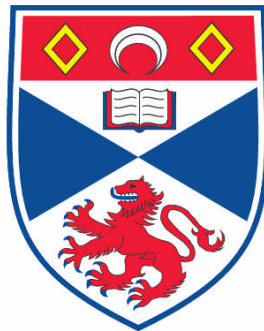


**THE ROLE AND IMPORTANCE OF CONTEXT IN COLLECTIVE
LEARNING : MULTIPLE CASE STUDIES IN SCOTTISH PRIMARY
CARE**

Gail Greig

**A Thesis Submitted for the Degree of PhD
at the
University of St. Andrews**



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THESIS TITLE

The role and importance of context in collective learning: multiple case studies in Scottish primary care.

Candidate: Gail Greig

Degree of PhD

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Abstract

Organisational learning is conceptualised within healthcare policy as an acontextual entity to be implemented across services through a prescribed governance framework.

Studies of organisational learning often exclude context in this way. The central questions of this thesis concern how and why context is relevant and important in relation to organisational learning. In order to address these issues, context and organisational learning were conceptualised as mutually constitutive activity and knowing-in-practice respectively. Taking a cultural-historical activity theoretical approach, learning is understood to be an intrinsic part of activity. These issues were explored empirically through qualitative case study in three purposively sampled Scottish primary care teams.

Initial findings suggested collective learning occurred through participation in everyday activity. Team accounts of apparently the same routine object of work revealed distinctive patterns of activity. Each team seemed to be doing the same thing differently. Exploration of mediating means present in each team's activity accounted for these differences: although similar on the surface, the attribution of meaning to each was contested and shaped through the cultural, historical and inherently contextual activity which they mediated within each activity system. Further analysis demonstrated members of each primary care team co-configured these objects with members of other interlinked activity systems. Different things were actually being done in similarly different ways. This showed how inherently contextual activities shaped the content of collective learning and offered an explanation of why context is relevant and important in collective learning.

These findings suggest efforts to transfer knowledge as a discrete, manageable entity between situations are unlikely to succeed due to the filtering and translating effect of inherently contextual activity. From this perspective, organisational learning and related concepts such as 'implementation' and 'best practice' become problematic. Healthcare policy concerning collective learning, within which such approaches are central, may benefit from reconsideration.

Declarations

I, Gail Greig, hereby certify that this thesis, which is approximately 100 000 words in length, has been written by me, that it is the record of work carried out by me and that it has not been submitted in any previous application for a higher degree.

I was admitted as a research student in October, 2003 and as a candidate for the degree of PhD in October, 2004, the higher study for which this is a record was carried out in the University of St Andrews between 2003 and 2007.

Date:

Signature of candidate:

I hereby certify that the candidate has fulfilled the conditions of the Resolution and Regulations appropriate for the degree of PhD in the University of St Andrews and that the candidate is qualified to submit this thesis in application for that degree.

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Glossary of healthcare terms:

AHP	Allied Health Professional (e.g. OT, SALT, Radiographer, Physiotherapist)
ALS	Advanced Life Support
ATLS	Advanced Trauma and Life Support
BASICS	British Association of Immediate Care (Scotland)
CARENAP	Joint clinical and social needs assessment for usually elderly patients who develop a need for support, often prior to or upon admission to hospital – for discharge planning purposes to help older person retain independence and live in community
CH	Community Hospital
COGPED	Committee of General Practice Education Directors
DGH	District General Hospital
DoH	Department of Health (England)
EGHOP	Expert Group on Healthcare of Older People
F2	Foundation 2 (new doctor training grade from 2003)
GMC	General Medical Council
GMS	General Medical Services contract (1990)
GP	General (medical) Practitioner
GP Registrar	General Practitioner Registrar (qualified doctor training in specialty of General Practice)
nGMS	New General Medical Services contract (2003/4)
NES	NHS Education for Scotland
OFPSR	Office for Public Services Reform
OT	Occupational Therapist
PALS	Paediatric Advanced Life Support
Physio	Physiotherapist
PMS / 17c Practice	Personal Medical Service / subsection: contract primary care organisation, usually professional partnership employing staff and providing services to the NHS under specified contract
RCGP	Royal College of General Practitioners
RGH	Rural General Hospital
SALT	Speech and Language Therapist
Secondary care	Services provided in District General Hospitals by specialists in single areas of clinical care e.g. most varieties of surgery, gynaecology, medical specialties e.g., ophthalmology, gastroenterology, etc.
SEHD	Scottish Executive Health Department
SHO	Senior House Officer (previous doctor training grade)
Tertiary care	Services provided by leading specialists in single area of clinical care, usually in a large teaching hospital linked to a university and/or organised on a regional or national basis.
WHO	World Health Organisation
WONCA	World Organisation of National Colleges, Academies and Academic Association of General Practitioners/Family Physicians

Foreword

Primary healthcare forms the empirical setting for this research, in which an interpretive methodology has been adopted. Given the choice of methodology, it is important to acknowledge the positive role of the researcher's prior knowledge of the setting or topic. This challenges the researcher to consider issues with appropriate reflexivity and transparency. Since this entire document comprises a series of choices made by the researcher, this is an important obligation throughout the thesis. Therefore, prior to commencing the presentation of the argument, I feel it is important to explain some of my own prior knowledge so that the reader may be aware of some of the influences on, and choices made about, the execution of this research.

My working life has been spent in healthcare of one sort or another over a period of twenty-one years. I joined the NHS with a joint honours degree in political studies in 1986 as a 'graduate management trainee' when general management was first introduced to the Scottish Health Service: I worked in almost every area of healthcare at that time including various hospitals (acute teaching, psychiatric as it was then known, sick children's, and maternity), community health services (such as district nursing), and the Health Board headquarters. I spent several months shadowing (and sometimes helping) all sorts of people (cleaners, porters, supplies people, computing staff, physicians, surgeons, clinical psychologists, managers, nurses of all sorts, allied health professionals, kitchen staff) in their daily work in healthcare where they generously helped me learn a lot about what they did.

My first "substantive post" was as assistant administrator of a large psychiatric hospital but it became clear that the role of managers in healthcare was to enact the government policy. Having come from a small business background, I found the culture somewhat "can't do" and when the time came for a career break, I decided to leave the NHS.

Four years later I re-entered healthcare as the general manager of a large General (Medical) Practice in a small town. This allowed me to work in healthcare but in a small business environment, since my new employers were independent contractors to the NHS. They

provided the medical input for the busy community hospital and approximately two hundred local nursing and residential home beds. I learned a lot about how the activities and agencies involved in caring for the local population interfaced, especially during a Total Purchasing pilot project jointly undertaken with a nearby Practice. What had always been a politically controversial project assumed Political significance when the new government terminated the policy under which the project ran. Since I had moved away from the area and working there now entailed long-distance travel, I reluctantly left the Practice.

But I didn't leave primary care: I subsequently undertook a Masters Degree in Primary Care in which I used my experience to explore healthcare issues academically. But healthcare pervades the rest of my life too, since my husband is a GP and all of his family are healthcare professionals, past and present. And of course, I am also a patient who has experienced various aspects of healthcare services including primary care.

All in all, this constitutes a rich seam of prior knowledge which has influenced many of the choices and interpretations throughout the conduct of this research, as discussed in chapter 5 concerning methodology.

Chapter 1: Introduction

The introduction of organisational learning in public policy

Pick up almost any academic paper or book about UK healthcare policy or organisation and you will probably encounter a tale of constant change, of flux, experienced by those in this area of public policy and service. This ubiquitous description is due in no small part to the reform agenda pursued by successive governments since 1979; the pace of change has, if anything, accelerated since 1997 when the New Labour government took office (Exworthy, 2001; Kirkpatrick *et al.*, 2005). The ostensible aim of change, of reforms, has always been to “improve services”. Whilst “change” remains a constant refrain, albeit having been subsumed and rebadged as “modernisation” in official publications (Harrison, 1999a; Morrell, 2006), it has been augmented with a new mantra of “learning”: individuals are urged to become “life-long learners” and organisations – including government agencies and departments, together with other types of public service organisations – are exhorted to develop the capacity of “organisational learning”, ideally by becoming Learning Organisations (Senge, 1990; DoH, 2000; SEHD, 2000b; OFPSR, 2002; Labour Party and Liberal Democrats, 2003).

The term “organisational learning” has entered the international lexicon along with its usual companion, the “knowledge based economy” (Labour Party and Liberal Democrats, 2003). Now widespread in general parlance, and frequently heard in relation to public service organisations, these ideas rose to prominence in private sector business practice, particularly during the late 1980s and 1990s (Cross and Israelit, 2000). This occurred during a period of simultaneous economic difficulties and successes: the West experienced the large scale demise of traditional manufacturing industries and economic recession, whilst the East achieved rapid economic development and growth. Western corporations sought to identify and emulate the source of that success in the hope of achieving “competitive advantage” in the new global market (Garvin, 1998; Nonaka, 1998; Hamel *et al.*, 2000). The previous management approaches of the industrialised West were now deemed too mechanistic and slow to offer the optimum opportunity to “evolve” as the pace of technological and social change increased: it was believed that successful organisations

which “survived and thrived” were likely to be those which supported the continuous acquisition and utilisation of relevant knowledge, through techniques of organisational learning, to achieve competency-based strategic goals (de Geus, 1997; Hamel *et al.*, 2000). Such organisations were sometimes referred to as “Learning Organisations” by authors who prescribed a way of working regarded as the optimum model to support organisational learning (Garrett, 1990; Senge, 1990; de Geus, 1997; Garvin, 1998; Pedlar and Aspinwall, 1998).

This perspective generally defined success as the ability to capture and exploit the “learning” and “knowledge” of organisational members by various means, including the use of organisational routines such as standard operating procedures. Attention focused on how organisations could measure and therefore manage these “intangible assets”, thereby rendering them tangible assets or commodities (Hussi, 2004; Roselender and Fincham, 2004). A body of academic work arose in business schools concerning performance measurement and management in relation to organisational learning and knowledge: various performance indicators were assessed, usually in relation to enhancing market share and/or profit (Cross and Baird, 2000; Boerner *et al.*, 2003; Cavaleri, 2004).

Organisational learning (OL) became widely regarded in the private business sector as a successful method of engendering continuous flexibility in turbulent (market) environments in order to achieve better (financial) results; the formula for success seemed to be: *learning plus change equals (continuous) improved performance* (Burnes *et al.*, 2003).

Given this brief background description, it may not be difficult to see the appeal such a formula might hold for a government seeking improved service performance. The New Labour government wished to increase the scale and pace of reform of the public services for which it became responsible at a time when those services had already experienced over a decade of organisational change and reform. At the dawn of the new Millennium it became clear the public services had become reform weary, whilst the efficacy of the successive change programmes was questionable (Davies and Nutley, 2000; Van Eyk *et al.*, 2001; WHO, 2003). Public services had apparently proved to be remarkably resistant to adopting some of changes previous governments had attempted to make through policy

initiatives (Schofield, 2001; Greer, 2005; Kirkpatrick *et al.*, 2005). In the face of such fatigue and resistance, approaches which might overcome these problems and which were consistent with the achievement of policy aims were required. Indeed, the need for reform and improved performance of public services had become a political imperative for politicians, particularly in light of the large increase in public investment which had been committed to those services in return for reform (OFPSR, 2002; Greer, 2004). This situation set the scene for the introduction of the notion of organisational learning to the UK government's health policy reform repertoire.

In the face of such large increases in public investment, it is not surprising that healthcare has been the focus of much public and academic debate. This typically relates to hospitals directly managed by employees of the organisations overseen by government appointed boards, known as Health Boards in Scotland (for example, see Exworthy and Halford, 1999; Boyne *et al.*, 2003; Ferlie and McGivern, 2003; Kirkpatrick *et al.*, 2005). These Boards have promoted the notion of organisational learning through a "clinical governance framework", introduced to ensure services are delivered to a specific standard through a variety of prescribed mechanisms although it is arguable as to how well these articulate with one another (SEHD, 2000c, 2001a; Wilkinson *et al.*, 2004; Sheaff and Pilgrim, 2006). However the same framework, incorporating its prescribed and particular form of organisational learning, has also been applied to the arguably less widely debated yet most heavily used area of healthcare: primary care (Donaldson, 2003).

Primary care is the area of healthcare within which the notion of organisational learning will be considered through this thesis.

Rationale for this thesis

Although primary care provides the bulk of healthcare service, it has generally occupied the limelight less frequently than other areas of UK healthcare. This has changed somewhat throughout the course of this research, during which time primary care has attracted controversy following the introduction of a new contract in 2003 for one of the main groups of Family Health Service independent contractors who provide a large proportion of the

service within primary care, namely family doctors or “GPs” (BMA and NHS Confederation, 2003). Although this represents just one in a series of successive changes which primary care has undergone in the way it has been organised over the past two decades (Ritchie, 2003), the pace of reform looked set to increase under the government’s accelerated reform-in-return-for-investment policy.

In light of the previously noted reform fatigue, some suggestions were made about how those working in primary care might cope with further reform including consideration of employing the notion of organisational learning, albeit taking a different approach to that promoted through the clinical governance framework (Davies and Nutley, 2000; Rushmer *et al.*, 2004). However, due to the nature of primary care, comparatively little was known about how the notion of organisational learning might fare in this area of healthcare: prior knowledge suggested that context was a generically important aspect of primary care, as the iterative-inductive process of this study will show. Therefore, the aim of the research upon which this thesis is based has been to explore empirically the notion of organisational learning in the “everyday” healthcare setting of primary care, bearing in mind the likely importance of context in primary care processes generally.

Structure of thesis

This thesis may be considered to form three main sections.

The first section, comprising chapters one to five, provides the necessary background to the empirical element of the work presented here and its subsequent analysis. In this first chapter, the policy background has been introduced which set the scene for an explanation of the rationale for conducting this work. The empirical setting for this research will be introduced in chapter 2 in order to provide some orientation for the reader. Various definitions of primary (health) care will be considered and its reputed diversity will be discussed. Having set the scene for the research, the nature of the concepts under scrutiny will be introduced and explored in chapters 3 and 4, through reviews of various literatures relating to the concepts of organisational learning and context respectively. These chapters provide the reader with an insight into the various conceptualisations of these notions and include discussions of what is already known about them so that issues worthy of further

exploration may be identified. In chapter three, the notion of organisational learning will be discussed from the various perspectives found within the existing literature, in relation to the empirical setting of this research. The concept of context will be then be discussed in chapter 4, having been identified as an issue worthy of further exploration within the organisational learning literature which would appear to be compatible with the reputed diversity of primary care. A detailed discussion of the framework of activity theory, adopted as the most helpful analytical approach to the data generated through this research, may be found here. This background section concludes in chapter 5 when the methodology adopted within this research will be discussed. Here the social science approach chosen to study the phenomena of interest in this research in order to address the research questions posed, together with a full account of the iterative-inductive way in which this has been achieved, will be presented. These chapters have been structured to lead the reader through the research as it has developed.

In the second section, the empirical element of the research will be presented. Given the approach adopted to explore the topic of this research, the chapters here do not follow a traditional “findings/discussion” division. Instead, the argument will be presented step-by-step as it was developed in order to form a coherent whole. Therefore, reflecting the iterative-inductive approach and the theoretical framework within which data were considered, the second section comprises a series of four chapters where findings will be presented, analysed and discussed in turn in order to prepare the way for the next step in the argument. Beginning in chapter 6, the findings from the initial exploratory phase of the research will be presented and discussed in order to identify salient issues for subsequent empirical exploration. The process through which these issues were further investigated empirically will be set out in chapter 7, together with the initial findings generated from this second research phase. In chapter 8, the main analysis of the data generated through this research will be presented and discussed in order to establish the empirical basis upon which the research questions posed within this thesis have been addressed. In chapter 9, the final stage of the analysis of the findings presented in these four chapters will link the three key phenomena of interest in this research – activity or practice, context and collective learning.

The sequential discussion of the empirical findings presented in these four chapters, provide the basis for developing the final stage of the argument presented here in the final section of this thesis. In chapter 10, the central points of this thesis are set out based upon the foundational steps of chapters 6 to 9. Here the role and importance of context in relation to collective learning in the empirical setting of Scottish primary care teams will be drawn out with brief reference to the data before being discussed in more detail. Finally in chapter 11, the thesis concludes with an explication of the contribution of this research and an exploration of the potential implications of the argument presented here, together with some suggestions for further work in relation to the issues raised by the empirical findings of this research.

Chapter 2: Background

The empirical setting for this research is introduced in this chapter. First, a brief overview of conceptualisations of primary care will be provided to orient the reader in relation to its role, formation and characteristics. One of these characteristics, often assumed but rarely properly explored, is the notion of diversity which will be considered briefly to set the scene for its importance as a consideration in relation to the study of organisational learning in primary care.

Setting the Scene: Primary Care

Primary care is a familiar phrase but its meaning is often ambiguous and depends upon who is using the term and to what end. Perhaps the most frequently used definition of primary care is set out in the World Health Organisation Declaration of Alma Ata:

Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system of which it is the central function and main focus, and of the overall social and economic development of the community.

(WHO, 1978)

This definition suggests two components to the term 'primary (health) care' which, for the purposes of the present discussion shall be called the *setting* of primary care and the *function* of primary care. This distinction is explicated in the definitions offered by the World Organisation of National Colleges, Academies and Academic Association of General Practitioners/Family Physicians (WONCA) Europe, which differentiates primary care and primary health care in order to clarify matters:

Primary care: The setting within a health care system, usually in the patient's own community, in which the first contact with a health professional occurs (excluding major trauma).

(WONCA, 2002)

Primary health care: Health care that emphasizes responsibility for the patient, beginning at the time of the first encounter and continuing thereafter. This includes overall management and coordination of health care, such as the appropriate use of consultants, specialists, and other medical / health care resources. In addition, maintenance of continuity on a long term basis, including coordination of secondary and tertiary care is required.

