be suitable locations to meet the requirements of the hypothetical characters. They were then asked to explain in turn why they had marked the specific locations.

Is this a fair distribution?

The final stage of the discussions centred on whether the patterns of opportunities and problems identified through the vignette mapping were just for the actual people currently living in those localities – was there any inequity for rural residents. These discussions proved very fruitful for understanding the normative framework of the participants in relation not just to their own circumstances, but thanks to the vignette, those for other people with differing needs and choices.

Table 2. Vignette narratives used with participatory mapping (the numbers relate to the variable descriptions in Table 1). Elements marked *** were customized to each location with relevant and appropriate detail.

Vignette One—Health and Safety	Vignette Two—Leaving the Nest
<p>“Mr. Adam Regis (32 years old) and his wife Mrs. Janet Regis (30) are moving to the local area so that Adam can take up a new job with the local council in *** as a transportation planner. He will be paid approximately \$***K for this new role [3b, 3d]. They have two children, George, six, and Chloe, two. Janet cannot drive so ideally they would like a house somewhere with facilities or public transportation links [2a, 2d, 2e]. The family is moving from Manchester and would like somewhere safer [4c] and healthier [4a, 4b] to bring up their children. They enjoy being outside (walking and cycling) [2c, 2f, 3a, 3c, 3e] and would ideally like somewhere with facilities for the children [2e].”</p>	<p>“Sarah is 23 and still living at home with her parents in ***. She has always lived at home [1g] as she has struggled to find work locally [2g, 1e] and could not afford to move out [1g]. Sarah has recently started a more secure job in *** with an income of \$17K per annum [1b] and now feels she would like to move into a place of her own. She realizes she cannot afford to buy locally [3b], but would like to rent. She would like to stay near her family, but doesn’t know if this is possible or affordable. Sarah drives to work but would like to save money by taking public transportation.”</p>

ANALYSIS AND RESULTS

The discussion groups were recorded and transcribed for further analysis in a qualitative software package. They were then coded using a structure, collaboratively defined by the research team, which evolved as the process developed using a grounded theory approach (Bryman, 2008; Ritchie and Lewis, 2007). The findings from the vignette responses, participatory mapping information and the in-depth discussions of unfairness can be grouped into themes related back to the quantitative factors seen in table 1. The ‘richness’ of living in a rural environment was described in relation to the beauty of the countryside, low pollution levels, but also linked to risks associated with these qualities such as river flooding. The increasing ‘remoteness’ of rural settlements was highlighted in relation to the availability (or more often lack) of services such as schools, doctors, shops, banks, libraries and post-offices. This was a major concern and linked to the increasing inaccessibility of key services for many residents by any means other than private transport. The high levels of perceived safety and relatively low crime were considered important benefits of rural living and were related to a strong community spirit and cohesion felt to exist in these locations. This could be considered the inverse of the quantitative ‘pollution’ factor. The lack of affordable housing was a concern across the country, particularly in relation to the options available to young people’s ability to live in villages. This was seen to be connected to the rise of tourism and rural second homes leading to less people living fulltime in villages. This depopulation was seen to be leading to a reduction in employment opportunities and an increase in seasonal or tourist related work that was low paid. These issues equate to the ‘disadvantage’ factor. These findings gave increased confidence that the identified quantitative factors had resonance with everyday life in rural England and were consistent with the experiences of people residing in the countryside.

Analysing these views more deeply identified the normative framework that participants were using to generate their perceptions of inequity. This framework included: the nature of the

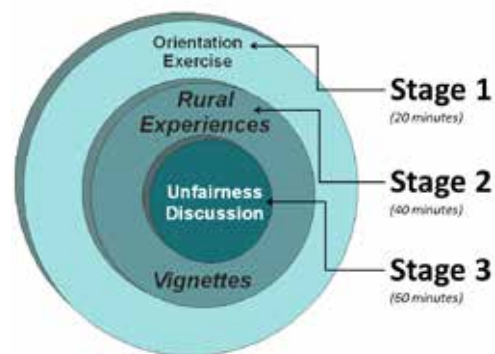


Figure 5. Illustrating the nested stages and timings of the discussion groups

inequalities (typically in services); for whom these inequalities had an impact (mainly children, the elderly and those on low income); and the impact these inequalities had on peoples quality of life (such as increased isolation and lack of available facilities).

VIGNETTES LINKED TO PARTICIPATORY MAPPING

The spatial component of the vignette responses linked to participatory mapping makes it possible to compare participants’ perceptions of rural conditions with the four factors generated in the first part of the project. By classifying the characteristics of places that led to locations being identified as suitable or not suitable for the vignette characters into four themes similar to the quantitative factors the qualitative information can be compared to the quantitative findings. This comparison should be considered a pilot of this methodological approach as the original data collection had not been explicitly designed to undertake such an assessment. Nevertheless it did reveal some interesting, although tentative, findings and is included here to demonstrate the potential of the technique.

