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Approaches to sampling and case selection in qualitative research: examples in the geography of health

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Abstract

This paper focuses on the question of sampling (or selection of cases) in qualitative research. Although the literature includes some very useful discussions of qualitative sampling strategies, the question of sampling often seems to receive less attention in methodological discussion than questions of how data is collected or is analysed. Decisions about sampling are likely to be important in many qualitative studies (although it may not be an issue in some research). There are varying accounts of the principles applicable to sampling or case selection. Those who espouse ‘theoretical sampling’, based on a ‘grounded theory’ approach, are in some ways opposed to those who promote forms of ‘purposive sampling’ suitable for research informed by an existing body of social theory. Diversity also results from the many different methods for drawing purposive samples which are applicable to qualitative research. We explore the value of a framework suggested by Miles and Huberman [Miles, M., Huberman, A., 1994. *Qualitative Data Analysis*, Sage, London.], to evaluate the sampling strategies employed in three examples of research by the authors. Our examples comprise three studies which respectively involve selection of: ‘healing places’; rural places which incorporated national anti-malarial policies; young male interviewees, identified as either chronically ill or disabled.

The examples are used to show how in these three studies the (sometimes conflicting) requirements of the different criteria were resolved, as well as the potential and constraints placed on the research by the selection decisions which were made. We also consider how far the criteria Miles and Huberman suggest seem helpful for planning ‘sample’ selection in qualitative research. © 2000 Elsevier Science Ltd. All rights reserved.

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Qualitative research methods are increasingly recognized for their importance in the geography of health and health care. Morse’s comment that “Qualitative research is ...essential to the knowledge development of the health care disciplines” (Morse, 1994, p. 2) is as

true for geography as for other disciplinary perspectives. Discussion of approaches in the geography of health have emphasised the contribution made by qualitative as well as quantitative methods, and discussed the theoretical basis for qualitative research, as well as the distinctive features of qualitative methods. While we cannot attempt a complete review of the relevant literature here, useful overviews include: Jones and Moon, 1987; Curtis and Taket, 1996; Baxter and Eyles, 1997; Kearns and Gesler, 1998.

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This paper focuses on the question of sampling in qualitative research, by which we mean the selection of cases for study. This aspect of qualitative research needs to be addressed rigorously and is fundamental to our understanding of the validity of qualitative research. Although the literature includes some very useful discussions of qualitative ‘sampling strategies’ (e.g. Trost, 1986; Patton, 1990; Strauss and Corbin, 1990; Kuzel, 1992; Miles and Huberman, 1994; Stake, 1994; Baxter and Eyles, 1997) we have noticed that the question of sampling often seems to receive less attention in methodological discussion than issues of data collection (e.g. techniques applied in interviews, focus groups or observation) or of analysis (matters of coding and interpretation of qualitative data).

The following paper reviews some of the principles of sampling which are argued to be important for qualitative research and discusses some guidelines for sampling in qualitative research which have been proposed by Miles and Huberman (1994). Using three examples of our qualitative research in the geography of health we illustrate the issues involved in applying these guidelines in practice and conclude with an evaluation of the usefulness of such guidelines, based on our experience.

Principles of sampling in qualitative research

It can be argued that for some types of qualitative research, case selection is not a matter for which principles can be laid down, since cases are simply ‘given’ aspects of the research question. For example, Stake (1994), in his discussion of case study methodology, distinguishes between: *intrinsic* casework (where the case is pre-specified, not chosen, because a particular case is the focus of the research question); and *instrumental* or *collective* casework, requiring one or more cases to be chosen from a number of possible alternatives in order to explore a research theme. Stake (1994, p. 243) suggests that, if qualitative research requires cases to be chosen, then “...nothing is more important than making a proper selection of cases. It is a sampling problem.” Even in intrinsic casework, there may be issues of selection and choice to be resolved with respect to within-case sampling.

Thus decisions about sampling are likely to be important, but one is faced with varying accounts of the principles of case selection. In the literature cited above there seems to be general agreement about what qualitative sampling *should not* be like (i.e. the approach to sampling is usually described in terms which explain that it is *not* based on principles associated with extensive, statistical methods using probability theory). However, there is less agreement on what qualitative sampling *should* be, reflecting the

different positions of experts in qualitative research methods. This difference of perspective is particularly obvious in the tension between those who espouse a rather pure type of ‘theoretical’ sampling, designed to generate theory which is ‘grounded’ in the data, rather than established in advance of the fieldwork (Glaser and Strauss, 1967; Strauss and Corbin, 1990), as opposed to those who promote forms of ‘purposive’ sampling suitable for qualitative research which is informed *a priori* by an existing body of social theory on which research questions may be based (for example, the stance of Miles and Huberman (1994) seems to be more of this type). There are many examples of different strategies that have been used for drawing qualitative samples (e.g. Patton, 1990), and this makes it difficult to draw out the underlying principles which might be of general relevance.

However, there are, apparently, some key features of qualitative samples which have been distilled from the literature mentioned above:

- the method of drawing samples is not based on theories of the statistical probability of selection, but on other, purposive or theoretical sampling criteria;
- samples are small, are studied intensively, and each one typically generates a large amount of information;
- samples are not usually wholly pre-specified, and instead selection is sequential (by a rolling process, inter-leafed with coding and analysis);
- sample selection is conceptually driven, either by the theoretical framework which underpins the research question from the outset, or by an evolving theory which is derived inductively from the data as the research proceeds;
- qualitative research should be reflexive and explicit about the rationale for case selection, because there are ethical and theoretical implications arising from the choices which are made to include particular cases and exclude others;
- qualitative samples are designed to make possible *analytic* generalizations (applied to wider theory on the basis of how selected cases ‘fit’ with general constructs), but not *statistical* generalizations (applied to wider populations on the basis of representative statistical samples). For example, Miles and Huberman (1994, pp. 27–28), citing Firestone (1993) argue that qualitative sampling can provide the opportunity to select and examine observations of generic processes which are key to our understanding of new or existing theory about the phenomenon being studied. The implications are that theory will drive the selection of these cases, and also that the careful examination of the cases may lead to elaboration or reformulation of theory.