(WONCA, 2005)

These two complementary definitions begin to reveal the potential range and complexity of the concepts and meanings encapsulated by the term, 'primary care'. They highlight four characteristics most frequently associated with this aspect of health care which can be summarised as: equity of access covering all healthcare needs; participatory, person- rather than disease-focused care; a continuing care relationship; and cost-effective co-ordination as required within healthcare systems (Ritchie, 2003; Starfield *et al.*, 2005).

Primary care can therefore be seen to occupy a position of great importance to the health of populations throughout the world and to the efficacy of healthcare systems (WHO, 2003; Starfield *et al.*, 2005; WHO, 2006). In the UK, primary care has been, and remains, central to health policy fulfilling its twin cost-effective roles of universal provider of, and gatekeeper to, other types of health services (SEHD, 2005b).

So far these definitions only suggest where primary care is located within healthcare systems and offer some initial idea of its function. They do not reveal anything about *who* is involved or *what they actually do*. In fact, although it is now regarded as team-based and multi-disciplinary (SEHD, 2005b), primary care still has at its core the clinical discipline of general practice, personified by the general medical practitioner (McWhinney, 1996; Rosser, 1996; Ritchie, 2003). In recent years, controversy arose within the medical

profession itself about the most appropriate definition of general practice, when concerns were voiced that existing definitions confused the setting of primary care with the role of those working within it, not least about the role of the general practitioner (Heath *et al.*, 2000; Olesen *et al.*, 2000). A new definition of the European general practitioner and general practice was drawn up by academic general practice, and endorsed in the UK by the Royal College of General Practitioners, in 2002:

General practitioners/family doctors are specialist physicians trained in the principles of the discipline. They are personal doctors, primarily responsible for the provision of comprehensive and continuing care to every individual seeking medical care irrespective of age, sex and illness. They care for individuals in the context of their family, their community, and their culture, always respecting the autonomy of their patients. They recognise they will also have a professional responsibility to their community. In negotiating management plans with their patients they integrate physical, psychological, social, cultural and existential factors, utilising the knowledge and trust engendered by repeated contacts. General practitioners/family physicians exercise their professional role by promoting health, preventing disease and providing cure, care, or palliation. This is done either directly or through the services of others according to health needs and the resources available within the community they serve, assisting patients where necessary in accessing these services. They must take the responsibility for developing and maintaining their skill, personal balance and values as a basis for effective and safe patient care.

(WONCA, 2002)

In summary, general practitioners deal with the undifferentiated presenting problems of a defined population over time, using their clinical skills and knowledge to cope with uncertainty, assess and manage risk and provide care in collaboration with their colleagues in general practice and primary care (McWhinney, 1996; Rosser, 1996; Ritchie, 2003; Starfield *et al.*, 2005). This involvement of the wider team members from various backgrounds – perhaps, for example, from nursing, managerial, social work and professionals allied to medicine - is acknowledged in the now familiar term, ‘primary care team’, one definition of which is:

A group of health care providers and ancillary staff serving the same population or geographical area, sometimes occupying the same building, working together to provide different but complementary services which are directly available on demand.

(WONCA, 2002)

These definitions demonstrate some of the complexity encapsulated in the term ‘primary care’ and offer a glimpse of the contested nature of such terms. Primary care may be thought of as a setting within the broader health and possibly social care system, as a central or foundational activity of healthcare systems, as an approach to healthcare provision based on a particular epistemic approach within the overall body of professional medical knowledge which is complemented by the skills and knowledge of other colleagues within the primary care setting. This brief overview will become important when discussing the theoretical and methodological bases, and the empirical findings of this study in chapters 4 to 9.

Diversity in primary care

A prevailing view within and about primary care, howsoever one chooses to define it, is that it is an area of healthcare practice characterised by diversity. Although broadly an anecdotal and axiomatic view, a recent review of Scottish primary care over the past twenty years suggests that diversity is an important characteristic of such services and practice which is difficult to explain based on current information (Ritchie, 2003).

Some empirical work has been done to look specifically at the issue of diversity including differences between rural and urban primary care, and between large and small Practices, relating to issues such as workload, workforce and service configuration (for example, (Farmer *et al.*, 2003; Farmer *et al.*, 2005a; Farmer *et al.*, 2005b; McCann *et al.*, 2005). In relation to population health, there is some evidence that there may be differences between patient outcomes in urban and rural areas although the reasons remain unexplained (Campbell *et al.*, 2000). There are also apparent differences in satisfaction levels between urban and rural patients, with rural patients being twice as happy with their local hospitals (often small community hospitals) and two and a half times happier with their local GPs,

which may be partially due to the connections of local practitioners who are embedded within their communities and the less fragmented nature of the services (Farmer, 2006).

However, the picture may be changing. Structural changes in primary care over recent years have led to suggestions of a reduction in diversity between Practices, through the processes of industrialization and institutional isomorphism across primary care services (Iliffe, 2002; Iliffe and Lenihan, 2003). A recent study of the new contract for general practitioners' Quality and Outcomes Framework (QOF) scores of Practices in urban areas found that features such as Practice size had an impact on the scores achieved in organisational spheres, but did not seem to have any relationship to the clinical or other quality indicators within the Framework (BMA and NHS Confederation, 2003; Wang *et al.*, 2006). Others have suggested the QOF may have distorted clinical prioritisation away from patients' needs which fall outwith the areas of care for which incentives are offered (Fleetcroft and Cookson, 2006). Changes such as these may contribute to suggestions of reducing levels of diversity in primary care.

It would appear that a clear understanding about the diversity or otherwise between primary care teams or Practices remains elusive. Overall, there seems to be a continuing view that diversity *is* a characteristic of primary care teams, although the reasons for this are unclear and the meaning of the notion of diversity itself remains ill defined and poorly understood.

In 2003, the World Health Organisation annual report concluded that diversity and contextual factors required to be acknowledged in the organisation of healthcare, and that primary care services should occupy a central position in order to promote effective team and organisational learning if improvements in world health were to be realised (WHO, 2003). It seemed that whatever the underlying reasons, issues of diversity and difference in practice across primary care would be important considerations in any study of the notion of organisational learning in primary care.

This chapter has provided a brief overview of various conceptualizations of primary care. The issue of diversity as an assumed characteristic of this complex and complicated area of healthcare has been explored and this suggests that the concept of context may be an important consideration in any study involving primary care. These brief discussions

provide an insight into the empirical setting for the research study upon which this thesis is based.

Chapter 3: Literature Review – Organisational Learning

Introduction

In chapter 1 the policy background through which the idea of organisational learning arose in healthcare was outlined to introduce the topic of this thesis. A brief discussion of primary care was then provided in chapter 2 to introduce the empirical setting for this study. The purpose of this chapter is to consider the notion of “organisational learning” itself as a central phenomenon of interest in this thesis.

The chapter is organised as follows. First, an overview of some of the literatures related to organisational learning will be outlined in order to map the potential academic terrain relative to the thesis, including the main approaches to the subject. Some of the problems within these areas of literature will be identified and an alternative approach will be introduced and explored. Issues which continue to be of academic interest in relation to organisational learning will then be identified. The chapter concludes by locating the work presented here within the overall literature and identifying the issues within it that this thesis is intended to address.

Overview

Introductory remarks

The academic literature concerning the topic of organisational learning is a large, contested and divergent body of work spanning several decades. During that time, a range of academic disciplines, methodological approaches and an accompanying array of interests and aims have all considered the notion of organisational learning. Therefore, a major challenge for any newcomer to the topic is to try to navigate through what could reasonably be described as a maze of literature(s) (Berthoin Antal *et al.*, 2001). In order to try to avoid becoming lost in this maze, it is useful to remember why the notion of organisational learning is of interest. Therefore, the aim of the research being undertaken (to explore the notion of organisational learning and the potential role and importance of context in that process) will act as a compass in order to maintain the focus and direction of the review. In

this way salient issues will be identified, whilst others may be acknowledged but not pursued. So this review of literature is not exhaustive, but rather sets out to consider ideas of relevance in order to inform the conduct of this empirical research in the potentially diverse and complex healthcare area of Scottish primary care.

Origins, scale and scope of the literature

The term “organisational learning” apparently first appeared in the literature in 1958 in a discussion about emergent problems concerning bureaucratic models of organisation, particularly in public sector organisations (March and Simon, 1958). Based on an observation made about inappropriately defensive organisational behaviour in the face of certain (unintended) consequences of previous organisational actions resulting in even more rigid and controlling behaviour (Merton, 1940), the term made its debut when the behaviour observed by Merton was subsequently described as “dysfunctional organisational learning” (March & Simon, 1958, p37). This particular problem of the rigidity of organisational behaviour, together with others identified in that initial publication (for example: adaptive and/or generative learning; the spread of what is learned – knowledge – throughout the organisation; linkages between the learning of individuals and the organisation; how best to organise to utilise learning to improve performance) formed the basis of what could be described as a research agenda concerning organisations and learning which is still in evidence almost fifty years later. The central problem under scrutiny was, and to a certain extent remains, how organisations (may) change, under which conditions and for which reasons?

From its beginning in a publication by two political scientists in what was a relatively new field of the study of organisations, the notion of organisational learning spread to other disciplines interested in different aspects of either “organisation” or “learning”, or both. These included psychology, sociology, anthropology, political science, economics and history (Dierkes *et al.*, 2001), as well as all of the various areas of academic study within the study of management and/or organisations (howsoever one chooses to define that area of study) (Easterby-Smith, 1997).

Given the relative longevity of literature concerning organisational learning, the scale and contemporary nature of its growth should not be underestimated. Reviews of the literature illustrate this in various ways. For example, up until 1989 there had been a total of fifty articles published concerning organisational learning, but between 1989 and 1994, a further one hundred and eighty-four publications had emerged (Crossan and Guatto, 1996). The vast majority of these were in the field of management and organisation studies until the mid 1990s, with only four publications within the discipline of psychology at that point (Maier *et al.*, 2001). However, the exponential growth in publications on organisational learning seemed to occur around 1996: a bibliographic analysis of citations demonstrated totals of eight hundred citations prior to 1996 and a further two thousand and two hundred between 1996 and 2003 (Easterby-Smith and Lyles, 2003).

This vast array of publications suggests a growing interest in this area of study, but the sheer volume obscures two issues which must be accounted for: the subject area of this literature is not homogenous, and much of the volume of literature focuses on either theoretical discussion and propositions, or reviews of existing literatures and further musings about its potential for research and/or for the practice of management. Each of these issues deserves brief exploration.

In relation to the type of work presented in this rapidly proliferating literature, a review of the one hundred and fifty papers published in 1997 identified that only fifteen were papers based on empirical work, and of those ten were conducted by people involved in attempting to make organisational change happen, rather than about the notion of organisational learning *per se* (Easterby-Smith and Araujo, 1999). In addition the comparatively slow development and limited volume of publications prior to 1996 (Crossan and Guatto, 1996) contained few empirical studies, so the overall range of empirical findings presented in the total work done in this subject area has been relatively small, although this trend has begun to be reversed as discussed subsequently in this chapter.

The nature of the work done highlights the other issue obscured by the somewhat startling number of publications on offer to the newcomer to the subject: the literature is actually a *series of literatures*, concerned with different issues, coalescing around the terms

“organisational” and “learning”. This is perhaps not too surprising given the range of academic disciplines and interests identified as taking an interest in this area. It also perhaps explains why there have been so many reviews of the literature in the late 1990s/early 2000s, which act as maps to this diverse terrain. Broadly speaking, the literature actually seems to reflect four major areas of interest, within each of which there are (sometimes many) subunits of interest. These major areas are: organisational learning, the learning organisation, knowledge management, and organisational knowledge (Easterby-Smith, 1997; Easterby-Smith and Araujo, 1999; Easterby-Smith *et al.*, 2000; Berthoin Antal *et al.*, 2001; Easterby-Smith and Lyles, 2003). There is further broad agreement that there are two main approaches evident within these four major areas of interest: the learning organisation and knowledge management literatures seem concerned with prescriptive and normative approaches to the application of these subjects; meanwhile the organisational learning and organisational knowledge literatures are concerned with academic or scholarly, sometimes critical, approaches to studying these processes. It is therefore reasonable to surmise that these different literatures are characterised not only by different specific areas within the overall topic(s), but also by different ontological, epistemological and methodological perspectives within the social sciences. These require to be considered when identifying issues of relevance within the overall literature to one’s own topic of interest prior to conducting any research.

Having provided a brief “helicopter view” of the potentially relevant areas of literature, a discussion of these main areas will be presented in the next section. The potential relevance of the respective strands of literature will be considered in relation to the topic of this research. In this way some of the theoretical issues, and the methodological choices they have influenced, with regard to the conduct of the research will be highlighted.

Main stands of the literature

The discussion of each of the main strands of literature begins with a review of the Learning Organisation literature; this is primarily because it reflects the way in which the notion of organisational learning has been promoted through healthcare policy. This will then lead to a brief discussion of the knowledge management literature which is also

reflected in some of the activities of healthcare organisations. There will then be a brief acknowledgement of the organisational knowledge and memory literature, which links into a more detailed consideration of the organisational learning literature. The various approaches to the notion of organisational learning found within this strand of literature will be discussed including some consideration of their respective strengths and weaknesses. This will lead to a discussion of the approach adopted within this study. Finally, issues identified as being worthy of further exploration in the literature will be highlighted. This will provide an introduction to the research questions addressed in this thesis in relation to the empirical setting of Scottish primary care.

The Learning Organisation

This discussion of the learning organisation literature begins in 1990 with what is arguably the key text in this strand of literature, concerning how and why organisations should become Learning Organisations (Senge, 1990). Inspired by system dynamics (Forrester, 1956, 1968, 1994), Senge suggested the learning organisation was the optimum way for managers to manage better and set out five “disciplines” or dimensions required for good management: systems thinking, personal mastery, mental models, building shared vision and team learning (Senge, 1990). Managers should adopt these “disciplines” to enable their organisations to continuously improve their performance (represented by improvements in profitability, for example) but in a way which took cognisance of the human side of work (by empowering and involving the members of the organisation). Senge attributed some of the impetus behind his idea, to turn the academic work on the application of system dynamics in the study of organisations into a management method, to Arie de Geus, a senior executive at the Royal Dutch Shell company (Senge, 1990). De Geus subsequently produced a book in which organisations were conceptualised as living entities which could learn, based on an account of the author’s experience of putting the method into practice, and other company executives were exhorted to follow suit if they wished their companies to “survive and thrive” in what was described as an increasingly turbulent business environment (de Geus, 1997).

It seemed that this was the new way to organise for the future and variations on the theme emerged for “leaders” of the future, prescribing how best they might achieve this goal (Garvin, 1998; Pedlar and Aspinwall, 1998). Eleven characteristics of a learning organisation were identified, including: a learning approach to strategy; participative policy-making; “informatting” (sharing critical information through information technology); formative accounting and control; internal exchange; reward flexibility; enabling structure; boundary workers as environmental scanners; inter-company learning; a learning climate; and self-development for all (Pedlar and Aspinwall, 1998). The stated intention within prescriptive texts such as these was to move away from mechanistic management as envisaged in the industrial era (Taylor, 1947) towards a new, flexible and apparently participative model designed to meet the needs of organisations and their members in what was felt to be an increasingly uncertain and chaotic world (Senge, 1990; Pedlar and Aspinwall, 1998). The literature contains many studies about whether and how this worked, or how it might be made to work more effectively (Finger and Burgin Brand, 1999; Boyle, 2002; Cavaleri, 2004; Marvin and Cavaleri, 2004), and continues to grow.

The underlying assumptions of this area of literature, for example that becoming a learning organisation is a desirable aim, and that gaining advantage for the organisation through the learning of individual members is good management practice, have been identified and in various reviews (Huysman, 1999; Easterby-Smith *et al.*, 2000). Despite the stated aims in the prescriptive literature of taking such an approach, a brief consideration of its underlying assumptions highlights the potentially exploitative nature of the idea of the Learning Organisation regarding the relative positions between the employer and employee (for example, the expectations an employer might reasonably have about what the employee will do in return for his or her salary; whose ideas the apparently guaranteed success of the organisation is based upon; and to whom the benefits generated from such ideas might accrue).

Some investigation into this contradictory situation indicates the importance of the underlying principles upon which the approach is based. These suggest that all aspects of organisation may be engineered by managers: the elimination of undesirable aspects may be achieved by using feedback loops to correct errors and amend behaviours so that better

decisions may be made; inefficiency may be avoided by paying attention to and putting in place a suitable structure which will produce the desired behaviour (Forrester, 1968). Furthermore, desirable behaviour may be pre-determined scientifically by modelling the “variables” which may be likely to influence the success or otherwise of the organisation in order to predict future performance and reduce uncertainty (Forrester, 1956). The system dynamics approach sought to provide a scientific way to account for the inherent complexities of managing an organisation and suggested that these could be favourably engineered by managers to continuously improve the performance of their organisation. In the learning organisation literature, perhaps the most famous example used to coach managers in the principles and benefits of system dynamics is the “beer game”, although other exemplars of situations arising in businesses are also used to demonstrate the efficacy of the method to managers, through which they apply the method to the problems presented to find the “best way” of dealing with them (Senge, 1990).