Considering the ‘remoteness’ quantitative factor, this was first grouped nationally into quintile classes. The locations identified

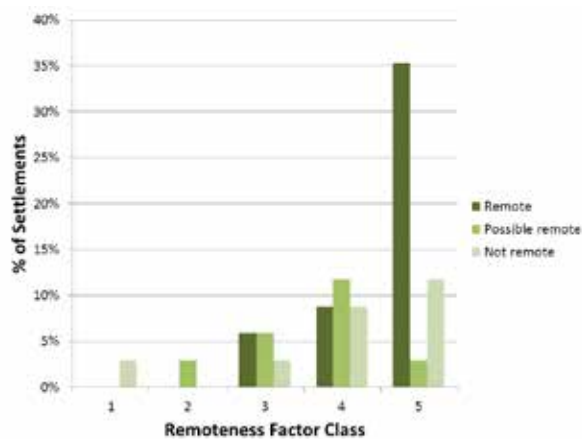


Figure 6. Correlation between Northumberland participants' perceptions of remoteness and quantitative factor class (1 = least remote; 5 = most remote)

from the vignette responses in Northumberland were then coded as remote based on whether people had described a settlement as lacking all services including shops, schools and leisure facilities (these issues corresponding to some of the components of the 'remoteness' factor); or possibly remote if there were only problems in relation to a subset of these facilities, for example, far from primary and secondary schools.

Figure 6 correlating participant's perceptions with the factor class indicates that the locations identified quantitatively as remote and lacking facilities resonated with the personal experiences and local knowledge of the Northumberland participants.

Undertaking a similar correlation between the 'disadvantage' factor and Northumberland experiential information there is far less agreement as seen in Figure 7. The quantitative classes include issues such as educational disadvantage, low incomes and levels of employment, barriers to housing, poor mental health and fuel poverty. The participants did not describe locations in these precise terms but instead referred to a lack of affordable housing but also villages that were suffering from what was often described as deprivation. The spatial variations in these perceived problems of deprivation were high, meaning neighbouring villages could be quite different in terms of their relative affluence. This fine grained differentiation was not picked up with the quantitative data based on a standard population base unit of analysis, the LSOA.

This indicates that whilst census based social and economic data can usefully differentiate between areas it will also (perhaps obviously) mask variations operating on a finer geographic scale. In relation to the issues of inequality, inequity and possible policy responses, this leads to some considerations discussed in more detail below.

BENEFITS OF A MIXED METHOD APPROACH

The mixed method approach to assessing inequality and inequity in rural England described above generated a variety of advantages

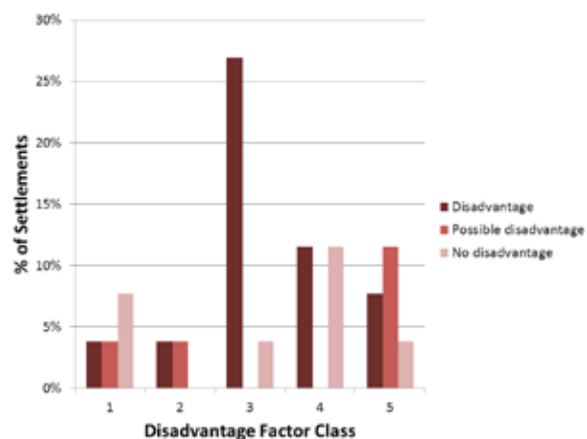


Figure 7. Correlation between Northumberland residents' perceptions of disadvantage and the quantitative factor class (1 = least disadvantaged; 5 = most disadvantaged)

to our understanding of these issues and possible interventions to ameliorate them.

The RAP-GIS method proved useful for attracting a relatively large and varied sample of participants. The concepts of inequality and inequity were specifically not raised in the RAP-GIS questions as it was felt that it was an inappropriate method, due to the very benefit of its short, speedy nature, to discuss this potentially contentious and sensitive issue. However using the approach proved beneficial to the project for a number of reasons.

It allowed the team to make contact with a wider cross-section of the local population than might otherwise have been case through the other engagement techniques employed to recruit participants for the in-depth meetings. The actual up-take of attendance at the meetings from RAP-GIS participants was quite disappointingly low. Of the fifty-four participants less than ten were recruited through this approach. This low uptake may have been a result of the time delays of a few weeks between the on-market events and the subsequent discussion groups. It may also reflect the strength of the method in engaging with people who are not enthusiastic for attending meetings, what UK local councils often call the 'hard-to-reach' (Cinderby, 2010). However as the intention of using the approach was to recruit people unlikely to respond to more conventional methods in some ways even this low uptake could be viewed as a success.

