

# METHODS BRIEFING 25

## Focusing on the case in quantitative and qualitative research

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The Programme aims to develop qualitative and quantitative methods within the context of substantive research. It also aims to encourage effective dissemination of good practice.

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### Aims and Objectives

This project had two interlinked aims:

- To develop the expertise of UK based researchers in the integrated employment of a range of case centred methods including –

Numerical Taxonomy methods  
Qualitative Comparative Analysis  
Qualitative Statistical Modelling  
Traditional Case Study approaches

- To engaged in a dialogical research exercise with researchers about their needs for and understanding of case based approaches in relation to the actual research problems with which they are engaged.

### Background to the Project

One of the major tasks of social science is establishing how things come to be as they are – establishing causal systems in the real world. It's a truism to say that the social world is complex. In other words you can't explain it in terms of single causes with single effects. However, the traditional quantitative approaches in social science based on variable analysis have tended towards such simple explanations. Sociology has a long

tradition of another approach in the form of the comparative method based on detailed comparison across a range of cases. Recently, developments in computer based methods have facilitated an integration of quantitative and qualitative approaches in a way which focuses upon the cases and allows us to address the complexity of social causes. This project combined training in the use of such approaches with an exploration of the way in which social researchers, at all stages of their careers, have thought about these issues in the past and can develop new strategies in the future based on case centred methods.

### The workshops

We had more than 90 applicants for the twenty five places in the programme. The workshops took place in July, September and December 2004 and in January 2005. At each of workshop, 22-26 researchers, mostly based in the UK, joined in the dialogical process of the project. Nineteen participants attended either 3 or 4 workshops in the series.

**Workshop One:** *Numerical Taxonomy through Time – exploring trajectories of cases and classifications.*

This workshop explored the use of numerical taxonomy techniques both to construct classifications and, using longitudinal data sets, to explore the double dynamic of cases through a set of classifications and of changes in the classification system itself. The workshop began with a discussion of the logic of classification and considered how numerical taxonomy procedures can be used with longitudinal data sets in order to explore trajectories through time. This format, of beginning with a conceptual discussion of the logic of enquiry, was common to all the workshops. There were then two hands-on workshops. Three participants (briefed in advance of the workshop) presented reflections on how numerical taxonomy might be useful in their own work. Finally there was a set of buzz groups (small groups working together) which reported back in a plenary discussion of the approaches and their application.

The issue of causality emerged as central in our preliminary discussions in this workshop. We were fortunate to have as a participant a philosopher with a particular interest in the issue of how social scientists understand and employ causality. Her contributions informed our discussion but in a reflexive fashion. As she remarked informally she found herself in the interesting situation of actually engaging in ethnographic research around philosophical issues. Themes developed in these preliminary discussions continued to be important throughout the whole series. Of particular significance was the contrast between modes of exposition which

involve explicit generation of causal accounts in contrast to ethnographic approaches which remain modernist in terms of the generation of an account but do so in terms which are perhaps most easily summarized by referent to Geertz's notion of 'thick description'. There was also extensive discussion of classification as a process and of the relationship between classifying tools, typified by cluster analysis, and the construction of classifications as a social process within science.

**Workshop Two:** *Qualitative Comparative Analysis and related techniques.*

This workshop began with a presentation of the realist conception of the nature of cases as this relates to Ragin's proposal that we consider cases as 'configurations'. We then proceeded to an exposition of Ragin's crisp and fuzzy set methods. We also introduced students to the related technique of TOSMANA which allows for ordinal output states as 'dependents' in configurational analyses. We considered the potential of time ordered classifications combined with QCA as a basis for exploring the causality associated with different trajectories through time of institutional and other complex systems. In the hands-on workshops students used fsQCA and Tosmana to explore causal configurations in data sets about schools. The discussions continued to develop the themes raised in Workshop One. Of particular importance was the feeling among some participants that QCA, by generating descriptive specifications of cases at a nominal or ordinal level of measurement and then by managing these in an essentially quantitative fashion, was itself a reductionist technique. There was a real sense of a gap between the characteristically interpretative mode of qualitative work and the products of QCA in terms even of multiple configurations of causal attributes.