Therefore, although the stated aim of those prescribing this way of managing was to move away from what they saw as a bureaucratic, rigid and mechanistic model of management towards a more flexible, less hierarchical approach to enable organisational change and continuous improvement, the underlying aim seems to remain unchanged. Since the principles are actually based on a system dynamics model to reduce uncertainty within a complex environment, it is possible to suggest that the overall aim of the approach – to increase certainty and control in an uncertain and complex situation - is just as controlling as the mechanistic management approaches to assembly line manufacturing in the early twentieth century. Although apparently taking a different approach to management, the learning organisation model continues the pre-determining role of managers (albeit of outcomes rather than outputs), despite the notion of empowering and learning from the work of all members of the organisation. Therefore, an important assumption of this approach is that learning is some independently existing thing which can be managed to effect change. Whether the learning organisation approach is less bureaucratic has also been questioned in recent times as the network structures, recommended as facilitative for learning organisations by proponents, have been called into question, particularly in the public sector (Ackroyd, 2006; Morrell, 2006).

The reason for discussing this area of the literature first is that this is the conceptualisation of the notion of organisational learning which pertains in healthcare policy. Policy documents emphasise the utility of the learning organisation approach to manage the reduction of organisational risk and uncertainty and therefore to enhance certainty and control (Donaldson, 2003; Wilkinson *et al.*, 2004; Sheaff and Pilgrim, 2006). Despite encouragement to pay attention to more recent work concerning the potentially problematic issues arising from this approach to managing public organisations (Ferlie *et al.*, 2003), the approach continues to be promoted in the management of healthcare organisations (SEHD, 2000a, 2000b, 2000c, 2005a). This may be understandable as the approach complements the related promotion of evidence based practice and evidence based medicine, which are also part of the drive to reduce uncertainty by spreading “best practice” throughout healthcare. This is to be achieved through the clinical governance framework, which features the use of protocols and guidelines for professional practice (SEHD, 2001a). However, the efficacy of these measures, and the way they have been enacted, has been called into question in recent years (Sackett *et al.*, 1996; Dopson and Fitzgerald, 2005a; Francis and Holloway, 2007).

This strand of literature has been characterised as normative and prescriptive (Tsang, 1997) and as such does not further the aims of this research. If these were to monitor the success or otherwise of managers in putting the prescription of the learning organisation into practice, perhaps by assessing their success or otherwise in implementing various policy initiatives, it may have been more relevant. However, its apparent credibility and utility in the view of policy makers and healthcare managers means that this is an important area of literature to bear in mind when considering the notion of organisational learning in primary care teams, as it forms part of the working practice of those teams to a greater or lesser extent.

Knowledge Management

Another strand of knowledge described as normative and/or prescriptive is that concerning knowledge management which could perhaps be described as a logical partner for the learning organisation literature. Whilst the latter concerns the management of learning, the

former concerns the management of what is regarded as the product of that learning, namely “knowledge”. Therefore, there is an implicit assumption that knowledge is an entity which can be gathered and managed.

Knowledge itself is a problematic concept, considered at length in philosophy (various approaches to epistemology) and in sociology (Berger and Luckmann, 1967). Therefore, it may be conceptualised in various ways. As suggested, in the knowledge management literature knowledge is conceptualised as the product of learning in the organisation, which may be used to further the aims of the organisation (Cavaleri, 2004). The main ideas within this literature concern the capture, storage and retrieval of the knowledge of organisational members so that future performance of the organisation may be improved in the new knowledge-based economy (Drucker, 1998; Cross and Baird, 2000; Cross and Israelit, 2000; Alavi and Tiwana, 2003). Ideas about how this might best be achieved are linked to the ideas of “informatting” within the learning organisation literature (Pedlar and Aspinwall, 1998) concerning the sharing of knowledge throughout the organisation. This is often linked to information technology solutions, to databases holding the “learning” of members of the organisation, which may then be accessed by others within the organisation in similar situations in the future (Cross and Baird, 2000; Syed-Ikhasan and Rowland, 2004).

As with the learning organisation, the key issue in this strand of literature is its conceptualisation of knowledge as an entity to be managed for the benefit of the organisation (Easterby-Smith and Lyles, 2003). The best means of storing knowledge using new technology (for example, in databases, or by means of “intranets”) forms a key topic within this literature, together with mechanisms for realising its potential in the form of enhanced profitability (Hussi, 2004).

This particular approach of capitalising on the knowledge of organisational members for increased profit does not assist in the conduct of this research to any great extent. However it must be borne in mind because, as with the learning organisation, the concepts have been adopted in healthcare policy and management (NES, 2004) particularly in relation to sharing “best practice” as promulgated through the clinical governance framework. This

involves the introduction of various mechanisms including Managed Knowledge Networks to facilitate such a strategy (NES, 2006). This touches on the idea of communities of practice (Wenger, 1998; Wenger *et al.*, 2002) which was originally based on a situated learning approach (Lave and Wenger, 1991). This suggests its current application in healthcare is somewhat contradictory to its origins. As with the learning organisation concept, the efficacy of such an approach in the work of healthcare practitioners has been shown to be questionable (Gabbay and le May, 2004; Dopson and Fitzgerald, 2005a). Therefore, although not of direct relevance to this research, the knowledge management literature is important to acknowledge due to its influence on healthcare policy and therefore its potential influence on the work of primary healthcare teams.

An obvious issue concerning both of these normative and/or prescriptive strands of literature is that they focus on the work of managers, rather than on the work the organisation *per se* exists to undertake and the role others play within that process (other than to be managed). Furthermore, the key concern would appear to be how managers may deliver change in organisations in order to maintain or improve the success of the organisation. By implication, success may only be judged in relation to a target or set of targets which have been pre-determined. This suggests that within these strands of literature, learning and knowledge exist as entities in relation to meeting pre-determined targets. This somewhat functional, deterministic approach may be useful and offer clarity, for example in a project evaluating the attainment of pre-set targets within an organisation, but renders these strands less than helpful for an open exploration of the notion of organisational learning and knowledge creation in primary care teams. Therefore, whilst these strands have been acknowledged as important in relation to the part they play in healthcare policy and management, they will not be pursued further in relation to this thesis.

Organisational knowledge and memory

Having briefly explored the normative and prescriptive strands in the literature, the more scholarly or academic and research-oriented strands will now be considered (Easterby-Smith and Lyles, 2003).

Given the broad aim of this research, the area of literature which is likely to be most relevant concerns organisational learning. However, there is an area of literature in which the focus of study is the process of creating, storing and retrieving the outcome of learning in the form of knowledge. Therefore although dealing with some of the same concerns as the knowledge management literature, a more academic approach is taken to the study of the process, in contrast to the prescriptive approach to managing it within the knowledge management strand. Different types of knowledge are also discussed within this literature, including explicit and implicit or tacit knowledge (Nonaka, 1998; Styhre, 2004). However, the overlaps are considerable and it has been suggested that the lack of distinction in papers within the two strands has caused confusion (Vera and Crossan, 2003). Perhaps this confusion stems from the fact that, on the whole, the conceptualisation of knowledge still tends to be that of an entity which may be drawn upon, moved, stored and retrieved (Nonaka, 1998; Crossan *et al.*, 1999). There are alternative approaches which take different views of knowledge but for conceptual reasons these will be discussed in a different section of this chapter (Blackler, 1993, 1995; Strati, 2003).

Towards the end of the 1990s, perhaps due to the increasing interest amongst those studying organisations and management in relation to the increasing discussion about the knowledge based economy, knowledge work and workers (Drucker, 1998; Cross and Israelit, 2000), questions were raised in respect of the splits in the literature concerning learning and knowledge from a scholarly perspective (Spender, 1996; Easterby-Smith and Araujo, 1999). It was argued that it was not possible to study one without the others because knowledge, memory and learning were all inextricably linked. Indeed, the whole basis of organisational learning, knowledge and memory was questioned, partially due to the lack of empirical evidence relating to these concepts which had arisen forty years earlier (Easterby-Smith and Araujo, 1999; Prange, 1999). Whilst convergence in the overall literature was unlikely for reasons which will be discussed in subsequent sections of this chapter, the intention here is simply to acknowledge that a division in the literature occurred relating to ideas about organisational learning, knowledge and memory. This probably contributed to the rise of fundamental questions about the scholarly progress, or lack of it, which had been made in gaining understanding of these processes within organisations. Therefore, organisational knowledge and memory will not be separately

pursued further here, but rather they will be considered together subsequently for conceptual reasons.

Organisational learning: characteristics of the literature

Comprising the main strand within the overall literature related to it, the academic literature concerning the notion of organisational learning is large and diverse even after setting aside the three other strands of literature already discussed briefly here. It is an area of literature about which the initial impression is confusion, if not outright chaos. Regular approaches to researching literature, such as looking back through theory development and identifying the empirical papers underpinning that development, tend to prove ineffectual in regard to this rapidly proliferating area of work. Reflection suggests that this is probably largely due to the divergence of aims, methodologies and philosophical underpinnings which may be found under the banner of “organisational learning”. But it is probably also due to the concept itself (Weick, 1991).

Perhaps the first thing to point out is that there is no agreed definition of the term, “organisational learning” despite the almost fifty years of research effort devoted to it. This is an observation made time and again in reviews of the literature (Simon, 1991; Easterby-Smith *et al.*, 1998; Nicolini *et al.*, 2003a; Chiva and Alegre, 2005; Shipton, 2006). Once some insight into the diversity of the literature is gained, the likely reasons for this become clearer, but initially this makes finding a departure point in the literature problematic.

One implication of this lack of cohesion is that it renders almost any discussion of the literature somewhat arbitrary. Therefore in the absence of any accepted course through the literature, the discussion in this section will be structured around various conceptualisations of the notion of organisational learning. These suggest a range of approaches which have developed simultaneously in the literature, rather than a chronological development of theory based upon empirical work (Prange, 1999). The main themes of these simultaneously developing approaches will be considered, together with some of the problems highlighted by them, in order to identify issues of importance in relation to the research presented here.

It is important to note that a large proportion of this literature, from whichever perspective or approach, concerns the work of one particular group found in organisations: managers. The role and aim of this organisational group tends to be privileged within the organisational learning literature. Although the notion of organisational learning has attracted attention from a variety of academic disciplines, particularly since the mid-1990s (Dierkes *et al.*, 2001), it has been dominated by scholars interested in the management of organisations. As will become clear, literature from this perspective tends to accept the phenomenon itself and its interest is often associated with what appear to be taken-for-granted notions of change and the management of organisations. Meanwhile, other disciplines tend to take a more enquiring approach to the notion itself and focus on the processes involved as part of social processes of organising. These differing perspectives are reflected in the methodologies adopted and the type of findings presented. Indeed, it has been suggested that these different approaches have become isolated from one another and fail to enrich overall understanding of the processes occurring in real world situations (Easterby-Smith and Lyles, 2003). As suggested some time ago, this may be less of a problem over time, as the problems highlighted by the insights of one area in the literature provide a starting point for others to pursue those issues from a different standpoint (Weick, 1991). In the next section, different conceptualisations of organisational learning will be considered in order to identify some of the methodological differences prior to discussion of some of the main themes within the literature.

Conceptualisations of organisational learning

In the absence of an agreed definition, one point of departure for discussing the notion of organisational learning is to consider the way it is conceptualised within the literature.

It has been argued convincingly that organisational learning is actually a metaphor which has been used by academics to theorise about certain aspects of organising and organisations (Morgan 1986; Elkjaer, 1999; Prange, 1999; Gherardi, 2000, 2006). The use of metaphor has been criticised as inadequate for the task of theory building in the social sciences and some of the issues related to this position will be discussed in chapter 5. However, for the purposes of this discussion, the suggestion that it can provide helpful

approaches to the study of unfamiliar and intangible phenomena in organisations, such as learning or change, will be considered (Morgan, 1986; Tsoukas, 1991; Prange, 1999).

The contrasting ways in which metaphor has been employed by academics studying organisational learning offers an insight into the way the literature diverges, thereby pointing to various paths through it. For example, some academics employ metaphors as “lenses” through which to view the phenomenon from differing perspectives, in the hope of shedding more light on it (Prange, 1999; Elkjaer and Wahlgren, 2005). But there are others who use it in a similar way to the methods used in the natural sciences where transformational modelling exercises, taking a reductionist approach to variables of interest, enable the construction of what may be regarded as generalisable theory (Tsoukas 1991). Here, organisational learning is viewed as an “indicator” which may be defined as a “latent variable” or “construct”:

...Social scientists are often concerned with explaining the causal relationships among independent and dependent variables. Many variables of interest, however, are latent – that is, not directly observable.....In these cases, researchers have to choose appropriate indicators of the variables in question (sometimes called constructs)...

(Dictionary of Social Sciences, 2002)

This approach casts the metaphor of organisational learning in the role of something which, although not directly observable, may be studied and measured by means of proxy indicators chosen by researchers (Gherardi, 2000). Some of the earliest studies of the notion of organisational learning adopted this approach (Cyert and March, 1963). It has prevailed to an extent over the years, particularly within some branches of management and organisation studies where the interest lies in identifying broad trends and making recommendations regarding such issues as efficiency and reducing uncertainty in relation to the costs of organising. An example would be studies relating to the notion of learning curves and other economically-based issues relating to the production of goods in manufacturing (Epple *et al.*, 1991). Here pre-determined goals, such as the production of larger numbers of items without fault over the shortest period of time, are readily identifiable and the suggestion is that the increase in efficiency is as a result of

organisational learning. Here, the balance of interest tends to be on the operation of the organisation, rather than on learning itself.

The social sciences are characterised by different research paradigms and perspectives, and this will be discussed in depth in chapter 5. Here these differences are noted in relation to the literature on organisational learning because they offer an insight into the types of studies conducted and the nature of the research questions to which they relate. Although casting organisational learning in the role of a construct to be measured, analysed, and perhaps even managed, has been promoted by some, particularly in the field of management and organisation studies (Huber, 1991), it is by no means the only way of addressing the phenomenon. Others have indicated that, although treating organisational learning as a construct may have been helpful, especially to answer “what” questions, it is unlikely to offer a full understanding of the phenomenon in real life settings where other approaches, such as the in-depth study of cases, may provide better clues in relation to “how” and “why” questions (Simon, 1991). Therefore, different approaches may be seen to offer different insights. Whilst this seems to add to the confusion within the literature about the study of the metaphor of organisational learning, it is helpful to keep this in mind in order to appraise the various conceptualisations of organisational learning in relation to one’s own topic of interest.

Having identified the different ways in which the metaphor of organisational learning is employed within the literature, it is now time to turn to the related conceptualisations within the literature. As mentioned previously, and for the reasons discussed above, it is not possible to identify an agreed definition of the concept of organisational learning. Rather, there are a range of definitions which reflect the ontological and epistemological perspectives of the authors who offer them. The following examples give some indication of some of the more well-known definitions available to scholars interested in this phenomenon:

Organizations learn: to assume that organizations go through the same processes or learning as do individual human beings seems unnecessarily naïve, but organizations exhibit (as do other social institutions) adaptive behaviour over time.

Just as adaptations at the individual level depend upon the phenomena of the human physiology, organizational adaptation uses individual members or the organization as instruments. However, we believe it is possible to deal with the adaptation at the aggregate level of the organization, in the same sense and for the same reasons that it is possible to deal with the concept of organizational decision making. We focus on adaptation with respect to three different phases of the decision process: adaptation of goals, adaptation in attention rules, and adaptation in search rules.

(Cyert & March, 1963 p.123)

...members of the organisation act as learning agents for the organization by detecting and correcting errors in organizational theory-in-use and embedding the results of their inquiry in private images and shared maps of the organization.

(Argyris and Schon, 1978 p.29)

Organizational learning means the process of improving actions through better knowledge and understanding

(Fiol and Lyles, 1985 p.803)

....organizations are seen as learning by encoding inferences from history into routines that guide behaviour. The generic term “routines” includes the forms, rules, procedures, conventions, strategies, and technologies around which organizations are constructed and through which they operate. It also includes the structure of beliefs, frameworks, paradigms, codes, cultures, and knowledge that buttress, elaborate, and contradict the formal routines.

(Levitt and March, 1988 p.320)

These definitions hint at the complexity and diversity of issues which are said to be included within organisational learning and most can be traced back to elements discussed in the original theorising work of March and Simon in 1958. They also demonstrate the diversity of indicators upon which research claims are made about the phenomenon. Furthermore, there seems to be some confusion about the relative roles of individuals and

organisations in the process of what is termed, “organisational learning”, an issue which will be returned to shortly.

Fiol and Lyles (1985) highlight the subsequent confusion which may have been generated by the choice of indicators as diverse as change (Levinthal, 1991), structure (Cohen, 1991), insights or knowledge (Crossan *et al.*, 1999), systems (Shrivastava, 1983), actions (Argyris and Schon, 1978), which are studied as proxies for learning, adaptation, and unlearning (Fiol and Lyles, 1985). Based on this observation, the literature on organisational learning could be likened to a house of cards built on sand. It is therefore important to be cautious about over-interpreting research findings in this area and making causative claims which may prove less than robust under pressure. This is especially the case when seeking to apply the theoretical insights suggested by such research to the work of organisational groups other than managers, as organisational learning and management learning seem to be regarded as synonymous in many of these studies.

The drive to produce generalisable findings which seek to reduce uncertainty and demonstrate cause and effect between social phenomena which are in effect abstractions may have become more problematic than helpful. This will be discussed from a methodological perspective in chapter 5. Whilst there are other conceptualisations of the metaphor of organisational learning to be found in what might be characterised as an emergent area of literature, these will be discussed later in this chapter to avoid further confusion. At present, the discussion will be confined to what might be termed the “main stream” literature concerning organisational learning.

Therefore, against the backdrop of these various main-stream conceptualisations of organisational learning, and with the caveat about the basis upon which claims have been made about the phenomenon, the main themes within this literature will now be discussed and considered in relation to this study of organisational learning in primary care teams.