We were interested to explore how far such general

principles of qualitative sampling might be expressed in terms of ‘guidelines’, against which it might be useful to assess alternative sampling strategies. We are aware that the notion of general guidelines may seem an anathema to some researchers who feel that qualitative research is of an idiographic nature and not amenable to evaluation against any common principles. On the other hand, we argue that it is important to justify the rigour of qualitative research and that this is difficult to do without some discussion of what aspects of sampling may be widely accepted to be important. If relevant criteria for evaluation of qualitative sampling strategies exist, they might be particularly helpful to less experienced researchers needing guidance in this aspect of qualitative research design.

We were therefore interested in a set of criteria proposed by Miles and Huberman in their well known manual on qualitative data analysis. Miles and Huberman (1994, p. 34) suggest that sampling strategies can be evaluated in terms of six different attributes, which they present in a pedagogic fashion in the form of a ‘checklist’. Our interpretation of these six criteria, adapted from Miles and Huberman’s text, is as follows:

1. *The sampling strategy should be relevant to the conceptual framework and the research questions addressed by the research.* This may imply consideration of whether sampling is intended to provide cases in categories which are pertinent to a pre-existing conceptual framework for the research, or how far the choice of cases might affect the scope for developing theory inductively from the data.
2. *The sample should be likely to generate rich information on the type of phenomena which need to be studied.* Miles and Huberman (1994, p. 34) phrase this in terms of whether the phenomena of interest in the research are likely to ‘appear’ in the observations. Intensive research depends on the collation of ‘thick description’ of the phenomena which are conceptually important, so we would further argue that it is important that the cases provide rich information on the phenomena of concern in the study.
3. *The sample should enhance the ‘generalizability’ of the findings.* For qualitative samples, as explained above, we are concerned with analytic generalizability rather than statistical power to make statements about a general population on the basis of a sample.
4. *The sample should produce believable descriptions/explanations (in the sense of being true to real life).* One aspect of the validity of qualitative research relates to whether it provides a really convincing account and explanation of what is observed. This criterion may also raise issues of ‘reliability’ of the sources of information, in the sense of whether they are complete, and whether they are subject to important biases which will influence the type of explanation which can be based upon them.
5. *Is the sample strategy ethical?* Miles and Huberman (1994) suggest that the researcher may consider whether the method of selection permits informed consent where this is required; whether there are benefits or risks associated with selection for and participation in the study, and the ethical nature of the relationship between researcher and informants. We also consider below ethical issues concerning cases excluded from qualitative research.
6. *Is the sampling plan feasible?* Miles and Huberman (1994) encourage the researcher to consider feasibility in terms of the resource costs of money and time, the practical issues of accessibility and whether the sampling strategy is compatible with the researcher’s work style. We would add, that competencies of the researcher may also be important for feasibility, for example, in terms of linguistic and communication skills, ability to relate to informants and their experiences, or the researcher’s (or informant’s) capacity to cope with the circumstances under which data collection may take place.

We focus on this ‘checklist’ as a relatively explicit articulation of how to assess purposive sampling strategy in qualitative research. In this paper we aim to explore the usefulness of these six criteria proposed by Miles and Huberman in more detail. We were concerned to explore how far these criteria might be seen to have relevance to our experience of research in the field and to the justification of sampling strategies which three of us have used ourselves. The aim is therefore to examine the shared elements, and the differences, in the sorts of justification which might be offered for sample design in different pieces of qualitative research in health geography. We were also concerned to evaluate how far the six ‘guideline’ criteria derived from Miles and Huberman seemed pertinent to the factors which had determined the choice of cases in each study.

Our examples comprise three studies in the geography of health which involve selection of different types of subject for study and are illustrative of some of the different topics and ‘units of analysis’ which may be important in the geography of health and illness. These were as follows:

- healing places (study 1);
- rural places which incorporated national anti-malarial policies (study 2);
- young male interviewees, identified as either chronically ill, or disabled (study 3).

The first study is mainly concerned with selection of places, the second is also mainly concerned with choice

	Study 1	Study 2	Study 3
Sampling parameters(Miles and Huberman's criteria)	Healing places (research by Wil Gesler)	Places with anti-malarial policies (research by Sarah Washburn)	People with illness or disability (research by Glenn Smith)
MH1: relevance to conceptual framework	Yes: based on (pre-existing) theory of therapeutic places	Yes: focus on particular type of intervention; role of social context; links between local and national processes.	Yes: theories of chronic illness, gender position, life stage
MH2 potential to generate rich information	Yes: especially requirement for archival material and potential for field observation	Yes: especially public accounts from local, state, national sources.	Yes: potential to articulate life stories and engage with aims of the research
MH3 analytic generalizability	Yes: wide range of geographical and historical context was sought	Yes: A range of urban and rural settings required.	Yes: choice not to be restricted to one source of contacts
MH4 potential to generate believable explanations	Not a key criterion but considered as a validating criterion.	Yes: Credibility of documented public accounts considered.	Yes: 'honest' and 'balanced' in approach to providing life stories
MH5 ethics	Not a consideration for selection of places, but relevant in relation to people encountered.	Not a determinant, but ethical implications of choice were considered.	Yes: a major factor determining both conceptual framework and practical selection process
MH6 feasibility	Yes: access to archival material and to the sites themselves	Yes: accessibility of documental archives.	Yes: Limited networks for access to this marginalised group.