### **Workshop Three: *Qualitative Statistical Modelling.***

We modified the content of this workshop somewhat in response to the developing view of the workshop participants in the previous workshops. In particular, participants expressed a very strong desire to engage with materials which were qualitative in form and to have some training in how they could move from text / images - documentary forms in general – to the kind of input which was used in procedures – numerical taxonomy, figurational analyses (QCA etc.) – which had been deployed in the previous workshop. To this end, we began the workshop with a session which involved demonstration of how it is possible to move from the qualitative exploration and interpretation of documentary materials to the construction of data entries for quantitative case based methods through using the Case Nodes and Attributes components of NVivo. We followed this with a session on qualitative modeling and logistic regression models with reference to qualitative and small-sample data and discussed how log-linear models represent qualitative aspects of society in their contingent conjunctions. Finally we ran a session which focused on the interpretation of the output from fsQCA .

### **Workshop Four: *The Qualitative Case Study.***

Again the content of this workshop was prepared in dialogue with workshop participants. We began with an exposition and discussion of ‘the case study method and its epistemology which addressed the question: can descriptions be true?’ This reflected what has emerged from the research component of the workshops as a central tension in the employment of qualitative methods in particular and case study methods in general in both academic and applied social research. In general, researchers at all levels identify a tension between the search for causality, which informs in particular configurational approaches, and the interpretive tradition. We found that key texts around the method of the case study had

an essentially positivist understanding of its purposes which was in clear contradiction to the interpretive tradition in its non-causal form. This theme was reviewed using material drawn from a preliminary survey of the workshop research materials. This kind of reflexive dialogue has been a particularly useful and productive part of the whole process. We then proceeded to an exposition and demonstration of Open Systems Analysis which considered the nature of the process of operationalization in the context of a researcher who iterates between ethnographic, case-study, case-based, and survey-data based interpretive work. The workshop reviewed advanced material from the philosophy of science, concerning measurement and the discursive positioning of the researcher themselves.

### **Key Findings from the Research Component**

There are a range of interesting findings emerging from the interpretive analysis of the ‘documents’ - in the form both of initial letters of application and transcripts of focus group discussions conducted during the workshops. We are particularly interested in the ways in which policy focused researchers understand the general methodological focus of their work in relation to the translation of findings into policy and practice. We are also interested in the pedagogical implications of the dialogical approach which seemed to work very well both in the development of understanding and as the basis of the research project.

There are three themes which emerge from the experience of the workshops:

#### **The nature of meaningful evidence when we are dealing with complex systems.**

There is a considerable emphasis on quantitative evaluation of policy and practice. Yet the experience of the researchers is that quantitative knowledge cannot work without a narrative.

There is a major turn to qualitative work in part because it provides narratives. Of course this is partly a matter of context. Although health, and indeed medical, researchers were quite strongly represented in the workshop groups, even those who were clinicians were working with difficult multi-character conditions, indeed really with cases in the form of people who presented with lots of things all at once. For the clinical researchers the issue was that the randomized control trial breaks down when there is significant and complex interaction.

Most of the applied researchers, including health researchers, were working in areas of policy development and implementation. The large N linear modelling based methods of traditional statistics were generally inappropriate for most of them because they were not working with large samples from theoretically infinite populations. The issue for them was about how knowledge generated in field research - perhaps a better term than qualitative research because numbers were used even if only in the form of descriptive statistics although embedded in narrative accounts – could inform social action. This is usually understood in terms of generalizability but the argument between that approach and thick description moved far beyond its usual academic locale into a developed discussion about the way in which the audience for applied research actually thinks about what it is hearing and seeing.

### **The need for a politics of methodology**

Participants questioned the perhaps uneasy but nonetheless real co-existence of a brute positivist approach to the use of the products of social research, especially but not exclusively the

quantitative products, alongside an essentially relativist understanding of the epistemological status of those products and the methods used to construct them. Although there was no consensus in discussion there was a general feeling that methodological issues translate into politics in a society and system of governance where evidence plays an ever increasing role.

### **The relationship between research and pedagogy**

The whole experience was dialogical. This reflected the ‘status’ of workshop participants. They were informed and articulate social (and other) scientists. We would not have worked with them in any other way but on the basis of explicit dialogue which respected their knowledge and ability to express it. In terms of pedagogy this raises some interesting issues. This style does perhaps provide something of a model for advanced training and participants responded very positively to it. There is also a message for research although this is more complex in terms of its implications. Participants agreed that social scientists do have understanding and technical abilities which are different from the subjects of our research. However, our subjects – most obviously in action-research but across the research field as a whole – are also agents and the dialogical mode applies to our reflexive engagement with them.

### **Output**

Details of all the workshops and papers resulting from the exploratory research are available from the project’s website at:

<http://www.dur.ac.uk/case.2004/>

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