Main themes and difficulties

There are many reviews of the main themes within the main-stream of the organisational learning literature, each of which takes a different approach to dividing the literature up to make sense of it (for example, see Easterby-Smith, 1997; Huysman, 1999; Maier *et al.*, 2001; Pawlowsky, 2001; Vera and Crossan, 2003; Wang and Ahmed, 2003; Shipton, 2006). Based upon the items reviewed during the course of this research, the literature seems to be split as to whether research is weighted towards issues of benefits to organisations related to learning, or issues of learning related to the organisation of work. It is on this basis that the following themes have been identified within the research and which will be discussed here.

Utilising learning

Taking the first approach, studies with a focus on organisation consider how “learning” might be utilised by the organisation and often relate to the work of managers. This involves issues including drawing upon the learning of individual organisational members to facilitate innovation and change in the work of the organisation. “Learning”, or perhaps more accurately what individuals in the organisation are prepared or able to convey of what they know, becomes a resource for the managers of an organisation to use in the drive to enhance organisational performance against a variety of publicly recognised and accepted measures in the world of business, such as productivity, profit or return on investment.

There are various approaches to this area of interest within the literature. Some focus on the identification of “core competencies” which can be used flexibly to change what the organisation makes or sells either as goods or services (Prahalad and Hamel, 2000; Cavaleri, 2004), identifying how best to improve the organisation’s ability to foster such an innovative approach (Cohen and Levinthal, 2000), and maintaining such an approach over time (Bessant and Francis, 1999).

As well as innovation, what might be termed preservation has also been studied, together with the linkages between two states of stability and change. For example, the ways in

which organisations adapt to both internal and external environmental changes have been studied, including the conditions under which their focus shifts from doing existing things better, to finding new things to do based upon abstract conceptualisations of what organisational members already know, often referred to as transferable skills (March, 1991; Dyck *et al.*, 2005). Consideration of the process has been extended to look at what happens not only within but between organisations by studying the process of collaborative working in groups of managers and senior organisational members: findings suggest that although there appear to be difficulties in moving or “translating” what is gained from experiential learning beyond where and when it happens, these difficulties may act as an impetus for intra- and inter-organisational innovation by promoting exploitation of existing knowledge and exploration of new ways of doing things both within and between organisations (Holmqvist, 2004).

In relation to learning theory, these studies (with the exception of the Holmqvist paper), are underpinned by a behaviourist approach (Philips and Soltis, 1985), whereby organisations respond to environmental stimuli and the change in behaviour encapsulated in that response is regarded as evidence of learning (Weick, 1991). Although the assumption that learning has taken place may seem a reasonable one, it has been observed that the change in behaviour may not be due to learning (Fiol and Lyles, 1985) but to other “situational constraints” (Maier *et al.*, 2001). The point has also been made that learning does not always lead to continuous improvement in that things may be learned incorrectly or the desired thing is not learned (Huber, 1991). Perhaps due to the behaviourist approach to learning within these studies, they are often regarded as offering static snapshots of conditions in organisations where learning takes place within the Skinnerian “black box” (Philips and Soltis, 1985). The result is that proxies for learning, such as the adoption of new routines or procedures or the achievement of pre-determined targets, become the focus of analysis and learning is regarded as an independently existing entity which may be managed and then measured at a particular point, or points, in time. It therefore becomes something which is portable and may be moved from one situation or context to another without altering its composition or content.

Learning as a process

The second main approach within the literature features studies in which the focus is on how learning as a process occurs within organisations. The main interest here concerns the link between how the learning of individuals becomes “institutionalised” by the organisation, so that learning may be said to have occurred at organisational level (Argyris and Schon, 1978, 1996; Crossan *et al.*, 1999). This is often accomplished through the creation of “routines” which may encompass aspects which are both formal (codes of conduct and procedures) and informal (norms, custom and practice, accepted values) (Levitt and March, 1988).

Therefore the major issue of interest in this stream of work is the process by which individual level learning is transformed into organisational level learning. Perhaps the most notable approach within this area of literature concerns the work of Argyris and Schon and their different levels of learning entitled single, double and triple loop learning (Argyris and Schon, 1978, 1996). As the use of the word “loop” suggests, these levels of learning operate on feedback mechanisms akin to the system dynamics approach underpinning the learning organisation literature. The different forms of learning loops enable organisational members to detect and correct different sorts of errors and amend organisational routines and procedures accordingly. In this way, organisations will be able to take action to change the so-called defensive routines which undermine organisational performance when managers, in particular, are forced to defend unhelpful ways of working which may lead to a situation of appearances and realities. This is when the so-called theory-in-use (actual working) does not match the so-called espoused theory (official version of working). In this way, the approach seeks to enable organisational members, especially managers, to admit mistakes and to use them as opportunities to learn and improve the organisation’s performance. Although there are others studying feedback mechanisms as a source of learning, a behaviourist approach is adopted and the focus is on managerial goal-setting and how these influence the type and level of risks taken in the pursuit of innovation and organisational change (Greve, 2003).

The approach adopted by Argyris and Schon deals with many of the issues identified as problematic by March and Simon in relation to the apparent rigidity in organisations (March and Simon, 1958) from a different perspective than the behaviourist approach adopted in the earlier studies (Cyert and March, 1963). The identification of the individual as a learning agent of the organisation, and the assertion that organisational learning is captured and implemented in the work of the organisation through the use of routines, standard operating procedures and protocols, reflect the issues identified by March and Simon (1958). The difficulty arises in showing how these two levels, of what has become accepted as organisational learning, are linked. If the learning takes place within the head of the individual it is difficult to know how this is extracted, shared and encapsulated, especially within what will often be a written routine, and then shared throughout the organisation.

The notion of organisational routines (of whichever sort) as repositories for organisational learning suggests that organisational learning will always be retrospective since, from this perspective, the feedback loops must be completed in order to generate the learning. Paradoxically, this makes it difficult to conceptualise the learning as a dynamic process, and raises questions about how, why and when changes to those routines will occur, particularly if errors are detected and performance amended accordingly as suggested by the theory. It also raises issues of transferability of learning through the idea of triple loop learning or “learning-to-learn”. In order to be able to transfer learning from one situation to another by means of triple loop learning, the learning or knowledge related to that learning is necessarily conceptualised as an entity which begins in people’s heads and then must travel into the public domain, be shared, re-enter people’s heads through the feedback loops in order to become organisational level routines but without being altered during that journey.

Another approach within this strand of literature which seeks to study the process of the movement of learning beginning from within individual heads, so that it may be shared at the organisational level, is that of “sense making” (Weick, 1997). Here individual learning is shared by means of interaction and communication between people engaged in working together or alongside one another (Weick and Roberts, 1993). This provides an alternative

approach to that of single, double and triple loop learning and focuses on the work of other organisational members, not mainly managers.

Studies within this second approach, weighted towards the study of learning related to organisations and the organisation of work, take a cognitive approach to learning (Philips and Soltis, 1985). Learning is conceptualised as something which originates within the heads of individuals and is then, through some sort of process, shared between the people who are members of the organisation so that the organisation may possess the knowledge derived from the sharing of individual learning. In this way, organisations may be said to be engaged in the metaphorical process of organisational learning. Whether that sharing of learning is done through feedback as in single, double and triple loop learning, or by gathering information through the accounts of work generated between organisational members as they “make sense” of what is happening in the course of their day, these approaches all share the common starting point of the individual human mind or head.

Even this brief account of some of the main themes within the organisational learning literature suggests that key issues of interest relate to processes of change and stability. For example, under what circumstances do organisations change what they do and how they do it? How does learning and knowledge flow around organisations so that they may be understood to be different from individual or group level learning processes? How can these processes be facilitated or promoted by management? Despite the large amount of effort and careful work which has gone into addressing these issues, the relative lack of empirical research suggests that there may be difficulties around the conceptualisations of organisational learning to be found within the main-stream literature. This seems to be due in no small part to the difficulty of carrying out empirical research to study the process of organisational learning: for example, how does one know when learning is happening? How can the link between individual and organisational learning be demonstrated, and how might these two levels of learning be differentiated, one from another, and from other forms of behaviour? In addition, although “single” and “double loop learning” might be discernable, how would “triple loop” learning, or learning to learn, be identified empirically? The main-stream conceptualisations of organisational learning seem to be beset by difficulties concerning levels and types of learning. This has resulted in many

experienced researchers in the field producing frameworks for thinking about, researching and even managing the notion of organisational learning in order to try to address some of these main-stream difficulties (Spender, 1996; Crossan *et al.*, 1999; Prange, 1999; Pawlowsky, 2001).

Upon reflection, although the main-stream organisational learning literature (and the related strands concerning the learning organisation, knowledge management and organisational knowledge) is diverse and confusing, this may well reflect its fundamental philosophical underpinning: they all conceptualise learning and/or knowledge as independently existing entities. Despite warnings to guard against such a development (Simon, 1991), what began as a metaphor conceptualised as various constructs relating to changes or stability in the work done by people in organisations, has apparently come to be regarded by some as a reality to be identified, measured, and often managed. Therefore, it may be suggested that the difficulties relating to levels and types of learning stem from the Cartesian roots of these main-stream approaches to organisational learning. In this light, it becomes possible to understand why it is difficult to reconcile the individual/organisational and learning/knowledge dichotomies which are so prevalent in these strands of literature. These issues will be discussed further in chapter 5 relating to the methodological challenges presented by these approaches, followed by reflections based upon empirical findings in chapter 6.

In addition to these conceptual and empirical difficulties arising from these approaches within the organisational learning literature, there are two other issues worthy of consideration which have been largely unacknowledged and unexplored in main-stream approaches to organisational learning; they are issues of:

- power and politics (Blackler, 1993; Coopey, 1995; Easterby-Smith *et al.*, 1998; Blackler and McDonald, 2000; Easterby-Smith *et al.*, 2000),
- and of context (Easterby-Smith, 1997; Easterby-Smith *et al.*, 2000; Gherardi, 2000; Burnes *et al.*, 2003).

These gaps are perhaps not too surprising given the conceptualisations of organisational learning found within the main-stream literature. The assumed willingness of employees to

surrender what they know to their managers, apparently for the good of “the organisation”, is axiomatically regarded by many as naïve (Yanow, 2004). The prevailing view in the literature of politics within organisations as a hindering factor to be overcome could also potentially be interpreted as exploitative, as it seems to privilege the views and opinions of managers above those of anyone else in the organisation (Coopey, 1995). Meanwhile, the issue of context is difficult to deal with within the main-stream conceptualisations of organisational learning which view learning and knowledge as rational, technical and decontextualised entities which are capable of being “disembedded” and “re-embedded” at the behest of the managers of the organisation (Brown and Duguid, 2001).

In relation to the research upon which this thesis is founded, these approaches to the notion of organisational learning raise serious questions which will be discussed in more detail in chapters 5 and 6. However, for the purposes of this part of the on-going discussion, it is important to note a few salient points including the empirical difficulties suggested by the necessity to differentiate between learning and behaviour, between different types of learning, and between levels of learning. Since much of the literature refers to issues like improving performance in competitive markets, the utility of the application of such approaches in primary healthcare is perhaps less than obvious. However, continuous quality improvement of services is a theme in healthcare of which the literature may enable some empirical exploration.

The apparent absence of politics and power from this area of theorising provides some difficulties for healthcare services which are inherently both political and Political by nature. This characteristic, combined with the nature of the work involved, highlights the importance of a variety of professional groups in the operation of healthcare organisations and not just managers, even at the “strategic” organisational level. So this aspect of the organisational learning literature presents a challenge when thinking about conducting empirical research in healthcare settings.

Lastly, the acontextual nature of organisational learning within these strands of literature complements the notion of “best practice” and evidence-based practice/medicine as previously indicated, since knowledge is assumed to be an entity which may be moved

unchanged between settings as required. However recent empirical research suggests that these are not unproblematic ideas when considered from an applied perspective, due to these underlying assumptions (Dopson and Fitzgerald, 2005b). This suggests the empirical application of such theoretical approaches to study the notion of organisational learning in primary care might prove difficult in relation to the issues which have been identified as worthy of further exploration through empirical research.

These issues will be addressed further in the main findings and discussion of this thesis. Meanwhile, in the next section an alternative literature stream will be discussed. The findings of this research suggest this provides more satisfying approaches to conceptualising the metaphor of organisational learning.

Practice-based approaches to learning and organising

One of the main characteristics of the approaches outlined in this chapter so far is the focus on the learning of managers, especially those in “strategic” positions (Prahalad and Hamel, 2000). When one pauses to consider the solution-based or problem solving approaches outlined here, such as error detection and correction, exploitation and exploration, seeking competitive advantage through innovation, these all seem to by-pass the other members of the organisation who also perform the actual work which organisations exist to do. In fact, these are the people from whom many of the problems seem to stem, such as “political” behaviour which undermines the smooth operation of the organisation and should be eradicated. But the solutions to at least some of the problems identified as reasons to bother thinking about the notion of organisational learning may be available to managers should they consider their fellow organisational members (Yanow, 2004). Indeed, they may not be problems at all, only perceived problems.

Yet despite this apparent managerialist view, the notion of members of organisations learning collectively is an important one because it touches on the whole reason for organising in the first place: to achieve things together. The persistent focus on managerial work and problem-solving approaches denudes the discussion of the colour and vibrancy of the (positive and negative) experiences most of people have of actual work, whatever that may be. Experiential and empirical evidence suggests that even if one happened to be a

manager, the issues that may occupy one's mind in the course of the day are not very likely to be experienced or carried out in the abstract way in which they are conceptualised within the organisational learning literature (see Foreword to this thesis and Mintzberg, 1973, 2004). These observations about the dominance of managers' work and learning, and the abstract and rational-technical approach found within the organisational learning literature considered so far, highlight the other major characteristic of that literature, namely the relative lack of empirical studies to enable the development of understanding of the notion of organisational learning in practice. This unsatisfactory situation seems to be due at least in part to the difficulties of putting the theory as stated into research practice, as previously discussed.

Perhaps partially in response to some of these issues, and to "balance the biases" found within the literature (Huysman, 1999), a different way of conceptualising the metaphor of organisational learning gained ground during the 1990s. This has become known as the practice-based approach to knowing in organisations (Gherardi, 2000; Nicolini *et al.*, 2003b). Although this literature encompasses a variety of different epistemological and ontological approaches, these find common ground within a practice-based approach to studying social phenomena (Schatzki *et al.*, 2001).

Beginning from a more substantive consideration of the notion of organisational learning prompted by ethnographic studies of the nature of work and learning in work settings (such as the doctoral thesis upon which Orr, 1996, was based and Lave and Wenger, 1991) rather than the abstract, idealised version found in the organisational learning literature, this "turn" in theory moved through various stages. These included thinking about learning, working and organising as inherently linked and not distinct (Brown and Duguid, 1991) and thinking about knowing through the work people *do* rather than thinking about knowledge as something to be managed (Blackler, 1995). In this way, insights into learning and knowing which is not planned and/or pre-determined, but happens by accident or unexpectedly, may be taken into account (Gherardi, 1999).

This shift in conceptualisation, from learning and knowledge as separate entities either "in the head" or as "commodities" to knowing-in-practice (Gherardi, 2000), has provided new

insights into collective learning through practising which will be discussed shortly. These reflect the fact that a large proportion of this strand of literature comprises papers based on the study of what people do in the course of day-to-day work. Although recently criticised for focusing on the individual rather than group or organisational “level” (Shipton, 2006), this may be a misunderstanding of the position within the various approaches in this literature which implicitly reflects the underlying assumptions found in the other strands of organisational learning literature. (This particular issue will be addressed in chapter 4.) The practice-based approaches will be outlined briefly next, before considering the insights they offer about collective learning as part of working.

Approaches within the practice-based literature

The practice-based literature concerning collective learning and knowing as part of organising work includes a variety of approaches which, although not in opposition to one another, regard the phenomenon of interest in different yet similar ways (Gherardi, 2000, 2006). The main approaches are activity theory (Blackler, 1993; Engestrom, 2001), actor-network theory (Feldman, 2000; Latour, 2005), situated learning theory (Lave and Wenger, 1991) and cultural and aesthetic theories (Yanow, 2000; Strati, 2003) and work-based studies (Suchman, 1996). Although different from one another, each of these approaches has a mutual basis in the way the individual is understood which stands in opposition to the theoretical approaches within the other organisational learning literatures: in practice-based approaches the self is regarded as socially constituted, albeit in a variety of ways (Bakhurst and Sypnowich, 1995a). The Cartesian dualism is not a basic aspect of any of these approaches and therefore dualisms such as subject/object, individual/organisation, order/disorder are all dissolved (Gherardi, 2000). The major point to note is that in each of these approaches, knowing is an inherent part of doing and cannot be treated separately from that. The position may be summed up thus:

...there is no such thing as “learning” *sui generis*, but only changing participation in the culturally designed settings of everyday life.

(Lave, 1993 p.5-6)

Therefore the issues of levels and types of learning, and of context, do not feature in the same way within this strand of literature. These issues will be discussed in detail in the next chapter. In the remainder of this chapter, the main insights offered by this strand of literature will be highlighted.

Insights derived from the knowing-in-practice literature

Practice-based studies have yielded insights which offer a different view of many of the same issues with which the other streams of organisational learning are concerned. In this section, some of the main insights gained through the practice-based approach to collective learning in work settings will be highlighted from which issues of continuing interest will be identified.

One of the most important insights gleaned from studies within this approach is that learning is not received and solitary but active and collective, and is socially situated (Brown and Duguid, 1991; Lave and Wenger, 1991; Orr, 1996; Gherardi *et al.*, 1998; Elkjaer, 2003). This key insight enabled the exploration of other issues of interest across the literatures concerning notions of collective or organisational learning, including those summarised here.

