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Patrick M. Dawson

University of Wollongong, patrickd@uow.edu.au

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Abstract

This article provides a series of reflections on the practice of carrying out processual research on organisational change. At a broad level, some of the main tasks associated with conducting company case studies are described and the benefits of this approach for dealing with complex change data are outlined. At a more specific level, the article addresses three main areas tied to the actual 'doing' of processual research. First, the notion of tacit knowledge and 'getting your hands dirty' by engaging in ongoing in-depth fieldwork. Second, the design and implementation of a longitudinal case study research programme. Third, the advantages and concerns of combining a range of different data collecting techniques in carrying out processual studies. Overall, the main intention is to provide some useful reflections and practical insights, as well as providing something of the flavour of carrying out this type of research.

Keywords

processual, longitudinal, organisational change, case study, tacit knowledge, data collection, research design, qualitative, observation, interviewing, narrative accounts.

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IN AT THE DEEP END: CONDUCTING PROCESSUAL RESEARCH ON ORGANISATIONAL CHANGE

INTRODUCTION

In Europe and to a lesser extent in North America, Australia and New Zealand, there is a comparatively small but growing number of academics who are embracing the value of processual research for understanding management and organisations. In the case of organisational change, the process of transition is generally studied over time and within an historical and organisational context (Johnson, 1987. p. 58). The approach is often multi-disciplinary (Clark et al, 1988), drawing on a range of perspectives and methods such as those applied by the business historian, the corporate strategist and organisation theorist (Whipp et al, 1987), and centres on the collection of longitudinal data over periods of real and retrospective time (Pettigrew, 1985).

With the growth in academic interest in processual research and the publication of associated case studies, the value of processual approaches to understanding the dynamics of organisational change are gaining increasing recognition (Van de Ven and Huber, 1990). They highlight the importance of context in examining unfolding processes of change, yet, unlike contingency models, they are not drawn towards unidirectional episodic theories of change (Dawson, 1996. pp.21-9). Detailed examinations are made of one or a small number of organisations and considerable time and attention is placed on the processual analysis of what is largely qualitative data (Dawson, 1994). Concepts and ideas are formulated both from the literature and generated from data-driven induction. There is not an attempt to build grand theory nor is there a removal of preconceptualisation, as suggested by some elements of grounded theory (see, Parry,

1996. pp. 23-5). Under the processual approach, there is a continuous interplay between academic preconceptualisation (based on a comprehensive knowledge of the area under study) and detailed empirical descriptions of emerging themes and topics, out of which new concepts are refined and interpretations developed.

As 'real-world' examples of company experience, processual case studies are able to tell their own story of the way change unfolds in practice, and how the substance, context and politics of change all inter-connect and overlap in shaping the dynamic odyssey of workplace change. As such, processual research offers the possibility for widening our interpretations through enabling the presentation of complex change data. Although to accurately predict the process and outcomes of large-scale change is to foresee the future (something that is beyond the scope of processual analysis), this type of research can question many of the taken-for-granted assumptions about change and allow us to see issues which have previously remained hidden.

In reflecting on the experience of conducting processual research, this article opens by raising the issue of tacit knowledge through 'hands-on' fieldwork. The process is briefly illustrated through recounting an early unforeseen incident during the author's night-time observational work of a British Rail marshalling yard. At a general level, the paper provides an overview of some of the key elements which need to be considered during the task of research design, data collection, data analysis and the eventual presentation of findings. Although this broad remit allows for comments to be made on the general research process (from research design to data analysis), space precludes the possibility of doing justice to all the pertinent issues which could be discussed under these headings and therefore, within this wider context, three central concerns have been selected for more detailed attention. These comprise: the question of tacit knowledge and the importance of

learning from the field; the element of longitudinal design in setting up a research programme and engaging in sustained fieldwork activity; and the value of combining a range of data collection techniques and the need to accommodate multiple perspectives from one or a number of different data sources over time. Under each of these topics, fieldwork experience and case examples are drawn upon to illustrate the points raised and clarify the ‘realities’ of carrying out processual research. It is hoped that the material presented provides some rich description and useful insights into the practice of conducting longitudinal case studies on organisational change.

TACIT KNOWLEDGE: THERE IS NO SUBSTITUTE FOR DIRTY HANDS

The concept of tacit knowledge, developed by Polanyi (1962 and 1983), refers to the ability to use knowledge acquired from experience in carrying out tasks and activities in the pursuit of particular objectives. This tacit knowledge has been described as a form of ‘inarticulate intelligence’ where individuals are often unable to explain the ‘theoretical basis for their action’ (Gray and Pratt, 1991. p. 164). In exploring the concept of tacit knowledge, Wagner and Sternberg (1986. p. 51) argue that a considerable amount of knowledge and skill is accrued in the process of carrying out everyday activities and in the absence of formal instruction. Moreover, this knowledge is generally difficult to extract and make explicit to others (Kantrow, 1984. p. 163), as the following anecdote illustrates:

There is a story about a farmer’s wife who won a national strudel-making competition in Austria. Asked by a journalist to say how she made strudels, the farmer’s wife looked puzzled. Eventually she said, ‘Well, I put on my apron, wash my hands, roll up my sleeves and then I go into the kitchen and make strudels.’ I feel a little of her puzzlement when I am asked to talk about how I study

organizations: I find an organization, get into it, and then I study it. Research, like strudel making, has elements of craft about it, so that some of the knowledge acquired by those who do it is tacit knowledge, embedded in the skills of the craft, and it is sometimes difficult to be explicit about these skills, which are easier to transmit by example and by apprenticeship. (Turner, 1988. p. 108)