Fig. 1. Relevance of the criteria proposed by Miles and Huberman to selection of samples in case studies.

of places to study (but also with selection of the type of discourse to be used), while the third was primarily concerned with selection of individual people. The studies also differ in that each was conducted separately by a different researcher working independently.

The juxtaposition of the examples is interesting because it enabled us to bring together these separate researcher's experiences and relate them to the framework suggested by Miles and Huberman, demonstrating for each study how far this framework seemed to 'fit' with the experience of planning the sample selection. In doing so, this paper demonstrates the varying issues which are important for different types of qualitative research in the geography of health and illness. The conceptual framework of each study varied in terms of the 'structure' which it provided for a purposive sample. Each study illustrates a process of balancing a range of (sometimes conflicting) criteria in order to make the final choice and shows how tensions between conflicting requirements were resolved by the researcher. The criteria which were considered most important and which governed the eventual selection of cases were not identical in each example, although some similar criteria were relevant for all the studies.

We recognize that there may be problems in using our own research in this way to exemplify our arguments. Not least is the risk of *post hoc* rationalisation

of the process of selection, since these studies did not use Miles and Huberman as a basis for planning the research at the outset. On the other hand, we would argue that in order to be meaningful, most discussion of method needs to make use of specific examples of real research to illustrate the applications which are being proposed. Also, it seems reasonable to evaluate the relevance of these guidelines in relation to research about which we have very good insider knowledge. The approach we have used allows us to pool our research experiences, providing a broader perspective than any of us could have produced individually.

The following sections comprise illustrations in the form of three individual descriptions of experience of qualitative sampling. Each example comprises an account, presented in quotes and in the first person, by the researcher who undertook the study. 'Editorial' commentary is provided in italics to distinguish it from the individual account. These accounts are the result of an iterative process, first involving production of a written account by each researcher, which reflected on the way he or she carried out the study and the relevance of the criteria which we had derived from Miles and Huberman. This was followed by discussion between all the authors and consideration of the comments of all reviewers. Each of the individual accounts was then revised to make them clearer and to express

the evolving views of the individual presenting each account.

In order to help the reader retain a sense of the separate, personal experiences on which this discussion is based, we have generally avoided standardizing the style of these accounts and have retained the character of the different researcher's voices. However, for ease of reference, each of the six criteria in Miles and Huberman's list above is alluded to by a reference number (MH1–MH6) and as shown in the first column of Fig. 1. The discussion aims to show to what extent, and in what ways, these six criteria figured in decisions about choice of subjects. The findings are summarized in Fig. 1, which is discussed in the conclusion to this paper.

Study 1: selecting cases for an international study on healing places

Over the past several years, Wil Gesler has been engaged in the examination of places which have established a lasting reputation for healing. In the following account he describes his experience of selecting the places which were studied.

"The process of selecting cases to study as healing places or 'therapeutic landscapes' was an evolutionary one, guided in part of specific requirements, but flexible enough for fortuitous developments. Selection was certainly not consciously guided by Miles and Huberman's six criteria (MH1–MH6, see Fig. 1), but some of the requirements match these criteria quite well."

"The conceptual framework for my research on healing places arose unexpectedly out of other work. A reviewer of a book chapter on "health and place" suggested that it was really about "therapeutic landscapes". This set me to thinking about what might contribute to these landscapes and I wrote an article which listed and described some of the factors others said were important (Gesler, 1992). These included concepts such as nature as healer, sense of place, symbolic landscapes, medical beliefs, legitimization and marginalization, territoriality, and the quality of social relationships. I realized during this review that healing should include mental, spiritual, and social healing as well as physical healing, and that I wanted to distinguish healing or how people experienced an illness from curing or measurable biological changes. The next logical step was to ask if there was any empirical basis for the claim that the factors really did contribute to making healing places or therapeutic landscapes. That is, places had to be found that people believed had healing power and that also

manifested all or at least some of the healing factors. In other words, I was trying to satisfy MH1, relevance to the conceptual framework."

"In selecting my cases I clearly wished to pick places that would give me as much information as possible on the different items set out in the conceptual framework; that is, I was thinking in terms of MH2, likely to generate rich information. I began to ask people such questions as, "Where would you go if you were recuperating from a serious illness?" Some answers, such as "the beach" or "the mountains" or "home" were too general to be useful for selecting cases for study. Other answers, such as "a little cabin we own in the Appalachians" were too specific. After a time, I realized that what might best serve my purpose was to locate some specific places which, throughout history, had achieved lasting reputations for healing; these would be places that many people agreed had healing power (although many might also disagree). I wanted to step back from the perpetual crisis mentality that seems to drive most investigations of health care and think about what it is about healing places that endures. One thought was that these places could include imaginary sites such as Sir Thomas More's *Utopia* or fictional places such as the tuberculosis sanitarium in Thomas Mann's novel, *The Magic Mountain*, but this idea was abandoned in favor of real places. However, More's and Mann's work did suggest some themes that were useful in selecting real places. *Utopia* dealt with current beliefs about illness and its treatment and described an ideal built environment for healing. *The Magic Mountain* reinforced my thought about the importance of natural settings, social relationships, and symbolic environments."