Learning and knowing are not the province of selected groups within organisations, but are part of everyone's daily work activity. Therefore, learning and knowing may be understood to be attributes and processes which are distributed between members of the organisation as they work (Hutchins, 1993; Weick and Roberts, 1993). Knowledge is therefore not regarded as being encoded or embrained (Blackler, 1995) or stored in organisational routines (Levitt and March, 1988). Indeed, organisational routines and standard operating procedures have been shown to be the result of continuous practising, collectively constructed and changing over time (Feldman, 2000); by implication, this suggests these are retrospective and distal accounts of enacted working practices (Gherardi, 1999) rather than centrally pre-determined givens. Indeed, not only has knowing and learning been shown to be distributed, but it has also been shown to be spatially distributed through the mediating means of various technological artefacts (Orlikowski, 2002). This suggests that

not only is knowledge not the province of a particular group, but the way work is organised has altered and people still learn and know even though they are not all simultaneously present and working within one building.

The way such distributed, collective knowing in practice occurs has also been examined and the focus on practice suggests that this does not always occur through pre-planned and pre-determined events (such as formal training courses) but frequently as a result of disruptions or discontinuities in the flow of day-to-day working (Engestrom, 1987, 1999b; Gherardi, 2006). Difficulties and tensions become the driving force for changes in practice which often highlight the contested nature of that practice from which solutions are identified and subsequently enacted collectively (Blackler and McDonald, 2000; Blackler and Regan, 2006b).

The insight that practice is contested suggests that knowledge is unlikely to be able to be transferred unchanged and calls into question the notions of “best practice” and of implementation of ways of working devised in other situations, for example at the “strategic” organisational level. In fact, based on empirical studies it appears that knowledge is not transferred unchanged in both form and content but rather that it is translated through the performance of local practice to suit local needs and customs (Owen, 2001; Bechky, 2003; Gherardi and Nicolini, 2003a, 2003b; Yanow, 2004) and highlights the richness of knowing how to do things locally which often entails aspects which are difficult to articulate (Cook and Yanow, 1993).

The importance of local aspects of knowing as part of practising, which may well be spatially distributed, brings the issue of the flow of knowledge, and related ideas of “stickiness” and “leakiness”, to the fore and questions the basis of these ideas (Brown and Duguid, 2001). Local cultural characteristics of practice have been found to influence the spread of practices across different areas leading to the observation that some practices are more widely and mutually adopted than others (Brown and Duguid, 2001; Yanow, 2004). Some things “stick” and do not move easily across different work settings, whilst others seem to “leak” out and become widely adopted very easily – in effect, the latter are put into use whilst the former are sidelined or ignored or “unlearned” (Hedberg, 1981). The process

of unlearning has been found to be one whereby practices become forgotten because those performing the work become disassociated and disconnected from the ideas or procedures and therefore these are not adopted (Blackler *et al.*, 1999a). This echoes the suggestion that in order for collective learning to have taken place, practices must meet a local human need or they will fail to be adopted (Engestrom, 1999a).

These issues form the basis of discussion throughout the remainder of this thesis and will not be discussed further in abstract here, where the purpose has merely been to identify them as influential in the identification of the research questions addressed through this research.

Of course as with any other approach, there are difficulties related to the practice-based approach to collective learning and knowing. The usual criticism of the approach is that although it is based almost entirely on empirical research conducted on firm theoretical bases, the research strategy most frequently deployed is that of the case study, usually taking an ethnographic approach. This is sometimes criticised for producing findings which are not generalisable beyond the cases being studied (an issue which will be discussed in detail in chapter 5). These criticisms relate to the situated nature of practice-based studies, which of course is also one of their strengths when considered alongside the other approaches to the notion of organisational learning as discussed previously.

In addition, such studies are sometimes criticised for their focus on learning at the individual rather than the collective level, but as suggested earlier, this may be an issue of misinterpretation or misunderstanding of the philosophical underpinnings of all of the practice-based approaches, which view the self as socially constituted (Bakhurst and Synnowich, 1995a). This issue will not be pursued further here as it will be discussed in detail in chapter 4.

Overall, despite these criticisms, the practice-based approaches to collective learning and knowing provide a feasible opportunity to study the phenomenon in the complex empirical setting of primary care teams and may have advantages over the other approaches considered within this review of the literature(s), such as dissolving the problems of levels

and types of learning. This proposition will be explored through the empirical work conducted as part of this research and will be discussed later, particularly in chapters 5 and 6. In the meantime, a brief summary of the outstanding issues of interest in this area of literature will be provided in the next section.

Issues to be explored through further research

These insights highlight the possibilities offered by the practice-based literature in relation to the study of learning and knowing in complex and diverse work settings where the objects of work are not necessarily material but concern knowledge and knowing processes themselves and where work requires interaction across organisations and professions (Engestrom *et al.*, 1999a; Blackler and McDonald, 2000; Blackler *et al.*, 2003). The importance of practices being situated and local are central to this area of literature, and the mediated nature of those practices influences what people know in different settings (Engestrom, 1995b; Bechky, 2003; Yanow, 2004; Blackler and Regan, 2006b). This means the issue of context is of key importance from the theoretical perspectives within this area of the literature.

Therefore, the practice-based stream of literature about knowing-in-practice, in contrast to the abstract and acontextual approaches to the notion of organisational learning, offers an opportunity to address the role and importance of context within the process of collective learning as part of day-to-day work. These perspectives suggest that the attribution of meaning through mediated situated, cultural, historical practices is of key importance in any understanding of contextual collective learning and knowing. Recent studies have identified how this process occurs within single work teams, single if distributed organisations and across different organisations but doing different types of work (Engestrom, 1993, 1996; Goodwin and Goodwin, 1996; Owen, 2001; Bechky, 2003; Blackler *et al.*, 2003; Yanow, 2004). However, although these and other studies within this area of literature suggest that context is important, their focus of has not been on the role of context *per se*. Therefore, as identified in these studies and elsewhere (Easterby-Smith *et al.*, 1998), an opportunity presents itself to consider the concept of context in relation to collective learning.

Issue of inquiry in this study

In this chapter the large and varied literatures relating to notions of organisational and/or collective learning in work settings have been reviewed and their relative merits and difficulties discussed using a familiar-to-unfamiliar discursive framework (Hart, 1998). The relevance of these various approaches to the study of such phenomena in the empirical setting of primary healthcare has been considered and issues worthy of further exploration identified. Given the reputedly diverse nature of primary care and the apparent difficulties, identified in relation to healthcare generally, with the adoption of the more rational-technical conceptualisations of organisational learning as exemplified in the learning organisation, knowledge management and behaviourist/cognitive approaches to organisational learning (Dopson and Fitzgerald, 2005a; Sheaff and Pilgrim, 2006), this research will explore the concept of context in relation to collective learning in the empirical setting of primary care. Accordingly, the concept of context forms the subject for discussion in the next chapter.

Chapter 4: Literature Review - The Concept of Context

If context is viewed as a social world constituted in relation to persons acting, both context and activity seem inescapably flexible and changing. And thus characterized, changing participation and understanding in practice – the problem of learning – cannot help become central as well. (Lave, 1993 p.5)

The review of the literature presented in chapter 3 revealed that context remains an under-researched issue in relation to the phenomenon of collective learning in organisations. In light of the reputedly diverse nature of primary care, there would appear to be an opportunity to explore empirically the concept of context in relation to collective learning in the primary care setting. In this way, insights may be offered into the role of context (if any) in collective learning and the way collective learning may be understood within primary care. Therefore the concept of context will now be considered as a central issue of interest within this research.

The chapter is structured as follows. First, various conceptualisations of the concept of context will be identified from the literature, including a conceptualisation based on cultural historical activity theory which provides the theoretical framework for this research. After a reasonably detailed discussion of activity theory, the possibilities it affords for the conduct of an empirical study of the concept of context in relation to collective learning will then be considered. This will pave the way for the discussion of methodological issues in chapter 5.

Introduction

Context is a problematic and contested concept amongst scholars. The etymological roots of the word “context” may be traced to the 15th and 16th centuries and are derived from the Latin “con”, meaning “together”, and “textere”, meaning “to weave” (Concise Oxford Dictionary of English Etymology, 1996). It is defined within the English language as:

the circumstances that form the setting for an event, statement or idea. · the parts that immediately precede and follow a word or passage and clarify its meaning.

(Concise Oxford English Dictionary, 2006)

Philosophical definitions include:

In linguistics, context is the parts of an utterance surrounding a unit and which may affect both its meaning and its grammatical contribution... Context also refers to the wider situation, either of speaker or of the surroundings, that may play a part in determining the significance of a saying...

(Oxford Dictionary of Philosophy, 2005 p.77)

In psychology (Dictionary of Psychology, 2006), sociology (Dictionary of Sociology, 2005) and politics (Concise Oxford Dictionary of Politics, 2003) definitions concern combinations of circumstances which offer an insight into the meanings and/or intentions related to human actions or utterances.

In the next section various conceptualisations of context will be considered in relation to notions of organisational learning, together with potential ensuing implications.

Conceptualisations of context

Conceptualisations of context tend to be viewed from one of two perspectives: on the one hand, context may be regarded as a container of, or constraint upon, social phenomena; on the other, it may be viewed as a dynamic and intrinsic aspect of human action. Of course, as indicated by the dictionary definitions above, context only has meaning when considered in relational terms: even if conceptualised as an independently existing entity, context must contain or constrain some other thing. Therefore, in order to enable discussion of context to take place, it will be considered in relation to the phenomenon of organisational learning. Each perspective on context accommodates a variety of views, some of which overlap, and entail their own challenges and implications for researchers who wish to examine “the problem of context”. This is partly because, whilst these two general perspectives may be

ontologically divergent, there is some epistemological convergence between some of the views they embrace. These will now be considered in turn.

Container / constraint perspective

Context as a container

Context may be conceptualised as a variety of containers. Some adopt a realist view of context as some thing which exists independently in the world. For example, context may be regarded as an inert object, like “the bowl that contains the soup” (McDermott, 1996, p282), whereupon it remains invisible, an unacknowledged item which may be ignored as it has no effect on what it contains and vice versa. Another approach within the realist camp regards context as “a reality that can be observed and measured easily” (Dopson and Fitzgerald, 2005b p.80). Here, context does have some impact on what happens within it and those who favour such an approach may seek to address Lave’s (1993) first question (see p71) in relation to their phenomena of interest, such as organisational form (Pugh, 1997) or behaviour (Hannan and Freeman, 1977).

These views of context as an entity existing independently in the world tend to be adopted in approaches which conceptualise organisational learning as a portable entity, capable of being transferred anywhere at any time, or as an intangible but measurable “good”, as discussed in chapter 3. Reduced to a variable (or series of variables) which may be deliberately excluded as a confounding factor(s) by those seeking to make generalisations about aspects of organisational learning, context is rendered invisible and inert and organisational learning theory therefore becomes acontextual. Alternatively organisational learning theory may also be reduced to discrete, measurable variables and examined in relation to contextual variables in order to make generalisable causative inferences about the effect of contextual or “environmental factors” upon organisational learning. Here, context is cast in an external but deterministic role, something to which those within must react.

The implications of such conceptualisations of context in relation to organisational learning are that organisational learning should be the same regardless of the circumstances that form its setting, or that the circumstances determine the learning which may occur but where there is no discussion of how, by whom and when those circumstances arose. Human action is contained and unable to influence context “from within” so it becomes immutable (Dopson and Fitzgerald, 2005b).

An alternative view of context as a container which does not exist independently in the world comes from the cognitive perspective (Weick, 1997). Here, the container in question is the human head (Dopson & Fitzgerald, 2005; Lave, 1993). Context is contained in the cognitive processes of the human mind, embodied in and enacted by individuals: “the organization and environment are in the mind of the actor” (Weick, 1997, p401).

In order to gain insight into context in relation to organisational learning, some method of accessing those cognitive or mental processes would require to be found (Gherardi, 2000). From this perspective, context becomes an active container and human action is empowered. But both context and learning are locked in and unable to be accessed from outside. This presents an additional problem as to how the contextual learning within individual heads may be related to shared learning and thus regarded as organisational.

Of course, the obvious example of context as a container is the perspective adopted by those whom Bevir (2000) describes as “contextualists”. From this post-modernist perspective, organisational learning occurs within the literal container of verbal or written interactions between individuals so in effect, language – or more particularly, “*langue*” - assumes the mantle of context (Bevir, 2000; Gherardi, 2006). This conceptualisation of context in relation to organisational learning entails the obvious problem that it excludes any interaction which is not literal and suggests that neither context nor organisational learning are accessible or occur in any other form. According to Bevir (2000), such conceptualisations of context not only view it as a container, but also as a constraint, as the “*langue*” is based upon existing literal customs which dictate what may or may not happen now. Therefore, context becomes immutable and organisational learning static.

Context as a constraint

Meanwhile, views of context as a constraint are frequently associated with the social constructionist perspective (Berger & Luckmann, 1967). For those within this perspective, sometimes described as “conventionalists” (Bevir, 2000), context comprises previously socially constructed customs and practices which people regard as unchangeable parts of their social world. They are shackled to things done in the past, which thus act as a constraint on current behaviours and decisions (Dopson and Fitzgerald, 2005b). Thus context resides within the closed box of norms, customs and traditions from “there and then” which determine social interactions “here and now”. It is from this perspective that the notion of path dependency arises (Fear, 2001). A related view of context concerns structural constraints, such as legal and regulatory frameworks, especially in relation to political governance (Bevir, 2004).

The main implication for collective learning of context in a constraining role is that it actively restricts human action. This is problematic for any theory concerning learning as it renders the circumstances within which that learning occurs static, thereby stifling potential learning. There is no obvious way for new things to enter the context and no way for any new ideas within it to alter its contours.

In summary, whilst these conceptualisations of context are not uniform, they treat context as a mainly stable entity (Lave, 1993). This arguably renders their contents more clearly visible by reducing complexity and holding the container or constraint “steady”. However, difficulties arise due to the rigidity and resultant stasis which ensue when some aspects are automatically excluded from consideration which may be the very issues which would offer most insight into the process of collective learning, howsoever defined as discussed in chapter 3.

There are some conceptualisations of context which acknowledge these problems and offer a more flexible, dynamic approach to this contested concept. These will be discussed in the next section.

Context as an inherent aspect of social phenomena

Conceptualisations of context as an inherent aspect of everyday social phenomena stem from practice theory (Schatzki *et al.*, 2001). These are variously identified as relating to phenomenological or situated action models, (cultural-historical) activity theory and distributed cognition approaches (Lave, 1993; Nardi, 1996b). Whilst each approach has a common view of context being inseparable from on-going social action or practice, there are important differences between them which each have different implications in relation to organisational learning theory. These will be considered now.

Context as situated action

The phenomenological or situated action model approaches conceptualise context as something which integral to situated practice, which:

...begins with the premise that situations are constructed as people organize themselves to attend to and give meaning to figural concerns against the ground of ongoing social interactions.

(Lave, 1993 p.19)

From these perspectives, context is part of the ongoing flow of day-to-day practising and is different on each occasion (Lave, 1993; Gherardi, 2000). The ongoing social interaction is regarded as pre-reflexive: people do things first and reflect on them second. Knowing is inherently part of doing and arises in the moment within which context is both created and, therefore, contained. So from this perspective, context becomes an inherent aspect of social phenomena, but it also becomes another form of container only accessible by being part of those phenomena: reflection upon the interaction is an account which may be filtered in the telling and which may not re-present all of its elements (some of which may be unable to be talked about by participants because they are implicit or tacit) (Nardi, 1996b). It is only when there is a discontinuity or break in the flow of the action that context may become knowable (McDermott, 1993).

This perspective is extremely helpful in regard to collective learning, in that it offers an opportunity to examine learning in context. However because this is all contained within the situation, it has been suggested that not only is it another form of container, but also that the situation determines the action taken within the flow (Nardi, 1996).

Context as distributed cognition

Different from more traditional forms of cognitive science which excludes context as a confounding factor (Nardi, 1996b), this approach views context in relation to cognition in real world settings (Hutchins, 1993), mediated through artefacts which guide and constrain action to enable cognition to be shared, stretching across time and situation (Hutchins, 1997). Hutchins' famous example of such a mediating artefact is the map, the use of which involves the cartographer who constructed it in a different time and situation, in the current situation and shared actions of those who are navigating (Nardi, 1996b). Context within this approach is inherent to the action being undertaken, but that action is constrained and enabled simultaneously, mediated by artefacts which are imbued with the knowledge of others over time but which can be collectively drawn upon here and now. Therefore, although context may be regarded as something of a constraint, it is not entirely deterministic of current action.

In relation to collective learning, this conceptualisation of context differs from others in its inclusion of past knowledge and practice to assist (but also constrain) current action. It also enables learning to be thought of as a collective process in that no one individual will learn everything of relevance within the situation, but rather forms part of a system together with other people and the artefacts they use in their practice. However, due to its treatment of humans and non-human artefacts as equals within the learning situation, it omits the need for human consciousness as part of the learning process (Nardi, 1996b). Situations or contexts are therefore viewed as actor networks (Latour, 2005).

Whilst some views of context as a separate container or constraint give space to human action, they tend to focus on the individual as their unit of analysis which activates the problem of levels of learning within organisational learning theory. Here, the “double bind”

of trying to demonstrate a link between the learning of individuals within organisations, and the learning of organisations, is encountered (Bateson, 1972a; Engestrom, 1987). Meanwhile, views of context as an inherent aspect of social phenomena, such as the notion of organisational learning, may have a collective unit of analysis by the nature of their conceptualisation of learning as collective practice, although the accessibility and role of context is variable as discussed.

However, all of these conceptualisations of context - as either container or constraint, as separate from or integral to the social phenomena of interest - exclude the presence of human intentions because they all exclude human consciousness (Nardi, 1996). Intentions are arguably central in any meaningful consideration of context in relation to social phenomena, and perhaps this is nowhere more apposite than in the case of learning (Bateson, 1972b). (This theme will be discussed in more detail in chapter 11.)