Barry Turner's comparative description of the bewildered farmer's wife and the tacit knowledge associated with studying organisations, usefully captures some of the longstanding dilemmas which surround qualitative processual research. Even before questions of external validity and generalisability are raised there is the seemingly straightforward question of how do you do processual research in organisations? The glib answer is with great difficulty, a lot of patience and plenty of time. For many researchers in the field, their knowledge largely derives from 'going in at the deep end' and gaining experience in the companies they are studying. Although there are an increasing number of 'inside' accounts of social research in organisations (Bryman, 1988) and the publication of *The Discovery of Grounded Theory* by Glaser and Strauss (1967) and *Basics of Qualitative Research* by Strauss and Corbin (1990) provide potential resource guides (see also, Dey, 1993), many researchers enter the field with a grasp of the literature but not of the practice of carrying out processual research.

Although qualitative researchers often recount their feelings of 'drowning' in data, 'floundering in the deep end' often begins with their first step into the field to collect primary data. For example, in 1981, I vividly recall being in a large British Rail marshalling yard armed with a tape recorder, some questions and prompts, and a note book. The stress of the first few days in making contacts, developing a rapport and getting to know the layout of the yard, remains an intense memory. Most of the freight work was

carried out at night and there were a number of critical rules governing the safe working of the various yards. In my enthusiasm to collect data, I decided to take photographs of shunting activities, but following the first flash (green and red hand-held lantern lights were used to aid the night-time marshalling of freight wagons), the alarm and concern of yard staff immediately made the foolishness of my action transparent. Greatly embarrassed and a little shaken by the response, I remember the need to manage internal emotions and continue in the task of data collection. It was only over time, through growing familiarity and acceptance, that I was able to build a lasting rapport with shunting gangs and supervisors at the marshalling yard.

Three weeks later, in being offered a drink at the local pub and in being invited to social events outside of work, I knew that I was becoming accepted into the world I was studying. One older supervisor by the name of Percy, took me under his wing and went to great lengths to ensure that I was getting all the material I needed to satisfy the requirements of Southampton University. Although he found it difficult to understand the purpose of my research, he had taken on the role of guide and teacher of freight yard regulations and marshalling operations. In my experience, it was not long before the yard staff were learning as much about my history as I was about theirs. At this stage and under these conditions, the researcher is well placed to develop both his/her known and unknown research skills.

As my experience and the time spent collecting data and observing the work of yard staff increased, I started to build up a knowledge and understanding not only of the workplace I was studying but also, of the practice of engaging in processual research. However, not unlike the farmer's wife, one tended to concentrate on *doing* the research rather than documenting the nature of the skills acquired during fieldwork. Immediate concerns with

the day-to-day practicalities of the study (especially with early morning starts, twelve hour days, maintaining observational notes and records of research, and arranging interviews and additional trips) place numerous demands on the researcher during these rather intense periods of empirical study. The fieldworker immersed in data collection is rarely able to reflect on his/her own personal development as a researcher, or to consider the methodological consequences of missing a connecting train and being late for a scheduled interview. The focus is often on dealing with research contingencies in developing and maintaining good inter-personal relations and collecting a vast barrage of material, which all seem so critical to the research questions being posed by the study.

To those not experienced in this type of research, what might appear to be relatively minor issues, like the general outlook and dress of the researcher, can all influence the process of carrying out this type of study. For example, the ability to understand and listen to people with different views and perspectives without taking sides; dressing and acting appropriately to the environment in which the study is being carried out; being familiar with the workplace and demonstrating your seriousness by spending significant periods of time at the place of study; maintaining a bright and cheerful outlook even when frustrated and/or tired at the end of the day. All these are part of the tacit knowledge - a sense of what is appropriate in the context of fieldwork - and form an integral part of the process of engaging in 'hands-on' processual research.

An interesting illustration of this issue was raised when the author and a research colleague carried out a longitudinal study of the financial strategies of low income families in London. Although we were from different backgrounds, we both had previous experience with qualitative research and there was a common unstated understanding, particularly with regard to the practicalities of carrying out the research. However, in

working within a larger national group of researchers who were not familiar with techniques of qualitative data collection, we found ourselves spending considerable time justifying and explaining the rationale of our proposed study. Apart from the more clearly delineated methodological issues, there arose a concern about our decision to wear casual clothing (jeans and sneakers) to a deprived London housing estate. To our mutual astonishment, some of our colleagues sincerely felt that we should dress smart (tie and jacket) in order to ensure a level of objectivity and to maintain a ‘professional manner’ as ‘representatives’ of the research team.

This may seem a minor issue, but persuading our bewildered colleagues was not easy and yet, dress codes can significantly influence the development of research rapport in the field. Essentially, our argument was that attention should be given to the environment in which the study takes place (for example, a study of decision-making at the shopfloor or among senior executives might suggest that different forms of dress would be appropriate), in order to build up ongoing inter-personal relations over a sustained period of time. We also stressed the need for the researcher to be honest and truthful about his/her own background and the nature and purpose of the programme of study.