Despite this relatively disappointing number of recruits, the RAP-GIS generated useful information and provided a spatial snapshot of wide cross sections of residents' viewpoints on the positive and negative aspects of their local surroundings. For the fieldworkers this was particularly useful as it allowed them to quickly tap into current issues and concerns in localities they were unfamiliar with. This scoping proved beneficial for the facilitators during the discussion groups as it gave them some initial understanding of the local environment and politics.

PGIS linked to vignettes proved particularly beneficial in helping to generate the projects qualitative findings. The vignettes

forced participants to consider current conditions from differing viewpoints other than their own. This included an existing young resident on a low income but also an incomer moving from a large urban conurbation. The technique proved popular with the participants with one woman asking humorously when the Regis family were moving in as they would fit in nicely to the local village.

The first step in utilising vignettes (as with any research method) is to be clear on their purpose. Qualitative vignettes do not provide an accurate forecast of the individual participants' behaviour but rather give insight into their interpretative framework and perceptions (Jenkins et al., 2010). Responding to the SEIRA vignettes encouraged people to discuss conditions of income, employment, transport and housing without first person reference to their own situations. One participant responded afterwards by saying she had never thought about the local area in this way before. However, whilst the participants described conditions in relation to the needs of vignette characters, their viewpoints and framing of the problems indicated their specific experiences and local knowledge (Taylor, 2005).

The response to the Sarah vignette also proved interesting as it contained less detail of her personality and lifestyle making it more ambiguous (Finch, 1987). This led participants to infill this information based on their ideas of what a 23 year old woman would be interested in and want to live. Details of Sarah's social life were deliberately not included in the narrative but were imagined by many participants. As Barter and Renold's (2000) state, this 'fuzziness' can be a strength of the vignette approach. Participants assume that the protagonist is exposed to the same group norms as themselves and so explicate those norms in their responses to the narratives. However, disjunctions between participants' experiences and vignette descriptions can lead to the methodology breaking down if the differences are too great (Hughes & Huby, 2002). This may have been an issue for younger participants when dealing with the 30-something Regis family or for older people trying to empathise with Sarah's housing predicament.

The advantage of the vignette method in relation to inequality and inequity research is that by projecting situations onto hypothetical characters and asking the interviewees to consider the options open to the protagonist's, sensitive data can be obtained in an indirect, non-confrontational manner (Barter & Renold, 2000). This is especially the case when also combined to participatory mapping (Cinderby & Forrester 2005; Cinderby & Potts 2007)) which has been shown to deflect direct confrontation with participants focussed on interacting with the map as much as with each other.

Gould (1996) recommends that attempts are made to establish the internal validity of vignettes. Researcher bias in creation of vignettes is reduced by basing factors incorporated into the narrative on a systematic review of the research (Taylor, 2005). We attempted to generate this validity in two ways. Firstly, the factors (see table 1 and 2) affecting the vignette characters were identified as being significant issues for socio-environmental justice in the English countryside by the quantitative spatial data analysis and

literature (for example State of the Countryside (Countryside Agency, 2004)). Secondly, the specific vignette narratives were trialled at a project workshop with UK Environment Agency staff in Bristol and through a preliminary focus group held in a rural village local to the research team. To make the details in vignette pertinent to local conditions they were also modified to make them more realistic for participants. For example, Adam Regis's salary was modified to make it feasible (with an additional lump sum deposit) to buy a rural property, but not made so large that this would not prove challenging in the local property market. This meant considerably different salaries for South Yorkshire as opposed to more affluent Buckinghamshire.

Jenkins (2010) speculates that participant's responses to vignettes may be more considered and elaborate interpretation of a moral dilemma than would occur in every-day life. In the SEIRA vignettes we would argue the inverse happened with people taking the task less seriously than they would if they were really being asked by someone (particularly a friend or family member) to recommend places to live. This is not to say that people did not consider their responses carefully, more that there were obviously no real world consequences resulting from their recommendations. However, the focus groups setting did entail participants explaining the reasoning behind their selected locations to the wider audience. This meant they had to justify their local knowledge (Cinderby & Forrester, 2005), particularly when identifying failings in locations that made them unsuitable for the vignette characters as places to live.