The next section introduces an alternative conceptualisation of context from the practice-based perspective of cultural historical activity theory, which addresses the difficulties identified in relation to the other conceptualisations of context discussed here.

Re-conceptualising context: cultural-historical activity theory

Cultural-historical activity theory (or “activity theory” for short) is an inter-disciplinary approach incorporating psychology, philosophy, anthropology, linguistics and sociology amongst others, which has developed over more than one hundred years. In broad terms, it may be located within the area of practice theory (Schatzki *et al.*, 2001).

Its development has occurred over three “generations” or stages, but it has been relatively unknown in the West until the late 1980s/1990s when texts began to become available in English together with new work from mainly Nordic scholars (Engestrom, 1987; Kuutti, 1996; Cole *et al.*, 1997a, 1997b; Engestrom, 2001). Together with its growing availability, interest in it was simultaneously increasing in the West. This was particularly evident in the field of (cultural) psychology, where questions about “context as a central constituent of

human mind” were arising (Cole *et al.*, 1997b) largely due to the inadequacy of current approaches to dealing with the “problem” of context (Lave, 1993).

Reputedly “hard” for Western scholars to deal with (Nardi, 1996), activity theory is based upon a fundamentally different philosophy from that usually encountered in the West, particularly in Anglo-American literature, which may account for this observation (Bakhurst and Sypnowich, 1995b). Therefore, it requires some explanation to set the scene for subsequent discussion.

The three generations of theory development are set out next. The discussion begins with the concept of *mediation*, which forms the basis for the second generation concerning the concept of *activity*, before finally discussing the third generation concerning *context as activity* occurring within and across a minimum of two activity systems. This may result in “expansive learning” or new collective learning across contexts (Engestrom, 2001).

First generation – the concept of mediation

The basis for activity theory rests upon the concept of the socially constituted individual. This stems from the pioneering work in the 1920s/30s of psychologist Lev Vygotsky and his interest in exploring the possible presence of a link between mind and society (Vygotsky, 1978). Rejecting the dichotomy in the psychology of his day, between those who accorded superiority to either the conscious mind (Freudians) or to human behaviour (Skinnerians), Vygotsky initially trod an “and/both” path, taking human behaviour as his unit of analysis in common with the behaviourists whilst simultaneously incorporating what he regarded as the other element of mind – consciousness - in his approach. After some early work, he moved away from the behaviourist approach altogether and revisited the problem of the connection between mind and society by focusing upon the *mediating signs and psychological tools* (including speech and “word meaning”) through which individuals were able to apprehend abstract notions by participating in situated activity (Minick, 1997). The notion of the mediated act was summarised as follows:

Every elementary form of behaviour presupposes *direct* reaction to the task set before the organism (which can be expressed with the simple S→R formula). But the structure of sign operations requires an intermediate link between the stimulus and the response. This intermediate link is a second order stimulus (sign) that is drawn into the operation where it fulfils a special function; it creates a new relation between S and R. The term ‘drawn into’ indicates that an individual must be actively engaged in establishing such a link. The sign also possesses the important characteristic of reverse action (that is, it operates on the individual, not the environment). Consequently, the simple stimulus-response process is replaced by a complex mediated act... In this new process the direct impulse to react is inhibited, and an auxiliary stimulus that facilitates the completion of the operation by indirect means is incorporated. Careful studies demonstrate that this type of organization is basic to all higher psychological processes.... The intermediate link in this formula is not simply a method of improving the previously existing operation, nor as a mere additional link in an S-R chain. Because this auxiliary stimulus possesses the specific function of reverse action, it transfers the psychological operation to higher and qualitatively new forms and permits humans, by the aid of extrinsic stimuli, *to control their behaviour from the outside*. The use of signs leads humans to a specific structure of behaviour that breaks away from the biological development and creates new forms of a culturally-based psychological process.

(Vygotsky, 1978 p39-40, italics in original)

In this way, Vygotsky provided the basis for the development of a theory of the social creation of the human mind through the key concept of *mediation* (Bakhurst and Sypnowich, 1995b; Engestrom, 1999a). In his account the human mind is not socially constituted through a dynamic process within which general, pre-given structural mental capacities, common to all, are ordered through the social interaction in which they participate, so that form precedes content. For Vygotsky, the human mind may be seen to be socially constituted through culturally mediated acts, imbued with the accumulated experience of those who came before. Therefore:

...activity theory reverses the relation between form and content... The real concrete organization of [] consciousness can only be determined by identifying the life histories of these human beings in particular socio-cultural forms of living.

(Axel, 1997 p.128-129)

This was because the way of thinking about mind and behaviour was fundamentally altered, so that:

...rather than two variables with characteristics that interact or influence one another like balls on a billiard table, it becomes impossible within this framework to separate the organization and content of the higher mental functions from the organization and content of social behaviour.

(Minick, 1997 p.121)

Vygotsky's early death meant his theory was not developed as he would perhaps have intended. But his work on the (socially constituted) individual mediated act formed the basis for further development by his colleague, Leont'ev, who introduced a collective aspect through the concept of *activity*.

Second generation – the concept of activity

Having established the development of individual higher mental functions (such as belief, feelings and values) and social behaviour as inseparable, mediated through the use of socio-cultural signs and psychological and material tools, Vygotsky had been unable to explore how that societal process worked. If behaviour were regarded as social, the question arose as to how such a collective process might actually be organised (Engestrom, 1999). Participation in the production of tools, both material and psychological, which were used to mediate actions, enabled individuals to exercise control over their own actions (Minick, 1997, Engestrom, 1987). This implied the presence of choice and intention, or consciousness, and formed the basis for such a theoretical development (Bakhurst and Sypnowich, 1995b; Tolman, 1999). It was in relation to this issue that Leont'ev introduced a framework to explain and enable empirical investigation of:

...how individual consciousness is organized through specific and particular activity.

(Axel, 1997 p.135)

Thus, the concept of *activity* was developed based upon a categorical framework which united the singular and particular mediated action of the individual, and object-oriented, purposeful and collective activity in the world. The framework illustrated activity as a three-layered process relating to corresponding layers of consciousness, as shown in figure 1:

Activity	→	Motive
Action	→	Goal
Operation	→	Instrumental conditions

Figure 1: Leont'ev's Activity (adapted from Engestrom, 1999, and Axel, 1997)

The basic layer is operation which is an automatic individual act, not requiring consciousness, carried out in relation to instrumental conditions. The second layer is action, which is also individual, but does require some consciousness in that it entails a goal. The action may comprise the collective operations carried out by the individual toward the achievement of a specific goal. The third layer is that of *activity*.

Activity comprises the collective goal-directed actions of individuals whose goals are united by a collective motive. The notion of a shared motive which guides collective activity is taken as a demonstration of consciousness within the activity. In an action, the subject or person acting does something to the object of their action, through which they have set out to achieve a goal; in activity, there is a collective subject (those carrying out the actions) engaged in the transformation of a common object which carries the collective motivation for the activity. Therefore, activity may be thought of as a collective, purposeful, object-oriented process, characterised by an alignment between processes, object and motive (Axel, 1997).

In order to facilitate understanding of this somewhat abstract notion, the primeval hunt was used as an exemplar to demonstrate how that process might be organised and understood

(in a more naturalistic, complex fashion than the somewhat linear, sequential hierarchy suggested by the framework). Although some time has passed, the same aspects of Leont'ev's example may be seen in the following depiction of a collective hunt, painted in 1529.



“The Stag Hunt” (1529) Lucas Cranach the Elder.
© Glasgow City Council (Museums), The Burrell Collection

Here the collective subject may be seen as those participating in “The Stag Hunt”. They include the beaters, like the man in red at the centre of the picture, whose action is chasing the deer. He does this by means of the operation of running and his action is mediated by means of the stick he carries to frighten the deer and force them to go in the desired direction.

Other subjects are the riders on horseback some of whom are riding across the field chasing the deer while others await, hidden in the trees, their actions being mediated by the running/standing of their horses. (These riders may have another action in relation to the deer if and when any are killed, or they may indeed have an action of killing the deer, but

this is not entirely clear from simply looking at the picture.) Men with cross-bows hide in the trees waiting to fire at the deer, their action mediated by means of the cross-bows and bolts or arrows they fire. These are joined there by other beaters whose action appears to be supplying the bowsmen with arrows or just watching and waiting. Perhaps they are there to take up the action of driving the deer in other directions should they stray in an undesired direction, or to drag the deer away should they be shot. At least one of these men may be seen engaged in the action of controlling the dogs, which are also used to mediate the actions of the beaters and horsemen in driving the deer across the field towards the water. On the right of the picture a man on horseback waits in the trees. His role is to sound the horn thereby conveying instructions and information to other participants, an action mediated by the horn through which he blows.

Finally, there are the people in the boat. One of the boat's occupants performs the action of rowing to steady the boat or move it to a desired position in the river, his action mediated by means of the oar, so that his passengers may perform their action of spectating.

In addition, the actions of other less obviously identifiable individuals should not be forgotten. These people may be in a different place and may have carried out their actions prior to the other subjects involved in the overall mediated activity:

...a person may have the object of obtaining food, but to do so he must carry out actions not immediately directed at obtaining food... His goal may be to make a hunting weapon. Does he subsequently use the weapon he made, or does he pass it on to someone else and receive a portion of the total catch? In both cases, that which energizes his activity and that to which his action is directed do not coincide.

(Leont'ev, 1974, quoted in Nardi, 1996 p.73-74)

Difficulties of translation aside, this passage indicates that activity is not simply what happens today, but includes what others contributed in the past and at a distance from immediate event(s). In "The Stag Hunt" the actions of the people who made the material mediating artefacts such as the boat, the bows and the horn are also involved; and although it is not easy to identify the individuals in question, the host of the Hunt has had

an obvious role to play in the collective activity, together with the contributions of those who created the psychological artefact of the rules of hunting.

Each of these subjects has a goal related to his or her action. In Leont'ev's example of the primeval hunt, the goal of the beater is to satisfy his hunger, yet the action he performs is to frighten the deer in a specific direction, away from himself, by making a noise such as clapping his hands (Axel, 1997). This paradoxical action may only be understood when considered in relation to the complementary actions of the other subjects participating in the primeval hunt, whose action is to kill the deer through the use of mediating tools in the forms of the weaponry of the day. The thing they all have in common is a common object, which carries their mutual motive: they wish to catch the deer (their common object) which will enable them to achieve their desire to eat (the common motive).

Therefore, the series of actions depicted in "The Stag Hunt" may seem unconnected and even contradictory when considered in isolation but, just as the composition of the picture directs the attention of the viewer, the common unifying object of this particular activity is catching the stag. Of course, the motive here appears to be more complex than simply being able to satisfy hunger, in that it appears to include the desire to provide entertainment through the spectacle of a skilled sport, with the specific object being to catch the stag and not just any of the other deer present. (Although this may be a secondary motive, in order to feed the guests afterwards).

So the overall objective may be to demonstrate wealth and status by providing a spectacle for the guests in the boat, carried out through the collective activity (of the host, beaters, bowsmen, horsemen, hunt leader blowing the horn, oarsman, and maid), the object of which is to hunt and catch the stag using a variety of mediating material and psychological tools (money, sticks, bows, arrows, horn, instructions, rules, horses, boat, dogs).

Leont'ev attempted to deal with the difficulty of thinking about the relationship between the individual actions in the world, how those might be ordered collectively, and related to consciousness. Therefore, activity may be understood to be the collective ordering of individual actions, distinguished by the presence of a common motive-laden object. If

processes, object and motive are not aligned, there are only the disconnected actions of individuals (Axel, 1997).

Although Leont'ev facilitated the move from the concept of mediation (through individual culturally mediated acts) to the concept of activity (through collective purposeful actions), his framework has been criticised for being rigid, restrictive and focused only on the individual internalisation of existing collective cultural practices (Engestrom, 1999a; Axel, 1997). This perhaps reflects Leont'ev's focus which was how the process of the organisation of consciousness could be depicted in an externally visible way. By introducing the concept of activity he:

...considers *society* as a unity of actual interlacing patterns of particular activities – as a result of and condition for human praxis. In his writings Leont'ev never treats the characteristics of this unity separately. That is a task for sociology.

(Axel, 1997 p.137, italics in original)

Axel's comment demonstrates where the edges of psychology and sociology (and perhaps other social sciences) meet within activity theory. However, some of the criticisms of Leont'ev's framework have been addressed through the third generation of activity theory which will be outlined next, before introducing a philosophical bridge between the psychology of activity theory and the broader issues of practice within which it provides the basis for considering contextual, collective learning.

Third generation – activity systems

The issues of how existing collective, culturally mediated practices are internalised through participation in activity may have been dealt with by Leont'ev's framework, but his representation of activity did not include how new activities might arise. Just by drawing upon Leont'ev's originally cited example of the primeval hunt, but using a visual depiction of a much later version to demonstrate the same framework for activity in "The Stag Hunt", introduces the notion of changes in activity over time (although obviously neither of these examples is "real"). Although he did discuss the issue, it was not absorbed in the same way as the aspects of activity depicted within his framework (Engestrom, 1987). Therefore, the

issue of history was apparently unaddressed. Also, although implicitly evident, the social organisation of culturally mediated actions within activity was not modelled so that the systemic nature of collective activity might be drawn upon to study other activities (Engestrom, 1999a).

Therefore, the third generation of activity theory has sought to deal with these issues. Developing the original Vygotskyian triangle of the individual culturally mediated action, Engestrom developed a new representation of the collective activity system (Engestrom, 1987). This included other aspects of activity which had been demonstrated through, but not explicitly modelled by, Leont'ev's framework. These additional aspects were rules, the wider community, and the division of labour within activity which produced the following model (figure 2):

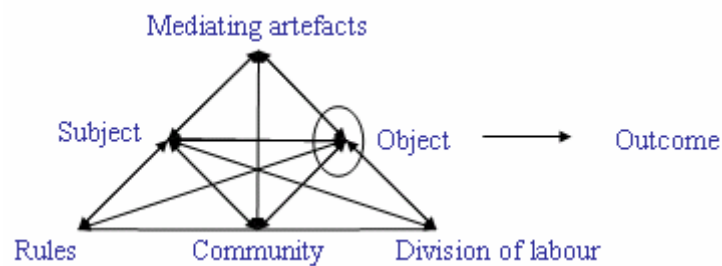


Figure 2: Activity system, as shown in Engestrom, 2001, p135.

Continuing with the example of the hunt, in Engestrom's model the beaters, bowsmen and other Hunt participants may be cast in the position of subject, catching the deer may be placed in the object position, and bows, boat, dogs and horses may be placed in the mediating artefact position. However, these may now be explicitly joined by the rules of the Hunt, as communicated by the man blowing the horn, the way the actions were divided up placed within the division of labour position, and those depicted within the picture may be thought about within the community of other people who participate in the activity of hunting, wherever they may be. The activity should be recognisable as hunting to the wider hunting community even if there are local differences and variation.

This new model provided the potential to consider issues of how activity changes over time, when activity systems come into contact with each other, and how these activity systems are inherently contextual. Each point on the model may be connected to the others,

thereby demonstrating the inter-related nature of each of these aspects of collective activity within a single system.

The newly added dimensions provide a visual and specific representation of previously present but perhaps less obvious aspects identified by Marx in his discussion of the “social individual” (Engestrom, 1993). Collective activity is a demonstration of the way individual actions have become interdependent and the world has become increasingly complex for individuals to navigate: few processes are entirely carried out by one single individual, if the collective activity approach is adopted. The individual may seek to demonstrate self-sufficiency and self-containment, for example by going off into the hills camping and “living off the land” but, as Tolman suggests, it is unlikely that the same individual also made all of the implements s/he will use on the trip (Tolman, 1999). Hierarchical and power relations are part of the division of labour position as they are experienced and organised within the collective activity system.

The process of change in activity

Working within the discipline of psychology, Engestrom developed this adapted model by studying theories of learning, including the theory of deuterio learning or Learning III (Bateson, 1972c) based upon the “double bind” theory (Bateson, 1972a, 1972b). This provided a path towards developing a methodology for studying creative, practice-based collective learning within activity systems as the insights derived from the work of activity theorists in psychology were complemented by Bateson’s anthropological insights.

The dynamic, changing nature of objects in activity theory was understood in relation to a process of change within the activity system as a whole (Engestrom, 1987). This took the form of inner or primary contradictions or tensions within each point of the activity system and secondary contradictions which resulted in tensions between the various points of the model, notably between the subject and object (the original contradiction, as noted by Marx, between “use” and “exchange” values) and influenced by rules, division of labour and mediating artefacts (Engestrom, 1987, 1993).

The process may be explained as follows: primary tensions give may give rise to a change in the object, but when this fails to resolve the tension, secondary tensions arise. The subject(s) questions the fundamental basis of activity as it is currently ordered which causes a disruption or discontinuity in the activity. A resolution to the problem is found so that activity may continue and a new object is established through the reconstituted material practice (Engestrom, 1987). These primary and secondary contradictions may be heightened by tertiary contradictions (which may occur between the newly created object and traces of the original activity) and quaternary contradictions (which may arise between the new object of the original activity system, created through the secondary and tertiary contradictions, and the objects of other neighbouring activity systems with which the original activity system came into contact through any of its constituent points) (Engestrom, 1987). In this way, activity system participants experience a “double bind”, whereby all possible eventualities are as unacceptable as the others, giving rise to new, alternative ways of doing things (Bateson, 1972a).