In reflecting on some of the tacit knowledge gained from practical experience, there is a wide range of elements (many of which may appear trivial), that one starts to automatically accommodate in carrying out processual research. The activity of building up knowledge about the practice of conducting this type of case study research typically occurs unknowingly over a number of years and can often be difficult to express or convey to new researchers prior to their initial fieldwork immersion. What reflection tells us, is that it is important for new researchers to ‘get their hands dirty’ and to experience and discover new skills and understanding by engaging in the practice of data collection

and drawing close to the subject of their study. As Peter Frost and Ralph Stablein conclude in their edited collection on doing exemplary research:

Teaching students to do exemplary research goes well beyond formal courses. It is a craft that must be learned through doing. It is an apprenticeship, and those who teach the craft play a vital role in the system...Only with the experience of 'doing it' will the lessons of the classroom truly make sense. (Frost and Stablein, 1992. p. 278)

However, before researchers can go into the field, they must first plan and design a feasible research programme. In designing a processual study on workplace change, one critical element centres on building a longitudinal element into the research design. In addressing this aspect, the next section summarises the slightly different designs of a number of research projects which were all aimed at collecting longitudinal qualitative data. The objective is to illustrate the intentions and practice of this type of case study research on organisational change, which does not occur in a vacuum, but must take into account various contextual opportunities and constraints such as, the willingness of companies to participate in the study, the time limits to the research, the geographical location of the researcher and the size and availability of travel funds.

PUTTING-IN-THE-TIME: THE DESIGN AND PRACTICE OF LONGITUDINAL RESEARCH

In a special issue of *Organization Science* on longitudinal field research methods for studying processes of organisational change, Van De Ven and Huber (1990. pp. 213-19) argue that research questions which seek to examining organisational change over time

require a framework which can explain the unfolding temporal processes of change. They note that:

Process studies are fundamental to gaining an appreciation of dynamic organizational life, and to developing and testing theories of organizational adoption, change, innovation, and redesign. (Van De Ven and Huber, 1990. p. 213)

In practice, longitudinal research can refer to a number of quite different types of study. For example, longitudinal designs are often proposed for quantitative studies which seek to identify the temporal relationship between two causally related variables. Alternatively, cohort studies may be carried out over a number of years in order to take a number of time-spaced sequential snap-shots from which more general trends and explanations can be derived. However, this static snap-shot view of social life runs contrary to the primary characteristic of processual research which seeks to explain the interconnected and dynamic processes inherent in everyday life. Through a concern with holistic and detailed descriptions of social settings and a commitment to reporting actors' interpretations of events, the final product is commonly a narrative temporal account of interaction and change. As Jon Clark explains in his detailed case study of workplace innovation at Pirelli's Aberdare plant in Wales:

This is not a conventional academic book. The main body of the text has no references, footnotes or other academic conventions. It is written largely in a narrative style. The main characters are real people...At first sight it might appear that this is simply a story about managers...As the book progresses, the reader will find that the workforce figures ever more prominently. By the end they emerge,

together with a small group of 'leaders', as the central characters in the story. (Clark, 1995. pp. xi-xii)

In working towards processual accounts, participant observation over a number of months or years has been the classic approach to studying a 'time-sequence of interpersonal events' (Whyte, 1955. p. 358). Whyte's *Street Corner Society*, which involved observational work over 3 years, is an exemplar of this type of research. The incorporation of long periods of continuous observation into study designs require observers to be largely free from other obligations and as a consequence, it is rarely an option for full-time members of university staff (Barley, 1990. p. 244). For the majority of researchers in the late twentieth century, time constraints and other influential pressures, such as, funding arrangements and pressures to publish, all impinge on the practice of carrying out processual research.

In dealing with some of these constraints as well as contextual opportunities, attention should be given to the practicalities of engaging in longitudinal research during the design stage. Questions, such as, company access, teaching commitments, resource availability and the like, all need to be accommodated in the design of a research programme which may not be as intensive or sustained as the researcher might wish for in a 'perfect' world. Few of us (apart from some full-time PhD students), have the freedom to spend even twelve months in a company as a participant observer, let alone three years. In response to these constraints, there has been an increase in the use of other methods, such as the use of taped interviews, and the development of research designs which collect this type of data over a number of specified periods during the life of a project (see Clark, 1995; Pettigrew and Whipp, 1991).

Although Bryman claims that studies which use semi-structured interviewing as their primary method of data collection are generally characterised by an absence of a sense of process compared to participant observer studies (Bryman, 1988. p. 115), the use of this method is widely employed by those adopting a processual perspective in organisation studies. Moreover, whilst much of the qualitative research in which the author has been involved has relied heavily on this technique, a longitudinal element was built into the research design at the outset and the method of observation was used to complement taped interview data. For example, in the work of the New Technology Research Group at Southampton University, three longitudinal case studies were conducted by an interdisciplinary research group which sought to examine the introduction of new electronic and computer technologies at the level of the individual workplace. The first of these case studies was concerned with exchange modernisation in British Telecom (Clark et al, 1988); the second with the introduction of a computerised system of freight information control in British Rail (Dawson, 1986); and the third, with the introduction of Electronic News Gathering (ENG) in Southern Television (Jacobs, 1983). The longitudinal case study method was chosen for the purpose of achieving the group's principal objective to examine the processes associated with technological change at the workplace.

In each of the case studies, a variety of methods was used centring on the use of documentary data, observations and interviews over periods of up to two-and-a-half years. However, because of the timescales involved in major change programmes, only parts of the change process could be covered 'as-it-happened' in British Rail and British Telecom. In the latter case, some of the fieldwork involved observing the switchover from electro-mechanical Strowger exchanges to a semi-electronic telephone exchange system known as 'TXE4' (see Clark et al, 1988). In the former case, the study comprised a retrospective

analysis of management strategy and industrial relations issues around the process of change, and an examination of workplace activities under routine operation (see Dawson 1987. pp. 47-60 and 1994. pp. 48-69).