"When I began to think about what places to use with my new requirement of a lasting reputation in mind, it became clear that there were dozens of possibilities. Many people had a favorite and could not understand how one could fail to include it in a study. As I sifted through possibilities, I established three more requirements: (a) the place should have a substantial amount written about it to facilitate library research; (b) I needed to be able to visit it fairly easily to undertake direct observation; and (c) the places should have achieved their fame in very different historical circumstances. The first requirement was in line with MH2. To satisfy it, I conducted preliminary investigations into library resources; this led to several rejections. The second requirement, which corresponded to MH6, feasibility, limited potential study sites to the Western World, given the travel funds I could reasonably hope to obtain. The third requirement related to MH3, that the sample

would be generalizable through conceptual power. That is, the findings would carry more conceptual weight if they could be shown to apply in different times and places.”

“My final three choices for case studies resulted from various combinations of influences, in addition to satisfying the requirements of lasting reputation, library sources, accessibility, and different historical circumstances. Many people mentioned spas they knew about or had visited in Europe, North America, Japan, or other places around the world. This led to the selection of Bath, once the premier watering place in England. A great deal had been written about Bath from Celtic through Roman and medieval times, to its glorious eighteenth century, and to the present. There was much to say about such things as the content of its mineral waters, the splendid architecture of John Wood, and the reign of Beau Nash. A colleague who is an historian of science and knew of the project suggested one of her favorites, Epidauros in Greece. Here Asclepius, who was half human and half god, was reported to have healed people in dreams for a thousand years. The physical setting, Greek beliefs about disease and its treatment, and accurate descriptions of the now ruined buildings by Pausanias, the historian and regional geographer, writing in the second century A.D. were included among the prominent features of this place. For my final site, I wanted a place whose reputation for healing was still current so that I could be a participant observer and thus try to understand from the inside how famous healing places derived their power. Lourdes in France was an obvious choice. For a century and a half Lourdes has attracted millions who believe that miraculous cures were possible at the grotto where the Virgin Mary appeared to a peasant girl, Bernadette Soubirous. Among the attractions here were the natural setting, strong religious faith, a colorful political and economic history, and the fact that I could join a pilgrimage and learn from a group of the faithful what a healing place might mean on a personal level.”

“How successful was the sample selection of healing places in light of Miles and Huberman’s six criteria? The brief description just provided of the three sites chosen indicate that MH1 and MH2 were satisfied fairly well. In all the places I found archival or observational material that illustrated most of the themes set out in the conceptual framework (MH1), although these themes were expressed in quite different ways. The themes that finally emerged were not exactly the same ones I started with, but the correspondence was fairly close. Of course I was compelled to slight or eliminate themes that

did not conform to the framework. On the other hand, one or two new themes, which repeated themselves in two or more places, emerged. Each study site was rich enough in detail (MH2) to provide a substantial set of material for analysis, which has been reported in various publications (Gesler, 1993, 1996, 1998). The selection was generalizable (MH3), I believe, to Western healing places, but perhaps not beyond this. The fact that six ‘healing environments’ could be developed which were common to the three places — natural, built, historical, beliefs, symbolic, and social — strengthened the generalizability argument.”

“The question of whether my selection was likely to generate believable descriptions/explanations (MH4), was not explicitly thought of in any of my selection requirements. I believe it was supported, however, by the ways in which evidence for different themes resonated with or corroborated each other within each unique setting. As examples, in Epidauros the natural and built environments combined to produce an ‘ecology of sacred buildings’; in Bath the circles and squares used in designing the Georgian architecture which symbolized perfection and order were reflected in the rules set down by Beau Nash to control social relationships; and in Lourdes religious beliefs in divine healing miracles were closely tied to specific historical political and economic circumstances.”

“Ethical considerations (MH5), were only of concern at Lourdes where I joined a group of pilgrims. Once I got to know the group, I told them frankly what I was doing there and they were very accepting and interested. I abandoned my original intention to conduct semi-structured interviews (having gone through the required Institutional Review Board procedures) and just talked with various people as we went through our daily activities. Finally, all three places were feasible to study (MH6) in two ways: abundant library materials were available and they could be visited with a relatively small amount of funding.”

“There were some conflicts in trying to satisfy some of the Miles and Huberman criteria simultaneously. There were some study sites whose characteristics might have been very relevant to the conceptual framework, but which did not generate rich information; the converse was true as well. It would have been desirable to study some non Western sites, which might have increased generalizability, but this was not feasible. Site selection also placed constraints on the research, mainly in terms of generalizability, despite the attempt to choose places that varied both historically and geographically.”

Study 2: ‘placing’ anti-malaria control efforts in North Carolina

Sarah Washburn has investigated the social context of the disease ecology of malaria in North Carolina, and this section describes the process of selecting her study sites and how she decided which types of discourse should be chosen for analysis.

“The aim of the thesis (Washburn, 1996) was to link national level policy to local places in order to analyse the way power relations shape anti-malarial practices. This study explored how people transform the ideas based upon categories of difference (such as gender, race, class and rural status) into practices of sexism, or class-based discrimination in particular places. It illustrates how such social practices become linked to disease and disease ecologies. Malaria, an infectious disease, is spread through the indiscriminant bite of a mosquito. Its differential prevalence or incidence among different social groups is mediated by social relations through landscape. Social relations, through geographically located systems of power, shape the way humans interact with environments in which mosquitos carrying malaria fly.”

“I chose to study the disease ecology of malaria and the social contexts of this ecology because a review of the literature supported the notion that this disease system has been historically linked to ideas of ‘race’ (e.g. McNeill, 1976, Meade, 1988). I chose to study malaria in the southern United States from 1920 to 1925 because by 1910, public health experts had established that malaria was transmitted by a mosquito and had recognized malaria as preventable through the use of medicine and through landscape change. Between 1910 and 1925, policy debates about malaria as a disease emerged in the public health literature and efforts to control malaria in the southern United States became a national priority (Washburn, 1996). The emergence of practices which utilized the idea of ‘malaria control’ in the early part of this century in the southern United States offered the opportunity to study how a political response to a disease developed and how social relations, particularly sexism, racism and class-based discrimination, influenced or shaped that political response in actual places.”