It is this activity, which Engestrom termed “expansive learning”, which may be understood as deuterio learning, or Learning III in Bateson’s terms. But Bateson discusses only the learning of individuals and not a collective learning process. Here, Engestrom draws upon the work of Vygotsky again, in the form of his “zone of proximal development”. This future-oriented developmental process, of creating new ways of doing things from those existing, culturally internalised practices (Griffin and Cole, 1984) has been carefully reassessed by Engestrom (Tolman, 1999), who suggested it may provide a key to understanding creative, collective learning processes through activity:

Human development is real production of new societal activity systems. It is not just acquisition of individually new activities, plus perhaps individual creation of ‘original pieces of behaviour’... Above, I have distinguished between three types of development... The third type [collective expansive] is the one which requires intuitive or conscious mastery – the subjectification of the subject. The concept of the zone of proximal development as an *instrument of subjectification* is relevant in the context of this third type of development... A provisional reformulation of the zone of proximal development is now possible. It is the *distance between the present everyday actions of the individuals and the historically new form of the*

societal activity that can be collectively generated as a solution to the double bind potentially embedded in the everyday actions.

(Engestrom, 1987 Ch 3, p27, italics in original)

Therefore, not only is the individual mind socially constituted, by means of culturally mediated acts internalised through collective practices or activity, but those activities may be renewed and created from within the activity system. Internal system contradictions enable members to think about and then externalise ideas for new ways of doing things, thereby forming new activities over time within which traces of the old activities may be found, but which deal with qualitatively new situations and conditions as they unfold (Engestrom, 1993, 1999b). From this perspective, “the problem of context” (Lave, 1993) comes into view:

This weaving of contexts and of messages which propose context – but which, like all messages whatsoever, have “meaning” only by virtue of context – is the subject matter of the so-called double bind theory.

(Bateson, 1972 pp.275-276)

It is this ability of activity system participants or subjects to, at one and the same time, create *and* transcend their context, thereby overcoming the double bind and demonstrating deutero learning, which is perhaps the most interesting and helpful aspect of this theoretical approach.

Although this all *seems* to make sense, it is difficult for a non-psychologist to directly apply these psychological insights within her own field of study. However the central issue of the social constitution of mind by means of culturally mediated collective activity, subsequently developed to account for the creation of new activity across time and place through Engestrom’s expansive learning, continues to be of interest across a range of academic disciplines. It is of particular interest to those who wish to study the link between collective learning and context. In this regard, related philosophical work may offer a more accessible route to non-psychologists who wish to avail themselves of these theoretical insights.

In the next section the origins of the philosophical basis of activity theory will be discussed. First, the central notion of the socially constituted individual will be considered and contrasted with the Cartesian self. The basis for this activity theoretical approach, in the form of the underpinning “concept of the ideal” will be discussed through which meaning is attributed to material or epistemic objects when they become imbued with so-called “ideal properties”. The process known as the “ascent from the abstract to the concrete”, through which such attribution of meaning occurs will be introduced, completes the introduction to the conceptualisation of context and activity as mutually constitutive concepts. Finally, there will be a brief discussion of the possibilities this affords for empirical exploration of the concept of context in relation to organisational or collective learning in primary care teams.

Philosophical basis of activity theory: context as activity

The central philosophical principle of activity theory relates to the socially constituted individual. Derived from the work of classical German enlightenment philosophers such as Kant, Hegel, Fichte and Feuerbach, as well as the more recent works of Marx and Engels, the argument was developed by the philosopher Evald Illyenkov (1977), who created a unifying theory for key concepts of mediation and activity (Illyenkov, 1977; Kuutti, 1996; Tolman, 1999). Illyenkov’s work forms the basis of philosophical case for the socially constituted individual by addressing the crucial philosophical question of how the world may become a possible object of human thought (Illyenkov, 1977). Obviously, answering this extremely complex and difficult question is not the aim of this chapter, the focus of which is how context may be conceptualised as an inherent aspect of collective learning. But in order to demonstrate this, a brief explanation of some salient philosophical points is necessary. The following discussion is based on the work of David Bakhurst (1997), who developed the philosophical case presented by Illyenkov to make the activity theory approach more accessible within, and in relation to, Western culture and philosophy (Illyenkov, 1977; Bakhurst, 1997). Here, the dominant notion of self must first be acknowledged so that the contrasts may be understood. In this way, the prevailing conceptualisation of context, often as a separate entity but generally in the form of some

sort of container or constraint, may be more easily understood. This may also place the arguably difficult re-conceptualisation of context within the theory of activity “in context”.

The prevailing view in the West: the Cartesian self

One of the reasons those in the West have difficulty in conceptualising context in a way which does not immediately characterise it as either a container (as at the end of the last sentence) or a constraint which may be thought about separately from its contents, may be due to the way self is regarded in relation to the world. The dominant view of self in Western society is that established by René Descartes (1596-1650), whose dictum, “cogito ergo sum”, became the foundation stone for many future philosophers (Oxford Dictionary of Philosophy, 2005) and is the source of the dualism which still dominates Western contemporary thought. Descartes’ dualism has two dimensions: of mind and body (with the inherent problem of how there may be any interaction between the two), and of image and object (with the inherent problem of how mind may apprehend objective “reality”). This two-dimensional dualism represents a dualism of two worlds, the material “object world” which is “out there”, and the subjective “inner world” which is “in here” (Bakhurst, 1997). This is primarily due to the way in which the “inner world” deals with objects from the “outer world”:

The basic image at the heart of the Cartesian conception is the picture of the mind as a great *mirror* containing various representations. Onto the glass of the mind images of the external world are cast. In the Cartesian tradition these images are called *ideas*. The self, or the “subject” of consciousness is presented as located, as it were, behind the mirror, surveying the representations which it presents to him.

(Bakhurst, 1997 p.153, italics in original)

Therefore, the Cartesian self cannot come into direct contact with the material or objective world, but only with representations or ideas of it, as presented to mind. In this dualistic existence, mind is self-contained, self-sufficient and ready made, responding to the presentation of ideas of objects (as mind may only know “mental” objects, that is, ideas). Therefore, mind is ready made and reactive:

“The capacity to think is, for the Cartesian, something which a being either has or lacks; it is not a capacity a being may develop.”

(Bakhurst, 1997 p.155)

Vygotsky’s notion of the socially constituted mind, created by means of culturally mediated acts, is therefore in direct opposition to this dominant Western philosophical position. In order to explain this dichotomy, Illyenkov’s “concept of the ideal” (Illyenkov, 1977) may be drawn upon, to bring some philosophical order to the propositions of cultural-historical activity theory and within it, the notion of context.

The “concept of the ideal”

The key issue within the notion of the socially created or constituted mind is also how mind may deal with the material world. In activity theory this happens in quite a different way from that depicted in Cartesian philosophy. In Illyenkov’s philosophy, mind is unable to come into contact with material objects directly, just as in the Cartesian view (where the use of the “mirror” is necessary). However, in the theory of the ideal, mind may come into contact with objects when they carry properties which imbue them with meaning. Once imbued with meaning, the objects are no longer merely physical objects: they have acquired new properties in addition to their physical properties, which render them suitable to be known by the mind. These additional properties are known as “ideal properties”, such as *meaning* and *value* (Bakhurst, 1997). For example, a lump of carbon is not understood merely as a lump of carbon: it becomes variously a chemical formulation, a piece of coal or (if it is of a specific type), a precious stone or diamond.

These “ideal properties” with which objects become imbued, which render them accessible to the mind, are attributed through a process of transformation within human collective activity. Therefore, through their use in human practice, physical objects acquire social significance which transforms the way they may be understood. Illyenkov generalises this point and suggests that humans not only transform individual aspects of the natural world through activity, but that they create a qualitatively different world through their activity by

imbuing all aspects of it with ideal properties. The world has then been transformed into what Illyenkov described as “man’s spiritual realm”. In this way:

...man transforms his natural habitat into one replete with social meanings: man creates an idealised environment. And it is in this process of idealisation that the material world becomes a possible object of thought and experience.

(Bakhurst, 1997 p.160)

Therefore, activity becomes the necessary pre-requisite for consciousness, since the ideal properties through which the world may become a possible object of thought are attributed through it. These may only be “appropriated” through a process of internalisation by individuals through their participation in socially mediated practices within their community or activity system. In this way, mind may be seen to be socially created, so that thought does not originate within the head in the private inner world of the Cartesian self, who is self-contained, self-sufficient and ready-made, but rather emerges through the social milieu of activity (Bakhurst, 1997). The process through which ideal properties are attributed to objects, known as the ascent from the abstract to the concrete, will be discussed in the next section.

Attributing ideal properties: ascent from abstract to concrete

The individual’s mind, or consciousness, may be understood to be created by acting within the collective activity system, wherein s/he internalises the meanings, values, morality and norms, based on past and present activity, through the ideal properties of the artefacts which mediate actions. The activity itself is collective and object-oriented, and is organised in a recognisable way to those who participate in its creation and in similar activity in the wider community. Therefore, the activity itself, in all its component parts as illustrated by Engestrom (1987, 2001), forms the smallest unit of analysis to study processes of collective learning.

But although the process of contradiction which provides the generator of change has been discussed in the third generation of activity theory, there remains a need to account for the

means by which transformations from one type of activity to another occur (the process of expansive learning). Illyenkov's philosophical examination of activity theory provides a suggested explanation, in the form of the *ascent from the abstract to the concrete* (Illyenkov, 1977; Engestrom, 1999b; Tolman, 1999).

This philosophical insight offers an account of why activity systems are dynamic and not static, open not closed. This concerns how changes occur in mediating artefacts which are crucial to the operation of activity systems, and therefore accounts for how changes may be made to ideal properties. These pivotal properties take account of past experience of those involved in activity, but they have the capacity to change. In order to understand this concept, the terms *abstract* and *concrete* must be clearly defined:

“To say that all things are concrete does not mean merely that they are things as opposed to ideas, but also that they are integral wholes within a larger system that also forms an integral whole. Things represent a “unity in diversity”. *Abstract* by contrast, refers to the stripping of these relations, either objectively or in thought.”

(Tolman, 1999 pp.76-77)

This process incorporates the kernel of activity system dynamics, which takes place through the activity cycle (Engestrom, 1999a). Here, the process of internalisation through mediated collective activity, imbued with ideal properties and with a common motive in order to meet some collective need, is complemented by a process of externalisation.

This cycle begins when the activity or way of doing something becomes reasonably established and the inner contradictions have begun to emerge. The collective nature of activity means there are likely to be multiple perspectives or voices within the system, and through these the inner contradictions gain voice and credence as they are discussed and debated. Various new ways of practising may be suggested and through a process of system negotiation they may be tried out and their contradictions or otherwise assessed in relation to the collective motive.

Through this dialectical process, the contradictions present in the activity may give rise to a fundamental change in the ideal properties present within the activity. If the object(s)

concerned, which may only be known by virtue of the ideal properties with which it has been imbued, no longer meets the needs of the activity system, it may be stripped of those properties or the properties may be changed, thus changing the meaning attributed to the object and therefore the way in which it may be understood (Lektorsky, 1999). In this way, the object(s) descend from the concrete to the abstract. The new artefacts or objects, introduced by means of the new activity, acquire their own ideal properties to enable activity system participants to appropriate and internalise them, and they ascend from the abstract to the concrete. And so the process begins again (Engestrom, 1999b).

Objects may ascend and descend over time, as traces of those objects remain in meanings and values, which may explain the frequently experienced feeling of “having seen it all before”. However, all is not the same because other aspects of the system may have changed: the properties and therefore the object and activity are not exactly the same (Engestrom, 1995b). As may be expected, this occurs through the process of activity and the descent of objects to the abstract:

...captures the smallest and simplest, genetically primary unit of the whole functionally inter-connected system.

(Engestrom, 1999b)

By studying activity which has not yet settled and become “fossilised behaviour” (Tolman, 1999 p.76), these underlying dynamics may be able to be identified as a series of contextual, specific epistemic or learning practices (Engestrom, 1999b, Engestrom, 1995).

Activity is context - context is activity

Activity theory has been criticised as a blueprint for authoritarianism by some, especially those who misinterpret Leont’ev’s framework of activity, in relation to the way existing rules and norms may be internalised by individuals through the process of activity (Lektorsky, 1999). However, the key concept of mediated action and the socially constituted individual, based on the work of Vygotsky and theorised by Illyenkov, may actually be seen to return agency to individuals by enabling changes in meanings attributed to mediating artefacts in order to meet local needs (Bakhurst, 1997).

Therefore, it may be suggested that the idealised version of the world will be *specific* to local activity, or perhaps more accurately, to the activity conducted within various overlapping local activity systems of which individuals are a part. If the collective activity is culturally-historically mediated, by means of artefacts imbued with ideal properties specific to the culture and history of that particular activity and its subjects, in relation to its objects, then it is possible to see how context becomes at once an enabling and constraining force (Nardi, 1996), guided by past experience, values and norms. But it is also one which is dynamic and not path dependent, creating and created by those involved in activity locally in the here and now, and in the wider world through linkages with other activity systems.

The notion of the activity system, characterised as changing through internal contradictions and the activity cycle, may be augmented by linkages with other activity systems. Inter-activity system contradictions which arise will give rise to further new activities, all characterised by changes in meaning, values, moral codes and customs over time, thereby changing and transforming the contexts of those activity systems in the process of their interactive activity.

This exploration of activity theory, in particular the process of the attribution of ideal properties to objects through the ascent from the abstract to the concrete, provides the basis for conceptualising context as observable, reportable activity (Nicolini, 2006). In the next section, the possibilities this creates for the empirical study of contextual, collective learning will be discussed.

Theoretical and methodological opportunities

The next step may be to reformulate the problem of context: Instead of asking, What is the constitutive relationship between persons acting and the contexts with which they act? the question becomes, What are the relationships between local practices that contextualize the ways people act together, both in and across contexts.

(Lave, 1993 p.22)

The question of how the individual and collective “levels” in the world or society relate to one another continues to perplex theorists from various perspectives, clustered around the study of how practices (Bourdieu, 1977; Schatzki *et al.*, 2001), institutions and structures (Giddens, 1984; DiMaggio and Powell, 1991; Scott, 2001) and human action (Archer, 2000) may be understood to be ordered.

Not least of the problems considered by these theories is that of the role and importance of *context*. Both of the questions posed at the beginning of this section by Jean Lave may be able to be addressed when considered in light of the re-conceptualisation of context as activity as described in this chapter, in that it:

...provides for a reconceptualisation of the relationship between the individual and the social system in which he or she lives and develops.

(Minick, 1997 p.125)

While other conceptualisations of context have been considered here, they each carry with them difficulties in identifying the role of context in relation to collective learning. For example:

If *context* is a collection of variables that influence the already existing individual, then it cannot be identical to society. Also, therefore, activity theory and contextualism are not saying the same thing with different words. They are fundamentally different theories because they are based on fundamentally different philosophies: Activity theory is a consequence of classical German philosophy; contextualism is one of the many natural offspring of British empiricism. As a result, their methodologies are distinct, yielding different methods and procedures. They also yield different kind of knowledge: one of underlying processual dynamics, the other of external correlations among variables.

(Tolman, 1999 pp.82-83, italics in original)

Although the terminology is difficult and not familiar to those in the West, activity theory offers both theoretical and methodological opportunities and benefits to enable context to be studied as part of practice or activity which is both observable and reportable (Nardi, 1996b; Nicolini, 2006). In this way it transcends the container/constraint issues, together

with the dualism between the individual and collective levels. It enables different objects to be studied within the same activity system, and the same objects to be studied across different activity systems, thereby enabling some assessment of the role and importance of context in collective learning.

This chapter has considered various conceptualisations of context in relation to the process of collective learning in organisational settings. Based on this discussion, the conceptualisation of context as activity appears to offer an empirical opportunity to study the concept of organisational or collective learning which might go some way towards addressing the relatively unexplored issue of the role and importance of context in that process. Therefore, cultural historical activity theory may provide a helpful theoretical framework within which to analyse the empirical data in this research.

Chapter 5: Methodology

In the preceding chapters the policy and empirical backgrounds against which this thesis is set have been introduced and issues which continue to be of interest in relation to the concept of organisational or collective learning have been identified. Given the apparently diverse nature of the empirical setting, the concept of context has been chosen as the issue with which this thesis is concerned. In the last chapter, various conceptualisations of the concept of context were considered and cultural historical activity theory was identified as a potential analytical framework for thinking about this concept in relation to collective learning in primary care teams.

The purpose of this chapter is to set out the methodological basis upon which this study of contextual collective learning in primary care has been conducted. First, there will be a brief discussion of the various paradigms and perspectives within the social sciences so that this study may be located within the overall field. This sets the scene for a discussion of the abstract nature of the phenomena of interest in this research. Some methodological challenges concerning ontological and epistemological issues, presented by the empirical setting of primary care in relation to these abstractions, will be identified prior to providing an explication of the subsequent research process. Following identification of the research questions addressed by this thesis, an account will be given of the research strategy through which the project was enacted. An explanation of the sampling framework for this instrumental study of multiple cases will be followed by the introduction of the primary care teams studied. Finally, the analytical process through which findings of this instrumental study of multiple cases were reached will be explained.

Social science research paradigms

The social sciences are characterised by a variety of paradigms and perspectives which stretch across academic disciplines and the full range of social science areas of study and topics of interest. A paradigm, or interpretive framework, has been defined as “a basic set of beliefs that guide action” which support “the researcher’s epistemological, ontological and methodological premises” (Denzin and Lincoln, 2005). Paradigms are therefore

axiological, incorporating the ethical and moral frameworks which support the researcher's world view and the ways in which s/he thinks that world may be known. Perspectives are somewhat different from paradigms, in that they are:

...not as solidified, nor as well unified....although a perspective may share many elements with a paradigm – for example, a common set of methodological assumptions or a particular epistemology.