Another variation on longitudinal research design is illustrated by a study into the process of change from job-shop layout to cellular manufacture of the hardware fabrication plant at General Motors-Holden's Automotive Limited (GMHAL) manufacturing complex in South Australia. Although in this case the timespan of the research was slightly longer, the time constraints were no less pressing as a consequence of other projects and teaching commitments. The main period of data collection occurred between October 1989 and July 1992 (although the last period of interviewing occurred in August 1995), and consisted of ongoing observation and a planned interview programme. The collection of taped interview data comprised three main elements: a two phase shopfloor interview programme; a key player interview programme; and a one-off series of operational workcell interviews. The two phase shopfloor interview programme consisted of pre-change and post-change interviews with plant employees. The first phase interviewing was completed in 1989 and the repeat interviews were concluded in March 1991. The major objective was to get descriptions of current work practices prior to change and an in-depth discussion of their primary concerns about change, and to then compare these with their actual experience and concerns under routine operation.

The supporting programme of observation involved regular visits to the plant in order to observe changes and to cross-check data collected during the semi-structured interviews. The main point of contact at the plant was the project implementation manager who, as a part of management, worked on the morning shift (shopfloor employees rotate between the morning and afternoon shifts). The focus on the morning shift was necessary because

most of the collaborative decisions on work re-organisation were made during this period, (it was also the shift in which most of the changes occurred), although the author also spent time on the afternoon and night shift, observing and informally discussing work with plant operators.

In a programme into the effects of Total Quality Management (TQM) on employment relations in a number of Australian and New Zealand organisations, an attempt was made to incorporate a longitudinal element into the research which commenced in 1989 and concluded in 1992. On a practical note, we realised that it would not be possible to chart the movement of a range of companies from the conception of a need for a quality initiative through implementation to operation and on-going change. Therefore, we decided to identify organisations who were: just thinking about the possibility of a quality programme; were currently engaged in implementing TQM; and who had embarked on a range of quality initiatives and saw themselves as operating with a TQM programme. In so doing, we hoped to be able to capture and comment upon a number of different workplace issues and employment themes from conception to operation of TQM, as well as presenting new empirical case study data on company change.

As it turned out, the geographical size of Australia posed a major problem to sustaining a presence in some organisations over a prolonged period of time. With close collaboration with two research teams, one located in Brisbane and one in Adelaide, it was possible to collect some longitudinal data from companies located in South Australia and Queensland. However, as we aimed to draw examples from New South Wales, Victoria and Western Australia, geographical constraints (reflected in terms of time, funding, and accessibility) limited the nature of some of the case studies undertaken. Consequently, with regards to

the longitudinal character of the study, there was some disparity in the amount of processual data collected between the various case sites.

Another element which further complicated data analysis and case presentation, was that the one company identified as only beginning to think about the need for a TQM initiative, had very little to say on the subject (as there had been no discussions of TQM at the workplace, there was a general lack of empirical data). Nevertheless, although there was significant variation in the amount of data collected across the eight case studies, we decided to give each study equal treatment in the published book (see Dawson and Palmer, 1995. pp. 59-148).

A common element linking these research programmes is that a longitudinal dimension was incorporated during the design phase of the research; at the same time, however, they all tackled the longitudinal aspect in a rather different way. The British Rail case study opted for a retrospective analysis of the process of implementing a computerised system of freight information control combined with an eighteen month study of the ongoing effects of change under routine operation. In contrast, the study at General Motors sought to examine the process of change as it unfolded over time. This involved interviewing staff before and after the changes and collecting data during the process of transformation. In the TQM study, data were collected over a limited period of time within companies who were identified as being at the conceptual, implementing or operating stage in their use and application of TQM principles.

In each of these studies, time was an important element both in terms of observing change over a number of months (rather than engaging in a one-off snapshot), and in terms of being visible in the work environment. From the author's experience, the commitment of

a researcher to the study being conducted is reinforced by prolonged physical presence in the workplace setting of those being interviewed. As familiarity with the work process and interviewees increase, so do the opportunities to observe and informally discuss workplace practices and opinions. Finally and as already mentioned, each of these programmes of research did not solely rely on observational work (as in the classic tradition) but rather, used a range of different data collection techniques. It is to the question of methodological choice and selection in carrying out case study research, that the discussion now turns in the next section.

DIGGING IN THE FIELD: THE MANY COLOURS OF CASE STUDY DATA

In carrying out processual case study research two main methods of data collection are generally used in tandem; namely, in-depth interviewing, and observation. Each of these techniques are discussed below and some of the benefits of combining observation with indepth interviewing are outlined. The section concludes with a brief overview of a number of supplementary methods which may aid processual research.

Observational methods

Observational techniques can be divided into participant and non-participant observation. Participant observation refers to the situation where researchers actually participate in the work in which they are investigating. This may be done overtly, through agreement with a company to work as a temporary member of the workforce over a specified period of time; or covertly, through becoming an employee of an organisation without letting the employer know. Typically, observation has been used by researchers as a method for getting close to the lives and activities of others in order to both observe behaviours and to share in their felt experiences (Gill and Johnson, 1991. p. 109). An example of this type

of 'immersion' is provided by Howard Becker (1973) in his studies into the sociology of deviance as a participant observer. As a professional piano player working in Chicago, Becker relied heavily on participant observation in capturing a musician's view of the world (Becker, 1973. pp. 83-5). As he describes:

Most of the people I observed did not know that I was making a study of musicians. I seldom did any formal interviewing, but concentrated rather on listening to and recording the ordinary kinds of conversation that occurred among musicians. Most of my observation was carried out on the job, and even on the stand as we played. (Becker, 1973. p. 84)

Similarly in his study of organisations, Dalton (1959) maintained that it is important for researchers to immerse themselves in the cultures under investigation in order to understand and explain differences between official expectations (revealed in formal interviews) and unofficial ways of doing things (evident through participant observation). Notebooks were used to reconstruct contextual data, such as, sequence of actions, behaviours, and non-verbal expressions, as soon as possible after the event. One advantage of these types of covert observational studies, are that they minimise the effects of the researcher upon the data. However, the element of deception associated with covert research does raise a number of ethical issues, particularly with regard to the development of trust, confidentiality and the potential threat of putting an informant's job in jeopardy (see Gill and Johnson, 1991. pp. 119-20).