“I recognized early that this thesis would involve a case study method. Most malaria literature addresses malaria control efforts at a broad scale, with national or global generalization. The strength of the case study method is that it links particular places referred to in these national and global accounts to the local social contexts surrounding malaria control practices. This thesis provides

insight into how policy was implemented at the scale of locales (Massey, 1994), the scale at which social processes are realized.”

“How would I choose the particular places I would study? What places would constitute my sample? The process through which I sampled the cases reveals that some of Miles and Huberman’s criteria were critical to the process. Feasibility (MH6), richness of information (MH2) and relevance (MH1) were the largest influences of sample choice. However, my choice of data and its subsequent influence on the sample of study areas had ethical consequences (MH5) as well.”

“I initially wanted to maintain a regional approach and sample specific locations across the southern United States. I quickly limited the scope of the thesis to places in North Carolina, as it became clear that a larger regional area would require me to travel to several states, which was simply not feasible (MH6). I developed a potential list of sites in North Carolina by locating references to North Carolina places in the international and national literature sources (namely the *Rockefeller Foundation Annual Reports*; the *United States Public Health Service Reports*, and the *Southern Medical Journal*) which published the proceedings of the International Malaria Committee’s annual meetings. This stage of the sampling process was shaped most clearly by my desire to choose places which would generate rich information (MH2), but also by my desire to achieve some level of conceptual generalizability (MH3). Through linking local contexts to accounts of actual events mentioned in national and international literature, I would be able to ‘place’ local perspectives of malarial control efforts within the context of national and international policy.”

“The next step in the process of selection was to choose the types of local accounts that I would use. Potential sources of local accounts included: public accounts such as newspaper reports; semi-public accounts such as church minutes or business records; personal narratives such as letters or diaries; and oral histories collected from people who lived in these places when malaria control practices took place. I struggled most with this particular issue. In terms of the Miles and Huberman criteria, I had to resolve the tensions between feasibility (MH6), conceptual relevance (MH1) and ethics (MH5). I ultimately limited my local level data sources to extant newspaper accounts on the grounds that these data were most feasible to analyze and also most relevant to the conceptual framework. They were most readily accessible and more easily cross referenced by place and date than other data. The choice to limit my data to public accounts was also related to the conceptual frame-

work. The analytical strategy I used, critical analysis, interprets an account in terms of its ideological content and practical or material effect (Jackson, 1989, pp. 48–54). Public newspaper accounts, as opposed to semi-public or private accounts, are written by persons prepared to have people comment on their published work, authors whose purpose of writing is to inform and persuade others, to assert power through representation. Public accounts are more expressly political and more consciously ideological. Private diaries, business records, and oral histories while potentially useful, are generated for other purposes, and I was not comfortable critically evaluating these types of account since these data seemed less amenable to an evaluation of material effect or ideological bias than are newspaper accounts.”

“However, I made this decision with what I considered to be a considerable ethical compromise (MH5). Public data were generated by the dominant social groups of the time, while semi-public or private accounts and oral histories would be more likely to include information and perspectives from subaltern voices of less influential social groups. An ethical criticism of this work is that the sample cases which emerge from these data choices are biased toward events largely controlled and commented upon by white men in positions of power within the communities investigated. These persons were not the only people to experience malaria or to practice malaria control. However, the data selected for this analysis, while excluding subaltern voices, were good examples of politically generated ideological documents.”

“In the final stage of developing a sample of case studies, I sought to ensure that the newspapers discussed anti-malaria policies and practices as well as information concerning general social relations. The town of Roanoke Rapids was the richest case, with international, national and local accounts all containing descriptions of a malaria control demonstration project (e.g. Rockefeller Foundation Annual reports, 1913; von Ezdorf, 1916; Roanoke Rapids Herald, 1914a). Each source also contextualised the malaria demonstration project, providing information about race relations (von Ezdorf, 1916) economic and social relations (Roanoke Rapids Herald, 1913–1914). This final stage of case selection, most strongly shaped by the criteria of relevance to the conceptual framework (MH1) and richness of information (MH2), provided four study locations; Roanoke Rapids; Edenton; Sampson County; and Pamlico County (Washburn, 1996). These sites each illustrated anti-malaria activities mediated by racism, sexism, class-based discrimination and discrimination based upon rural status.”

“Relevance to the conceptual framework (MH1) took precedence over other selection criteria in this work. Obtaining data which could be used to demonstrate how social relations operate in local places to modify malaria control policy was the key focus for choosing discourses and choosing case study sites. The next most important criterion for this study was to locate places which could provide a reasonable amount of information (MH2). Achieving some richness of data for each place was a key element. I also felt obligated to address ethical issues (MH5) and to choose case studies which could be conceptually generalisable (MH3). Obtaining believable accounts (MH4) was not a priority for site selection. By what measure do I evaluate ‘believability’? True to life explanations or descriptions are first historically contingent. Myth, misunderstanding and untruths offered in the documents and discourses available may have been as important in shaping practice as ‘truths’. I chose to presume that what was written by the reporters and officials shaping the dominant discourses surrounding malaria control efforts was written to be believed. The importance of feasibility (MH6) in shaping the practice of research cannot be underestimated. Given the limited resources of an unfunded project by a graduate student, feasibility entered into my sampling process. While my work offers a solid critique of malaria control practices, some tensions between selection criteria could not be fully resolved, in that subaltern voices of the time were not included, leading to ethical weakness in my work (MH5).”