The consistency of the vignette content also meant that some of the stimulants behind discussions were kept constant between groups and locations. This makes the technique similar to a survey and led to the results from the different meetings being easier to compare and generalise (Finch, 1987; Hughes & Huby, 2002). A weakness of the approach has been identified as being that participant's give lowest common denominator of morality responses (Barter & Renold, 2000). That is, the least offensive response to the implications of the vignette. The link to participatory mapping may overcome this drawback to some extent as the necessity to explain why the location was suitable or unsuitable necessitated making and explaining differences between places. These differences could be considered disparaging for communities and participants did remark that they didn't mean to criticise particular villages and their inhabitants, just the conditions would not suit the Regis's or Sarah.

The issues of inequality and their possible inequity include concepts of change both in the places and people who inhabit them, what Hall, Lashua and Coffey (2006) term animate geography. The use of the vignettes and mapping allowed us to tap into this living geography with people's perceptions of current fairness relating to the way conditions and the distribution of services had changed. If shops had closed and bus services reduced over time this downward trend added to the feelings that these changes were unfair for remaining residents – particularly for the young and elderly – who still lived in now isolated places. The vignettes helped participants consider conditions for people living lives

different than their own. Linking this to participatory mapping helped people concentrate on the current and past distribution of social, economic and environmental resources and how these actual, rather than abstract, changes related to injustice, the animate geography of rural England.

The use of RAP-GIS, PGIS and vignettes in the context of inequality and inequity research presented a number of ethical concerns. The research deliberately excluded young people from the discussions, even though they were a focus for much of the perceived injustice, as it was felt too sensitive an issue for this age group and ethically challenging for the researchers. Posters and invitations to the discussion groups did not mention inequality or inequity as they were considered loaded terms and off putting for a lay audience. To compensate for this ambiguity, participants were all given a briefing and consent form at the start of the group meetings with the option to withdraw. Nobody indicated to the researchers that they had been invited under false pretences.

The nature of the material generated from the vignette when linked to mapping of actual places poses particular ethical concerns. It may not be beneficial to communities that may already have significant social or economic problems to be labelled as deprived or isolated. In the project this was overcome by only presenting anonymised results back to the participants. However, this approach significantly weakens the value of the data to future research or policy making. These ethical concerns should be a consideration in any form of PGIS engagement but may need particular attention in relation to vignettes and mapping (Gutmann and Stern, 2006). Whilst the use of vignettes may have stimulated negative feelings about particular places for participants feedback from the group meetings indicated that most people had valued the opportunity to talk about the issue of inequality and fairness. The very fact that participants were all living in rural England indicated that they had chosen to live and stay in these communities despite any difficulties.

CONCLUSIONS

The use of a mixed methods approach incorporating a rapid scoping of local conditions and PGIS combined with vignette techniques proved insightful for understanding how inequalities were perceived by rural English residents. The high participation levels of the RAP-GIS mapping demonstrated its potential as a scoping method for engaging with a wide cross-section of a community. The possible limitations of the approach for recruitment were highlighted by the low uptake of participation in the group meetings.

The methodological development of linking vignettes from qualitative research to participatory mapping and GIS holds great potential. Vignettes are a useful tool for stimulating discussions on sensitive or contentious topics allowing researchers to gain insight into participants understanding and normative framing around difficult issues. Linking this to PGIS adds the spatial dimension which relates responses to the *actual* rather than the *abstract*. For topics such as inequalities, inequity, unfairness and justice this spatial framing allows both participants and facilitators to generate significant insight into the current distribution

of resources and consequent effects on the choices and options available to real residents and communities. Particular ethical care needs to be given to applying spatial vignettes to ensure that the participants and also the places identified are not stigmatised by the findings, particularly in relation to contentious issues such as inequality. The information generated from this hybrid method can be analysed spatially in comparison to other data, including official viewpoints on the same topic, one of the longstanding benefits of a PGIS approach. The use of mapping also seems to help participants understand and focus their responses to the fictional descriptions grounding them in the real world and leading to qualitative spatial insights that may not be generated from vignettes alone.

The tentative findings of the comparison between qualitative understandings of inequalities and their distribution with that generated on higher geographies indicates that policy makers need to consider their responses to such issues carefully. Understandings generated from official data may be operating on different a scale to the underlying inequalities. This may mask the actual distribution of effects and consequent problems. The use of participatory methods such as those described here can highlight these fine-grained differences and concerns at the geography experienced by real residents. This could be used to generate useful finding to guide policy interventions and changes on the ground.

Using a mixture of methods stimulated participation and interest in this important and challenging topic. By employing a combination of approaches to investigate the distribution of resources, social, environmental and economic in rural England and examine the consequences of these differences a more insightful, rounded and useful understanding was generated for the research team, policy makers and rural participants.

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