In taking an overt approach to observational research, William Foote Whyte also recognised the importance of 'seeing through the eyes' of those being studied. In his famous sociological study, *Street Corner Society* (1955), which was published in 1943,

Whyte gained access to the Norton Street Gang (located in a slum district in Boston) through a social worker who introduced him to Doc (a main character in his study). In order to gain ongoing proximity to the members of the gang, he decided to live in Cornerville and learn Italian. As an observer participating in the 'life' of Cornerville, he was able to establish his sincerity and as Bryman (1991. pp. 206-7) indicates, his attempt to learn the language was symbolically important in gaining acceptance and allowing him to get closer to those he was studying.

In his later work, Whyte used a combination of participant observation and semi-structured interviewing in his studies of Chicago restaurants, factories in New York State, worker cooperatives in Spain, and oil companies in Oklahoma and Venezuela (Whyte, 1984). The processual research of Pettigrew (1985) and more recently the author (1994), is also characterised by the use of multiple methods which have included the use of in-depth interviews, an analysis of documentary and archive data, and the collection of observational and ethnographic material. This multiple method approach makes it possible to cross check different types of data in constructing a narrative on the process of change. For example, in Pettigrew's early work on the politics of organisational decision-making, he spent 4 days a week over a 10 month period participating-as-observer in Michaels. This was followed by a less frequent programme of ongoing visits between July 1967 and April 1968 (see Pettigrew, 1973. pp. 52-75). During this research Pettigrew was aided by Enid Mumford (who liaised with the directors of the company) and concluded that:

Having two researchers operating at different points in the system is a major advantage in a decision-making study where the key participants work at different levels in the organisational hierarchy. (Pettigrew, 1973. p. 60)

The use of multiple observers is also evident in Whyte's (1944-45) intensive one-year study of 12 Chicago restaurants (less detailed studies were also made of 13 other restaurants), where Whyte and his three research assistants spent between 1 and 6 months performing and observing various restaurant jobs. As Whyte states:

In addition to interviewing and participating, we spent a good deal of time in observing the interaction of the various people who make up the restaurant organization. For example, we observed waitresses getting their food from service-pantry girls and picking up drinks from bartenders, and we stood with the checker while she checked the waiters' orders as they left one kitchen we were studying. (Whyte, 1948. p. 361)

Whyte (1984) notes that whilst access through employment may be relatively straight forward, the nature of the job may limit observational and interviewing opportunities. On the other hand, negotiating access into organisations can prove difficult in gaining permission from 'official gatekeepers' without unduly limiting the scope of the intended study. From the experience of the author in British Rail, relationships developed from initial observational work within the Western Region enabled the study to be extended to a number of additional marshalling yards in other regions accross the national rail network. Furthermore, in examining routine operation over a period of eighteen months, observational work and repeat interviews became critical methods to establishing the process of change under so-called 'stable' conditions. Voluminous research notes were taken during months of observation of the work of yard staff in British Rail marshalling yards. Typically, the author would arrive at a marshalling yard just prior to a shift changeover, and then leave just after the next shift changeover. All shifts were observed

in each yard studied. Ironically, the timetabling of British Rail passenger services to these large marshalling yards sometimes left the author for periods of twelve hours or more trying to fight off fatigue and to remain personable and interested in the work, issues and problems of yard staff.

In practice, the time spent at the yards proved instrumental in establishing good relationships, building up rapport and eventually being seen as an acceptable participant within the organisation. By the end of the study, the author was invited to a number of outside social events; he was attending informal group discussions in the local pub; and, in the absence of a passenger service, would be accommodated by an outbound freight train to return to his lodging accommodation. This proximity to the people being studied, and familiarisation with their work routines, produced very rich and detailed data. Thus, the value of observational data in understanding processes of change should not be underestimated. As Whyte concludes in evaluating this type of intense long-term observational research:

Full-time participant observation over an extended period of time tends to be an age-graded phenomenon. Such studies are most likely to be done by young people, in our student years. When we are established professionals, with teaching or other professional responsibilities, we are unlikely to have the time and the motivation to make such a full commitment. (Whyte, 1984. p. 63)

Attempts to develop research designs to accommodate the demands of other commitments and yet maintain the processual character of the research is noticeable in the work of a number of academics. For example, Jon Clark's (1995) single researcher study of Pirelli's Aberdare factory in South Wales used a compendium of methods (mirroring some of the

earlier work carried out within the New Technology Research Group) yet in this case, emphasis was placed on the use of interviews and documentary material. Whilst a series of structured observations were made (lasting between 90 minutes and 2 hours during a total of 27 visits to the Aberdare plant between June 1990 and April 1994), these were primarily for the purpose of gaining a clearer understanding of the cable-making process (Clark, 1995. pp. 245-48). In terms of analysis, the bulk of the data rested upon 272 Aberdare staff interviews, which consisted of 137 interviews of 146 employees in 1990 and 135 interviews of 135 employees in 1992 (Clark, 1995. p. 246).