Study 3: selecting a sample for research with ‘chronically ill/disabled’ people

Glenn Smith has carried out research examining the life stories of people with chronic illness or disability (Smith, 1999a,b). His account describes the process of gaining access to suitable informants for his study and choosing which individuals to work with.

Boxing clever: Opening the box...

“There is a much quoted phrase from the film *Forest Gump* that “Life is like a box of chocolates... you never know what you’re going to get” which springs to mind when I think back at developing my sampling strategy. Taking the box analogy one step further, I would suggest that sampling strategies involving people — particularly people on the margins of society — is more akin to opening a Pandora’s box. This is because the

sampling decisions the researcher makes may involve complex issues that could have implications for the people within the study, and possibly other people's lives in the future. Below, I discuss the reasoning behind my conceptual framework and how I developed my sampling strategy from this, subsequently attempting to use it to produce a working sample. I conclude by assessing the usefulness of the Miles and Huberman criteria in developing a sampling strategy on marginalised people."

The conceptual framework...

"The initial aim of my research was an attempt to redress an imbalance in the academic literature on chronic illness¹ that decontextualised the experience. My reasons for doing so originated from my own life growing up as a man with a chronic illness.

¹There are many definitions of the term 'chronic illness', but to summarise here I take it to refer to long term conditions that without medical intervention are life threatening. They may also be life-shortening. These may be conditions such as renal failure, cystic fibrosis, congenital heart disease, sickle cell anaemia and diabetes.

²Essentially the 'Social Model of Disability' aims to interpret impairment in terms of the context it is experienced in. In this way 'disability' does not lie within the individual's body but within the society the person lives in. See Oliver (1996).

³Masculinity or masculinities in contemporary culture have, it could be argued, become increasingly centred on 'the body' (Mishkind et al., 1989). Coupled with contemporary concepts of 'health' the 'healthy' physical body has become a central symbol in masculinities, at the same time (re)emphasising physical concepts of and centrality of sexuality in masculinities.

⁴It can be argued that, whilst gender slowly ceases to be central to our identities, sexuality and what this implies for human behaviour and social relationships is taking possession of the space and spatiality that gender once occupied in society (Condry, 1984).

⁵Recent work within human geography on spatiality has attempted to draw upon neglected concepts of space that were marginalised when geography was emerging as a discipline. Space is seen by contemporary writers such as Valentine (1992), Lefebvre (1991) and Olson (1987) as more than the physical surroundings but also as a political container shaping and influencing people's thoughts and actions.

⁶Recent British work in disability studies has highlighted the unequal power relationships between researcher and researched that has often resulted in 'disabled' people being misrepresented, especially research conducted by, with and in medical institutions/environments. It is argued therefore that it should be a 'sample' of disabled people who define the conceptual framework and not the other way around. Of course this relies on a definitive idea of who is and what is meant by the term 'disabled'

Furthermore, as I applied a social model of disability² to my life and the lives of other young people experiencing similar problems, I became aware that many of the difficulties I and they faced over time were probably mainly due to implicit contemporary understandings of 'illness', and its relationships with social construction of 'disease' 'disability', 'masculinity'³ and 'sexuality'⁴. Drawing on this theoretical and experiential background, a growing interest in 'neglected' ideas of space⁵ and recent work on life story and ethical methodologies originating from disability and masculinities studies, I began to formulate a conceptual framework. This then informed a research proposal which aimed to explore the experience of chronic illness both individually and contextually — particularly aspects of gender and sexuality — by drawing upon revived ideas of space, the social model of disability and life story methodology."

From conceptual framework to 'desired sample'...

"Having developed my conceptual framework, the next logical step was to develop my sampling strategy. My first task was to decide on where I would geographically locate my sample. This decision had in many ways already been made since a local Health Authority in part funded my research (see Acknowledgements). It seemed natural, appropriate and more feasible (MH6) to locate my sample of people within the Health Authority area. This I felt would give the Health Authority locally relevant information, while simultaneously enabling me to utilise their contacts to find my sample."

"The second issue I had to confront in developing my sampling strategy was recent work on ethical sampling within disability studies (MH5). One possible source of informants might have been via medical organizations such as hospitals. However, my reading of the literature on disability⁶ suggested that disabled people should be more influential in the choice of informants than 'others', viewing impairment from an outsider's point of view — particularly professionals from medical institutions. This obviously conflicted with accessing people through professional 'gatekeepers' in a medicalised organization like the local health authority. To resolve this conflict, I aimed to diversify the sources from which I obtained my sample."

"Having considered the ethical debates within disability studies the next step was to consider my strategy in choosing who would be 'good subjects' to undertake life story work with. There are two ways, argues Plummer (1983), that can be followed in deciding who to choose as life story subjects.

Firstly, there is the more pragmatic approach based solely on a chance meeting while the second is based on more formal characteristics to fulfil the needs of specific research requirements or the conceptual framework (MH1). The latter was obviously more suitable for my own study. However, in either of these approaches, the subject needed to be able to articulate their story in such a way as to be illustrative of their experience (in this case experience of illness) (MH2 and MH3) and appear trustworthy and balanced (MH4)."

"The types of chronic illnesses I needed to look at were defined both medically and by using existing ideas about what constitutes 'disability' within the disability literature. Furthermore, since most recent work on chronic illness had emphasised the commonality of experience rather than the individuality of symptoms I felt that a sample of individuals with diverse conditions was more appropriate than a focus on a single disease (MH3)."

"The sample I considered was to be all male. I felt that the sharing of private and intimate knowledge about the experience of gender and sexuality would be more feasible being a male myself in-order to obtain in-depth material (MH2 and MH6) and it would also be more ethical (MH5). This was because I considered it to be less embarrassing and stressful for the interviewee and myself to talk around these sensitive and private issues being of the same sex."