Similarly, in examining the research strategy developed at the Centre for Corporate Strategy and Change at the University of Warwick, the influence of Pettigrew's early experiences are evident. Although the time allocated to case study research is reduced, Pettigrew describes three person project teams as the norm with fieldwork tending to comprise 2 or 3 days over a 5 month period supplemented with further intermittent contact (Pettigrew, 1990. p.278). In the work carried out between 1985-1989, over 350 recorded interviews were conducted in two automobile (Jaguar and Peugeot Talbot), two merchant banking (Kleinwort Benson and Hill Samuel), two book publishing (Longman and ABP) and one financial service company (Prudential). Interestingly, in reporting on the later work less emphasis has been placed on observation with greater attention being given to the use of documentary material and the use of semi-structured tape-recorded interviews (Pettigrew and Whipp, 1991. p. 26)

The use of interviews

On the use of interviews, Burgess claims that they provide 'the opportunity for the researcher to probe deeply to uncover new clues, open up new dimensions of a problem and to secure vivid, accurate inclusive accounts that are based on personal experience'

(Burgess, 1982. p. 107). In practice however, it may be that certain types of people are drawn towards certain types of research, and that in-depth interviewing is not a task which can be accomplished by just anyone. On this count, Buchanan et al (1988) claim that the success of informant interviews may not simply be determined by technique but also by the personality of the interviewer. Whether or not this is disputed, in the case of processual research, the interview remains a major method of collecting data. Moreover, the process of carrying out this form of qualitative research can be very time-consuming and taxing. For example, Turner indicates in his 'inside' view of the research process, how considerable time needs to be given both to the analysis and collection of qualitative data. In discussing initial fieldwork he notes that:

At an elementary level, the researcher embarking on a qualitative study of an organization needs to be warned that this is a time-consuming exercise. It takes time to gain access, to meet people, to let them tell their stories and to make sure that their telling has included all that you want to know. It takes a long time to transcribe or write up field notes and tape recordings: as a rule of thumb, a one-hour taped interview takes two to three hours to transcribe. But even then, the analysis of non-standardised, non-survey data is in itself a lengthy process. For each study an appropriate approach needs to be devised and implemented, and these tasks cannot be accomplished in a couple of hours. (Turner, 1988. p. 110)

In collecting interview data, the researcher is able to cross-check the statements of interviewees with his/her observation notes and documented accounts. Discrepancy between these various sources of data was usefully highlighted in a study of cultural change at Laubman and Pank in Adelaide. Under a quality management initiative the optometrists were expected to give up their 'white coats' and to refer to members of the

public as 'clients' rather than 'patients'. Although there was formal agreement that this change had taken place (in company documents and the public image projected), the word patient was frequently used not only by optometrists, but also by the branch level retail staff who criticised optometrists for using the word 'patient' (Dawson, 1996 pp. 116-7).

As an interviewer, it is also important to distinguish between respondents' descriptive evaluations of the way things ought to be, their perception of the way things actually are, and the way they feel others interpret their situation. For example, in the case of Percy, there was a formal job description of what supervisors should do; then there was the supervisor's view of what ought to be done and what the job actually entailed (he had his own views on how others perceived his role, such as, managers, other supervisors and yard workers); then there were the articulated and often different opinions of line management, senior management and shopfloor employees.

Discrepancy between the views of employees occupying different hierarchical positions is not uncommon, nor would it seem unusual. However, in collecting data from the Chief Executive Officer (CEO) to shopfloor employees, there can be a surprising ignorance of the views held by employees among senior management. For example, in a study of one Australian automotive supplier (who was receiving good media publicity through winning a North American contract), there was a marked mismatch between the opinions expressed at different levels within the organisation. Three of these are printed below to provide a flavour of some of these differences:

“We're very much a work-together team...We're heading towards being a world class operation and our people will be world class too.” (Management interviews, 1991)

“They should tell the workers what is going on in the company and keep them informed about decisions. Information should go to all employees and not just supervisors and leading hands.” (Supervisory interviews, 1991)

“It’s not like what you read in the papers. The managers get the limelight at the expense of the workers and they don’t give them sufficient recognition.’ (Employee interviews, 1991)

In the context of change, clarifying the status of these various statements is often a central analytical task in making sense of interview data. **Discrepancy between the views of different groups is not problematic, but part of the rich data which is accessible through processual research. Unlike studies which seek to construct a single account of change, the co-existence of competing histories and views can be accommodated under processual research. In the same automotive component company, the charismatic champion of change was later recast as a dishonest and underhanded management fiend after his replacement by another senior management member. Thus, the longitudinal data was able to capture this movement from hero to villain, and make sense of the political motives of rewriting company history to fit current commercial objectives and the required public performance of the senior management group.**

Combining observation with indepth interviewing

The combination of observation with indepth interviewing enables both the the cross-validation of data, and the integration of contextual and temporal observations with the more perceptual and attitudinal data gathered from interviews. The importance of being able to cross-validate data was highlighted in a longitudinal study of change at General

Motor's hardware fabrication plant at their Elizabeth complex in South Australia. In this instance, interview data had indicated that a computer-based shopfloor scheduler was being used by supervisors in the planning and re-scheduling of daily work operations. This information which had been provided by management (and some of the external industrial collaborators), presented a version of 'the ways things should be done' rather than of 'the way things were done' (see also, Dalton, 1959). In other words, the story presented to outsiders by the organisation and their industrial collaborators (the public face) did not align with the daily practice of shopfloor operations (the PC Scheduler was only used in the initial setup of the cells and not for daily scheduling purposes).

This discrepancy between the day-to-day practice of cellular manufacture and the formal intentions and aspirations for how the system would ideally work in practice, emerged from the observational work carried out in the plant. On the basis of this disconfirming data, further questions were then formulated and asked in later interviews. Thus, a major benefit of carrying out research over time which utilises a range of different methods, is that it allows for the cross-validation of data and enables the modification of research strategies in the collection of further data. In this case, repeat interviews allowed the researcher to return to some of these issues, which as it turned out, raised interesting questions not only about official expectations and actual work processes but, also, about the creation and revision of group histories to accord with particular vested interests.

The example used above illustrates some of the limitations of simply using interview data. Similarly, in the case of observational work, data collection problems may arise in the course of a research programme which prevents a full understanding of the area being studied. For example, in studying the job of the Area Freight Assistant (AFA), considerable time was spent observing their work (interactions with others, time spent on

the telephone and so forth). However, in contrast to the yard supervisors, where observational notes provided rich contextual data on local yard culture, daily shunting activities and supervision (see, Dawson, 1987), the job of the AFA would have remained undisclosed and hidden if sole reliance had been given to this technique. For example, it was observed that the activity of liaising and communicating with operating staff took up the greatest proportion of the AFA's time, and that most of the communication was in the form of telephone conversations. Consequently, observing AFAs at work did not by itself generate material which explained the content and patterns of communication.

In tackling this issue, a questionnaire was developed and personally administered to AFAs. This modification in research strategy enabled the collection of data on communication patterns (although as it turned out, the second largest category was 'others', indicating that certain key individuals had not been accounted for during the design of the questionnaire). Further attempts to clarify their job centred on: a series of interviews with AFAs, attendance at supervisory training courses, and ongoing discussions with AFAs as they carried out their daily job tasks. On gaining a greater understanding of job content (and with whom the AFA liaised over the telephone), the observation method then proved useful in providing data on the way decisions were made in practice. For example, although AFAs were formally required to alter, cancel or arrange inter-area services in liaison with divisional controllers, it was observed that AFAs made these decisions without prior consultation. Furthermore, instances were recorded on observation notes where AFAs even arranged the short-haul inter-regional trips with other AFAs without liaising with either divisional or regional controls. Hence in this case, AFAs were observed, interviewed and asked to complete a questionnaire, the researcher participated in formal training courses, then engaged in discussions with AFAs as part of

further observation of their work and finally, used documentary material as another source of data to explain the emergence of this computer-oriented type of supervisory position.

Supplementary methods

Apart from the use of interviews and observation there are other supplementary methods which can be utilised, such as, work diaries, the use of the critical incident technique, and the collection and analysis of company documents. Work diaries can be designed for use within a company as a method of collecting a journal of events. This record of work activities can be spread over a number of months or used to detail tasks across a range of employees on a particular day (see, Clark et al, 1988. pp. 224-5). In the case of the critical incident technique, this can be used to collect data on what individuals identify as being a particularly memorable moment or incident. These events can then be recounted and the respondents' actions, motives, and evaluations recorded. A major concern with this method, relates to recall and the tendency for individuals to rationalise past action (see, Easterby-Smith et al, 1991. p. 83-4). Finally, company documents, internal memos and general correspondence, can provide a useful reference source for constructing a chronology of key events and providing material on, for example, initial and subsequent proposals for workplace change. Access to confidential correspondence and, with developments in technology, email transmissions, can provide a useful record of changing issues and historical areas of sensitivity. However, as John Gill and Phil Johnson (1991. p. 115) point out:

Various types of organisation documents, such as correspondence, memos and personal files can provide useful insights into organisational events and processes, though of course great care needs to be taken in interpreting their meaning and significance. It is particularly important to avoid taking such documents at face

value and to make some allowance for the audience for whom they were originally intended and the possible motives the author(s) might have in saying what they said.

These then are some of the main research methods which can be utilised in the collection of data on workplace change. As already indicated, care must be taken to ensure company documents are not misinterpreted, that rationalisations through recall are recognised for what they are, and that the status of various data is clarified and cross-checked. Once armed with mountains of data, there remains the daunting task of trying to make sense of interviews and observation notes, and to prepare the material in a digestible form for publication.

CONCLUSION

In reflecting on the practice of carrying out processual case studies on organisational change, three main elements were discussed within a broader account of the research process from initial study design to the final presentation of findings through using narrative accounts. First, it was argued that there can be no substitute for researchers 'getting their hands dirty' in doing research (see, Frost and Stablein, 1992. pp. 243-49). This 'hands-on' need is reinforced by the importance of tacit fieldwork knowledge which is often difficult to express and document in a form which makes it accessible and meaningful to students. It was further illustrated how many of these unexplained elements of carrying out research (which at first glance may appear superficial and trivial), can be crucial ingredients to the successful completion of a processual case study exercise. For example, knowledge gained from experience enables the researcher to make judgements about the timing and appropriateness of questions, and on the practicality of a compendium of methods within the context of the research setting. The way researchers

present themselves, their ability to develop and maintain good interpersonal relations, and their capacity to remain open to competing data and not to restrict their research gaze, all forms part of the tacit skills of the experienced researcher. For the novice seeking guidance, whilst the nature of this domain knowledge limits skill acquisition through the use of explicit techniques of formal instruction, there is a body of knowledge on research methodology which can be taught, in addition to the more widespread availability of stories and anecdotes which can be used to convey some of the less tangible dimensions associated with the tacit skills of the processual research. In other words, whilst there is an important place for the taught research course, handling data in context and learning from the experience of fieldwork is an essential element in training new researchers wishing to develop their practical skills in carrying out processual studies on workplace change.