"Lastly, I needed to decide the age of my subjects. Since developments in medical technology to treat many illnesses didn't become available until the 1960's, I considered there would be no subject over the age of forty. Furthermore, since the essence of the study was to understand chronic illness not as a 'biographical disruption', throwing the life path 'off course' (Bury, 1991), but as an integral part of the person's life and self-identity, the study needed to begin in childhood. However, I also considered early adolescence as a starting point for reasons of feasibility in finding people (MH6) without compromising the information I required (MH2)."

"Thus, in summary, my strategy was to select a sample of suitable informants who were young adult males with a long standing chronic illness, living in one Health Authority in East London, who, for reasons of ethics in research on chronic illness, would be contacted via non-medical sources (such as support groups for people with chronic illnesses), as well as medical, sources."

From sampling strategy to working sample...

"Turning my sampling strategy into a working sample soon became problematic. It was necessary

to reconsider the decisions that I had previously made particularly on the basis of ethics (MH5) and feasibility (MH6) and balance these two needs in light of obtaining information that would be both 'rich' and 'useable' (MH2)."

"Firstly, I had to revise my geographical location. This was because I discovered there were very few support groups for people with chronic illnesses within the area, while advertising for subjects in the local papers and accessing subjects through the local hospitals also drew a blank response. Furthermore, most of the patients with a chronic illness were treated by Central London hospitals and if I was to contact informants through medical organizations I would therefore need to obtain ethical approval not only from my sponsor's area but also from the medical ethics committee for the area where the hospitals were located. This meant I had to rethink my study with respect to the source of informants, and undergo the process of applying for medical ethical approval while maintaining the integrity of my research using qualitative methods and informed by disability theory (a balance of MH5 and MH6)."

"The ethics committees (justifiably) required a very rigorous justification of the ethical aspects of this study, although it was apparent that they had differing systems for determining this. Their application forms (which differed between the committees) suggested they were working to principles which were probably originally designed for statistical sampling and for clinical trials. This made it difficult to supply ethical information which was most important for this qualitative study. Both committees called for additional information in addition to that requested on the forms (although the questions raised by each committee were different), and one committee required me to attend a meeting in person to answer their queries. Both committees seemed to be mainly concerned with a process of gaining written informed consent which might have been more pertinent for a study involving some medical intervention. They seemed less concerned with other issues, such as avoiding 'labelling' informants as 'ill' or 'disabled' on purely medical grounds, or offering informants opportunities to comment on my interpretation of material being generated in the research. Both committees gave consent to the study and their advice did ensure that a very well documented approach to consent was developed for the study. On the other hand, the process was lengthy and raised questions for me about differences in perspectives on what was ethically most important for this type of research."

"As the study area was now incorporating more of London, I embarked on obtaining a list of support

groups within the wider area of East London and from one such support group I found my first suitable ‘life story’ subject. In addition, I also explored other sources of advertising and ways of obtaining subjects, but having drawn a blank with many of these I considered advertising in a widely read disability paper.”

“The first man who replied to my advertisement did not have a chronic illness. The second, third, and fourth men were also unsuitable. Essentially, the main reason was that they were lonely and I considered it to be unethical and problematic to enter into a ‘researcher and researched’ relationship with them (MH5). I felt it would be unfair to develop an ‘unnatural’ and relatively one-sided relationship that would probably not develop like most relationships and could possibly end in a very unsatisfactory way. Furthermore, a need for a friend could compromise their willingness to confide intimacies with me, because of concerns about presenting themselves in an unfavourable light that could damage that ‘friendship’ (MH2 and 4). However, the fifth and sixth men were both articulate, competent at conveying depth to their story, and came across as thoughtful and sincere people capable of balanced reflection.”

“I thus began interviewing the three men I had found as I continued looking for informants. Reflecting on the recent debates over the distinction between chronic illness and disability (e.g. Barnes and Mercer, 1996) and the lives of the men I was interviewing (MH2), I decided my remaining subjects should include people with impairments which most people would recognise within the term ‘disability’; for example, blindness, deafness, and cerebral palsy. This meant my original conceptual framework had evolved — in a way similar to a grounded theory approach — to acknowledge and accommodate developments arising theoretically, feasibly and ethically from implementing my sampling strategy.”

“Thus my revised sampling strategy involved selection of young adult males with long standing chronic illness or a disability, living in a wide area of East London, who were contacted from a variety of sources including the health service, and recruited according to ethical criteria partly defined by me and partly stipulated by two medical ethics committees.”

‘Boxing clever’...

“How successful was my sampling strategy in light of the criteria proposed by Miles and Huberman? Although I did not explicitly use Miles and Huberman’s framework, all six criteria were often

at the forefront of my mind in developing my sampling strategy and putting it into practice. Nonetheless, I have two reservations about using their criteria as they stand, that are highlighted by the development of my sampling strategy to produce a working sample.”

“Firstly, the criteria contain rather vague implicit references to ‘normality’. For example, one’s interpretation of *the ability to generate believable descriptions/explanations that are true to ‘real life’* (MH4) is obviously dependent on what is understood by terms such as ‘believable’ ‘true’ and ‘real life’ which, in-turn, is influenced by one’s positionality, method and conceptual framework.”