Second, it was shown how processual research sets a time-frame of reference for explaining change and by so doing, requires the collection of data over periods of real and retrospective time. As such, incorporating a longitudinal element into the research design is a critical part of the research process. During this design phase, researchers require a degree of honesty and realism if they are to develop feasible programmes which can accommodate contextual constraints and opportunities. In addition, 'putting-in-the-time' was also used to refer to the task of sustained fieldwork. In collecting longitudinal data, the researcher necessarily devotes a considerable amount of their own time and energy to data collection. It was noted that although prolonged periods within a work environment can be demanding and at times stressful, the visibility of the researcher over entire working days may go some way to signalling his/her commitment to the study, and act as a significant factor in the development of inter-personal relations and the building of rapport and trust. In this sense, 'putting-in-the-time' is important to the research design, in

the collection of processual data, and in becoming an accepted part of the workplace under study.

Third, a range of different data collection techniques were described and it was suggested that these should be used in combination for the purpose of longitudinal studies of change. For example, observational techniques can be used in conjunction with other methods in order to contextualise, validate and cross-check interview data. Whenever possible, a compendium of different methods can be used in studies which seek to collect longitudinal processual data on workplace change. It was also argued that the time required for processual analysis of this qualitative data should not be underestimated nor the need for blocks of uninterrupted periods when the researcher can immerse themselves in the body of data they have collected. Analysis is often the hardest task of all as the researcher seeks to do justice to the data they may have taken years to collect. This is also the period in which researchers may question their sanity in embarking on such a study in the first place.

In essence, a processual analysis involves breaking down data into its various constituent components, then locating data under one or a number of different categories and sub-categories, before building connections across the research material as a whole.

Transcriptions are transformed from a single text to multiple fragments (many with annotated commentaries) which are then combined and linked with other data in developing pre-assigned categories, and in creating and redefining others. In a way, the data is cracked open, labelled and then reconstructed to form something quite different from the original text, in an attempt to explain and understand the object of study. In other words, processual analysis centres on decoupling, classifying and recombining data to develop, redefine and create concepts which enable the presentation of new accounts

(post-analytical descriptions). In the narrative case studies presented elsewhere (see, Dawson 1994 and 1996), the intention has been to provide - through this type of analysis - open contextual descriptions of the dynamic process by which change unfolds.

In practice, the actual design of processual research, the data collection techniques employed, and the analysis of data are all influenced by various 'opportunities' and 'constraints', such as funding, period of grant, staffing of the project, and the geographical location of the principal investigators. For example, although the benefits of working within a research group and the use of multiple observers was briefly discussed, in the experience of the author (who has engaged in a number of research group and single researcher studies), there are also advantages in working outside of a bigger group. For example, the strong identification and ownership of a project, the capacity to innovate and be creative throughout the study without the need for continual discussion and debate, and the high levels of self-motivation in wanting to see the conception of 'your' research idea to be developed into a study which is eventually published. What these individual and group-based processual studies have in common is their use of multiple methods and their longitudinal research designs. As a result, a major benefit of this type of strategy is that it enables the development of processual theories which are able to unmask some of the common myths about organisational change, such as: the linearity myth that change goes through a logical sequence of stages; the improvement myth that change is marked by a line of continual improvement; and the leadership myth that there is one leader of large-scale change rather than a number of leaders with a range of roles which may emerge, evolve and decline at different times during the process of change. Thus, the capacity of this type of research to provide new insights, question many taken-for-granted assumptions, and widen our knowledge of the topic under study marks the journey as not only being academically worthwhile but also, satisfying on a more personal level.

Apart from the benefits of processual research, one area of possible concern in the context of spreading international pressure to 'publish or perish', is that the more time-consuming processual study may be increasingly replaced by the shorter case study. These more concentrated cases are planned to minimise time commitments whilst maximising potential publication output. On this count, it could be argued that a weakness with some of the more recent interview-intensive narratives has been their tendency to downplay the contribution of observational work to processual research. Therefore, it is important to stress that whilst the write-up of case study material may rely heavily on interview data, the information collected through the use of complementary techniques should also be central to any processual analysis of workplace change. In particular, observation notes can often prove to be an important data source in providing: a chronology of events, an account of routine and unforeseen activities and tasks, an awareness of the informal organisation of work, and in capturing the non-linearity of processes of change. Unlike the snap-shot study or the broader questionnaire approach, processual case study research on organisational change uses a compendium of different methods over time in order to chart the complex and muddled waters of organisational life. In collecting rich empirical data and getting behind the seductive appeal of consultant techniques and quick-fix solutions to company ills, the researcher must learn to 'swim in the deep end' through surviving sustained periods of 'hands-on time digging in the field'. Through the wide collection of detailed data (in the use of company documents, interview transcripts and observation notes), the researcher is able to engage in a more critical processual analysis and by so doing, unravel and break open many of the popularised myths about management and organisations.

On final reflection, conducting processual research on organisational change may require a lot of patience and plenty of time, but it also offers the researcher the chance to study unfolding issues and events as they occur. The 'deviant' or 'outsider' no longer has to be viewed as problematic in final data presentation as fine-grained contextual accounts can easily accommodate diversity. The focus is not on working the data to strengthen the generalisability of the findings but rather, to provide narrative accounts of the continuously developing and complex dynamic of people in organisations. Although general trends can be identified and typical responses recounted, under the processual framework, one is significant.

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