“Similarly, the criterion relating to ethics (MH5) needs more discussion and I am constantly reflecting about my ethical principles. For example, what is ethical? Whose ethics are we using? Moreover, is the choice of informant ethical if the generation of ‘rich’ information excludes those unable to articulate in ways that we can understand and easily work with? For example, should I exclude someone who is deaf because I would find it difficult to communicate with them well enough to collect “rich” information in an interview. Similarly, if a person seems lonely, should I assume they will be vulnerable in the ‘researcher and researched’ relationship, and therefore unsuitable to interview for ethical reasons? My own research has required that I find a balance between competing principles, needs and definitions: those originating from disability studies, the medical ethics committee, the needs of the individual and requirements of research to help future generations.”

“Nonetheless, if these points are taken into account when using the criteria, then when we open the ‘Pandora’s box’ of sampling people in qualitative research we can at least begin to make more informed decisions in our future qualitative research which can only be a good thing. In other words we will be able to *‘box clever’*.”

Conclusions

A number of conclusions can be drawn from consideration of these different examples concerning our experience of generating accountable qualitative strategies. A specific aim of this paper was to explore the relevance of criteria derived from the ‘checklist’ suggested by Miles and Huberman (1994). Arising from this exploration, however, were other issues concerning the value of making explicit in the reporting of qualitative research the problem of resolving different, often conflicting considerations in sample selection. We

suggest that the discussion may have wider relevance for other qualitative research in the geography of health, although evidently consideration of just three examples does not justify generalisation to all research in this field. There are some types and settings for qualitative research in the geography of health which are very different from the studies used as illustrations here. One type of research which we have not considered, for example, is focus group work, although it is of growing importance in the geography of health. We note that other researchers using focus groups in gerontology have used Miles and Huberman's (1994) text to inform their work (Arcury et al., 1998).

We consider first how far the criteria derived from the Miles and Huberman 'checklist' for sampling strategies was found relevant to our experiences. Fig. 1, above, summarizes the examples from this point of view, showing which of the criteria were seen by the researcher to be relevant in each case. None of the authors of the three studies described here had the six criteria proposed by Miles and Huberman specifically in mind while they were carrying out their research. This paper has also demonstrated that a simple 'blueprint' for qualitative sampling could not be imagined, since each study requires a specific strategy. Nevertheless, these criteria were, in retrospect, all of some relevance to the way the sampling strategies were developed in each of these three studies. Two of the researchers do, however, comment on the difficulty of interpreting what comprises a 'believable' account in terms of any notion of 'truth' (MH4). Issues associated with criterion MH4 which were found to be relevant issues in these studies concerned the bias, varying value systems and motives for participation in a study.

In all of these studies, to some extent, the conceptual framework and the associated sample strategy has evolved partly in response to the findings of the research, so that it would not have been possible to specify an entirely satisfactory sampling strategy from the outset. This was true particularly for Glenn Smith, because he aimed to use the views of his informants to help to define and justify the conceptual categories he used in his study.

The importance of each specific criterion from Miles and Huberman's list varied markedly between studies. One obvious point emerging from comparison of the studies discussed here is that the ethical issues involved in choice of a sample of individual people (as in study 3) are more complex and difficult to resolve than those involving choice of places (as in study 1). The fact that there is no universally agreed set of ethical criteria further complicates this issue. Thus for example, in study 3 above, Glenn Smith had to justify the ethical criteria governing his research not only to himself and his informants, but also to two different medical ethics committees, making varying requirements. This situ-

ation is perhaps especially evident in fields such as geography of health and illness, at the interface between medicine and social science, where there is likely to be a requirement to consider differences of emphasis between the ethical criteria established in social research and those developed in medical research. The other two examples did not raise such contentious ethical issues of selection at the outset, but it is interesting to note how in study 2 the ethical question of who is excluded becomes an issue of significance which needs to be considered and cannot be entirely resolved. Sarah Washburn decided she had to exclude all but public accounts, in order to maintain the theoretical integrity of the research, but felt she might face criticism on ethical grounds because these accounts might favour the views of the most powerful social groups.

It is notable that each study had to find a balance between the different criteria, although often these created tensions and difficult choices. As already noted, ethical criteria concerning who should be chosen to have a voice in a research project, and how access to informants should be organized, can seem to conflict with a rigorous theoretical framework. Both of these considerations have to be weighed against more practical considerations of whether particular cases will provide sufficient data of the right type and whether it is feasible to collect the data. One clear conclusion from this paper is therefore that what is most difficult in designing accountable sampling strategies is finding the right balance between conflicting criteria for subject selection. The resolution of this problem is shown in this paper to be very dependent on the type of study and the type of subject being chosen. However, all three researchers seem to have gone through a decision making process which shows some similarities. In each case, the selection of the sample was initially planned with reference to the theoretical framework of the research and the desire to make analytical generalizations. Subsequently, more practical issues of availability of a potentially rich and reliable source of data and the feasibility of exploiting them also intervened in all of the studies to determine the final sample selection. We therefore draw attention to the implications of excluding cases because they are less articulate or less well documented, of uncertain reliability or difficult to access. All of the studies above show that the authors are having to place some caveats on the conclusions they can draw because of these constraints on sample selection.

Consideration of these three study examples seems to emphasize the importance of the choices which are made in sample selection. It seems essential to be explicit about these, rather than leaving them hidden, and to consider the implications of the choice for the way that the qualitative study can be interpreted. The six criteria proposed by Miles and Huberman (1994) do

appear relevant for the development of a sampling strategy in the examples of research in geography of health considered here. They are likely to prove useful also to other researchers in this field, provided that the problems of resolving conflicting requirements are also understood and addressed. Careful consideration of these can enhance the interpretive power of a study by ensuring that the scope and the limitations of the analysis is clearly specified. Arguably, sample selection can also be made more 'efficient' if more attention is paid to accountability in term of these criteria, since this will also help to ensure that effort is expended mainly on gaining access to the most pertinent cases.

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