(Denzin and Lincoln, 2005 p.183)

This presents a series of challenges for social science researchers in terms of making methodological choices and decisions about their projects. which are not as evident in the natural sciences where debates tend to focus on the methods used, but rarely debate the ontological and epistemological aspects of research (Sechrest and Sidani, 1995). In the social sciences these issues are more complex than the somewhat simplistic, if commonly held, dichotomous quantitative/qualitative view would suggest (Guba and Lincoln, 2005). This relatively common view is neither entirely relevant to, nor accurately descriptive of, this field of academic endeavour. It is not entirely relevant because its emphasis tends to be erroneously and narrowly focused on research techniques or methods; it is not accurately descriptive, because both the quantitative or qualitative approaches may be evident within the same social science discipline, and even within a single research project (Easterby-Smith *et al.*, 2002).

Paradigms and the perspectives they encompass may be complementary or competitive (Guba & Lincoln, 2005). They may be conceptualised as a continuum ranging from “conventional” to “alternative” (Guba and Lincoln, 1994). Those situated at either end of the continuum (positions 1 and 2 respectively) are generally held to be mutually exclusive and competitive, whilst those situated along the continuum may be complementary to a greater or lesser extent. Most social science research projects fall towards the “alternative” end of the spectrum within those paradigms regarded as interpretivist (O'Reilly, 2005) rather than positivist. However, despite claims of their demise (Wilson and Natale, 2001), positivist and post-positivist paradigms do still feature in some social science studies as identified in Chapters 3 and 4 (Hammersley, 1995). A summary of paradigms is set out in table 1.

Table 1: Paradigm positions (adapted from Guba & Lincoln, 2005 p.196)
(NB: shading represents perspectives compatible with researcher's view, see p84)

Issue	Positivism	Post-positivism	Critical theories	Constructivism	Participatory
<i>Nature of knowledge</i>	Verified hypotheses established as facts or laws	Nonfalsified hypotheses, probable facts or laws	Structural/historical insights	Individual and collective reconstructions sometimes coalescing around consensus	Extended epistemology: primacy of practical knowing; critical subjectivity; living knowledge
<i>Knowledge accumulation</i>	Accretion – adding to “edifice of knowledge”; generalisations & cause/effect linkages	As for positivism	Historical revisionism; generalisation by similarity	More informed & sophisticated reconstructions; vicarious experience	In communities of inquiry embedded in communities of practice
<i>Goodness or quality criteria</i>	Conventional benchmarks of “rigor”: internal & external validity, reliability, objectivity	As for positivism	Historical situatedness; erosion of ignorance and misapprehensions; action stimulus	Trustworthiness and authenticity including catalyst for action	Congruence of experiential, presentational, propositional, practical knowing; leads to action to transform the world in the service of human flourishing
<i>Values</i>	Excluded – influence denied	Excluded – influence denied	Included – formative	Included - formative	Included - formative
<i>Ethics Inquirer posture</i>	Extrinsic “Disinterested scientist” as informer of decision/ policy makers and change agents	Extrinsic As for positivism	Intrinsic “Transformative intellectual” as advocate and activist	Intrinsic “Passionate participant” as facilitator of multivoice reconstruction	Intrinsic Primary voice manifest through aware self-reflexive action; secondary voices in illuminating theory, narrative, other presentational forms
<i>Training</i>	Technical and quantitative; substantive theories	Technical; quantitative & qualitative; substantive theories	Resocialisation; qualitative and quantitative; history; values of altruism, empowerment & liberation	As for critical theories	Co-researchers are initiated into the inquiry process by facilitator/researcher and learn through active engagement in the process; facilitator/researcher requires emotional competence, democratic personality and skills

Position 1 ← Paradigm continuum → Position 2

Each paradigm has its relative merits and difficulties. These may only become evident when considered in relation to the questions to which the research project is addressed.

These philosophical issues may seem somewhat esoteric initially. However, their importance lies in the nature of social science itself, in that it concerns the study of human lives (O'Reilly 2005) and related concepts which are frequently abstract rather than material (Bateson, 1941). It is this aspect of social science which requires careful consideration be given to methodological issues in all research projects.

Indeed, Mason (1996) suggests researchers ask themselves five “difficult questions” concerning the ethical/moral, ontological, epistemological and methodological issues they face, regardless of the (qualitative or/and quantitative) methods they eventually adopt, to meet this requirement:

1. What is the nature of the phenomena, or entities, or social ‘reality’, which I wish to investigate?
(Ontological issues)
2. What might represent knowledge or evidence of the entities or social ‘reality’ which I wish to investigate?
(Epistemological issues, related to 1.)
3. What topic, or broad substantive area, is the research concerned with?
(Methodological issues, related to 1 & 2.)
4. What is the intellectual puzzle? What do I wish to explain? What are my research questions?
(Connects what you wish to research with how you are going to research it, consistent with and related to 1, 2 & 3.)
5. What is the purpose of my research? What am I doing it for?
(Axiological issue and academic contribution, relates to paradigm positioning and encapsulates 1, 2, 3 & 4.)

(Mason, 1996 pp.11-18, text in brackets added)

These questions enable the researcher to think about the paradigm and perspective which best suits their particular research project. This facilitates the construction of a coherent research design which retains a necessary degree of flexibility (although not in the positivist or post-positivist paradigms where different criteria apply), to allow alterations to be made in light of what is learned when conducting the research whilst ensuring it remains focused and the questions are addressed. This is particularly important when considering the frequently abstract nature of the topics of interest to social scientists which will be discussed in the next section.

Researching abstract concepts

The central issue for any research project is obviously to address the research question(s) posed. However, it is important to consider the preceding process which culminates at that important point. Each step in that research process involves choices and decisions relating to the issues encapsulated by Mason's (1996) five questions as outlined above. In the social sciences, the process is closely related to the researcher's favoured paradigm, and within that, his or her preferred perspective on the phenomena of interest. These preferences are not whimsical but are rigorous, informed choices, which display the skills necessary to conduct research. They also relate to a key quality indicator in research projects: how appropriate is the design for studying the phenomena under scrutiny, and does the methodology (and methods used) fits the question(s) asked (Light Jr, 1979).

Research conducted within the positivist or post-positivist paradigm is based on deductive logic and seeks to test *a priori* propositions or hypotheses to either confirm or disprove them. This type of research is potentially useful when the topic relates to material, measurable objects and the questions relate to questions such as what those things are, how frequently they are encountered, or how two or more of them relate to one another (or do not). But social scientists are often interested in abstract concepts related to human interactions and their questions focus on why certain processes occur (or do not) and how they happen (Mason, 1996). This means that the field of research is not static and frequently the focus is not on material objects. Therefore, the positivist and post-positivist paradigms are used less often in the social sciences. When they are used, researchers need

to ensure they relate openly and appropriately to the phenomena of interest and enable the research questions to be addressed.

Topics of interest to social scientists may often be better served by the application of inductive logic (Mason, 1996). This allows the researcher to use data from the “real world” s/he is studying to inform the course of the research, enable new insights to be gleaned, new themes to emerge, and to form the basis for analysis and findings. Although there are methodologies which seek to be entirely inductive, for example some purist forms of grounded theory (Glaser and Strauss, 1967) where everything begins with and stems from the data generated, this is not usually the case in practice. Most people do not conduct their research knowing nothing about their topic of interest. In most instances they draw upon various informative sources prior to commencing data gathering, including their own prior experience or “pre-understanding” (Gummesson, 2000), “fore-shadowed problems” (Malinowski, 1972) gleaned from the findings of previous research about their topic, and by familiarising themselves with potentially relevant areas of theory. The process involves moving back and forth, both mentally and physically, in an iterative and inductive fashion: mentally, they move between what is already understood and what is emerging through the process of conducting the research which creates new insights; physically, they move between their field of research and their own research base. This iterative-inductive process (O’Reilly, 2005) allows the researcher to identify and address their research questions by enacting the flexible but focused and coherent research strategy devised at the outset when addressing the “five difficult questions” (Mason, 1996) from within their preferred paradigm and perspective.

However, there are circumstances in which paradigms may be inappropriately employed. In his 1941 paper, Gregory Bateson eloquently describes how this may arise, offering an illuminating account of the dangers which lie in wait for the unwary researcher who regards abstract concepts, so often of interest in social science, with a measure of “false concreteness” (Bateson, 1941 p.62). In this case, the abstract concept in question was “ethos” in relation to the culture of a group of people in New Guinea whom Bateson was observing. It is worth quoting at some length as it encapsulates the point well:

I was especially interested in studying what I called the “feel” of culture...It appeared to me that it was impossible to understand the behaviour...apart from the “feel” of their culture, and from this it seemed to follow that the “feel” of the culture was in some way *causative* in shaping native behaviour... But it also guided me into regarding the “feel” of the culture as much more concrete and causally active than I had any right to do. This false concreteness was reinforced later by an accident of language... I was referring to an abstraction [but the word “ethos”] helped me to go on thinking that it referred to a unit something which I could still regard as *causative*... as if it were a category of behaviour or a sort of factor which shaped behaviour... I multiplied my offences by creating several more concepts of about the same degree of abstraction... and all these I handled as though they were concrete entities. I pictured the relations between ethos and cultural structure as being like the relation between a river and its banks – “The river moulds the banks and the banks guide the river. Similarly, the ethos moulds the cultural structure and is guided by it.”...I was looking now for physical analogies which I could use in analysing my own concepts... But when one is seeking an elucidation of one’s own concepts, then one must look for analogies on an equally abstract level... But these similes about ethos being the river... were, as I thought, the real thing... I thought that there was one sort of phenomenon which I could call ethos and another sort which I could call “structural culture” and that these two worked together – had mutual effect one on the other. All that remained for me to do was to discriminate clearly between these various sorts of phenomena so that other people could perform the same sort of analysis that I was doing.

(Bateson, 1941 pp.62-63, italics in original)

This account demonstrates how easy it could be to fall accidentally into the trap of choosing an inappropriate paradigm and research methodology in social science research because abstract concepts have been inappropriately categorised as things which exist independently in the world. However, sometimes this happens less by accident and more because of what might be termed ‘cultural expectations’: at a time in which the term “evidence-based” applies not only to scientific issues, but also to other areas of life concerning (and through) political and social policies and policy-making, there remains a

continuing trend within academia and society more generally to tacitly endorse some research paradigms - notably the “scientific”, empiricist approach exemplified by positivism and post-positivism - above others (Dickson, 1988; Denzin and Lincoln, 2005). At least part of the explanation for this may be the perception that such research paradigms have the capacity to discover “the truth”, defined as:

...the accurate representation of an independently existing reality.

(Smith and Hodkinson, 2005 p.917)

Although the veracity of such a claim for science itself may well be problematic, it is not raised here to provoke such a discussion. Rather, it is mentioned for the purposes of this discussion because it offers a possible insight into the allure such paradigms and perspectives hold for some social scientists who may, inappropriately, adopt them when researching abstract concepts relating to human interaction and behaviours. In a culture dominated by the Cartesian split (Tolman, 1999; Oxford Dictionary of Philosophy, 2005) between the subjective and objective realms (exemplified by views of dichotomous relations between mind/body, subject/object), where knowledge relates to objective entities, and where the social science researcher must still persuade the reader about the validity of his or her findings, the appeal of such truth claims is perhaps understandable. But the temptation to indulge in verisimilitude (O'Reilly, 2005) by making such claims based on “a fallacious bit of thinking” (Bateson, 1941 p.62), through which abstractions are treated as objective entities, should be resisted. Apart from misleading readers who might take the findings literally, this may not only cause confusion, but ultimately discredit the research. It is interesting to note that Descartes' notion of separating the subjective from the objective, originally intended to free thinking from the metaphysical problems of the day (Oxford Dictionary of Philosophy, 2005), has recreated the same problem in a different guise by trying to “explain mental processes by principles analogous to those which govern the physical interaction of material objects” (Bakhurst, 1997 p.157), thereby encouraging methodological inconsistency and rendering its process opaque.

A key methodological issue in the social sciences concerns how abstractions may be intellectually apprehended based on such conceptualisations, and how these may then be studied in the complexity of social interactions and dynamic processes in the social and

material world. Therefore, given the possible paradigm variation in social science transparency is required about the conceptualisation and interpretation of abstract notions in research projects, in relation to the research questions asked. This forms an important aspect of quality criteria in the social sciences where rigour involves demonstrating the reliability and accuracy of the methods used, and the validity of data acquired by those means, as part of a coherent methodology. It is upon these criteria that the quality of the conclusions from research may be assessed (Mason, 1996).

The remainder of this chapter addresses these issues in relation to this project. Based upon the discussion in the preceding chapters, the thinking behind the methodological choices made will be explicated and their philosophical “underlabourer” aspects explained (O’Reilly, 2005). The research questions will then be introduced and the research strategy through which they have been addressed, based upon these methodological choices, will be described.

Thesis methodology

This research project concerns the phenomena of organisational and collective learning and context in relation to Scottish primary healthcare teams. The preceding three chapters have shown that these phenomena are not unproblematic and that each may be viewed as an abstract concept. As discussed, there are diverse views about the nature of these contested phenomena and therefore about how their existence in the social world may be characterised and identified. There are examples of most, if not all, of the research paradigms summarised in table 1 within the existing literature, which reflects diversity of axiological, ontological and epistemological views about these phenomena. These philosophical issues, performing in their informative “underlabourer” role, rather than the foundational and deterministic role sometimes unquestioningly claimed for them within the positivist/post-positivist paradigms (Hammersley, 1995; O’Reilly, 2005), are therefore crucially important when making methodological choices to address research questions concerning such concepts. In the next section the choices made in relation to the research under discussion here will be explicated, informed by the sources of prior knowledge outlined in the Foreword to this thesis.

Ontological issues - The nature of the phenomena of interest

In setting out to establish “organisational learning” and “context” as abstractions, I have given an indication of my ontological position about the nature of things in the social world.

I believe that the social world is a product of interactions between people: me and others, and others and others, over time (past and present). I believe that these social interactions have resulted in a complicated web of socially constructed structures (for example: political, economic, legal, organisational, cultural) which influence our daily lives. These interactions and structures are situated within our own settings (wherever “we” are), which are partially socially constructed by us and others, as well as being part of the natural world. They change and can be changed over time, through a dynamic process of interaction between people, socially constructed structures and events, and life settings. Therefore, I believe that some parts of the social world exist independently of my knowledge or direct experience of them. However, due to the nature of social interactions, some of which may reside only in the perceptions of those between whom they occur, such modes of existence are not necessarily visible.

Therefore, in relation to the nature of the phenomena with which my research is concerned, I do not regard any of them as “entities” existing in the world independently of human action. I believe they are all abstract concepts and therefore not directly accessible material “things”. (Although I acknowledge that it is perfectly possible to hold other ontological views in respect of these phenomena, and that their contested nature within the literature is testament to this.)

Epistemological issues - knowing about phenomena

My epistemological assumptions about what constitutes knowledge of the phenomena I wish to investigate are based on my ontological view.

I believe efforts to produce knowledge about the social world can best be served by seeking to understand better the dynamic process through which people, their settings and social structures are interlinked. Some of these aspects may be visible and able to be observed empirically (activities, behaviours, artefacts, places), whilst others may only be accessible through the perceptions of experiences of those who participate in their creation and/or who are affected by them. Therefore, knowledge about some aspects of the social world can be produced by empirical means (by studying the observable), whilst others can only be produced by interpretive means (by finding out about what people say they think and/or believe which may influence their actions or views), in the settings where these interchanges occur, over time.

My epistemological assumptions therefore rest on an “and/both” rather than “either/or” approach. Since I regard the phenomena I am interested in as abstractions which do not exist independently of human action, it is important to clearly acknowledge that my own beliefs, experiences and participation (both now and in the past) have played a part in the research process, since I am not an objective and value-free observer.

As discussed in the Foreword to this thesis, reflexivity - here referred to as “the problem of accounting for the role of social scientists as participants in the cultures they study” (Dictionary of the Social Sciences, 2002) - is a particularly important aspect of my research project, given my own background of working within healthcare services prior to undertaking academic work. Clearly, these axiological aspects relating to the experience I have had in my “field” of research play a fundamental part in my ontological, epistemological views about my research topic (Johnson and Duberley, 2003; Denzin and Lincoln, 2005). These have influenced my chosen methodology, the data generated and its interpretation, and in reaching my research findings. Ultimately, this means these reflexive issues require to be considered in relation to the theoretical conclusions of this research. Therefore, my perspective is incommensurate with the positivist and post-positivist paradigms but is consistent with interpretive approaches (see shaded areas of table 1).

Methodological issues - phenomena in sharper focus

My research involves the concepts of collective learning and context, which I regard as abstractions. These may be known through the research process, which itself has been a dynamic interplay between “foreshadowed problems” (Malinowski, 1972) and prior knowledge (O’Reilly, 2005), and empirical data. In order to demonstrate the thinking behind my methodological choices, it is necessary to bring the topic into slightly sharper focus to show its development throughout the research process (see figure 4).

From this perspective my research topic broadly concerns “intra- and inter-organisational learning in Scottish primary care teams”, which has been my research project working title. This description developed from thinking about the three abstractions in relation to my ontological and epistemological views. New aspects became evident which indicated the sorts of issues about which my research might seek explanations. These developed through the process of thinking about the phenomena of interest and familiarising myself with some aspects of relevant theory. This involved thinking reflexively about how primary care teams might be conceptualised, given my prior knowledge of this aspect of the topic of research, and about “organisational learning” through reading published literature.

The concept of context identified from existing theory as an issue or “foreshadowed problem” worthy of attention became a central focus of my project emerging through the empirical aspect of the research process itself. Context is a contested concept and, together with other perspectives, my own conceptualisation of it as an inherent aspect of situated activity or practice is discussed fully in chapter 4. Here, the discussion concerns issues of primary care teams and organisational learning.

Conceptualising primary care teams

The research process helped me to realise I had to be critical about “primary care teams” lest I treat them implicitly as “givens” based on my own experience and understanding; but it also helped me to see that my prior knowledge would assist me in that endeavour. Reflecting on the literature and my own knowledge, I realised that “primary care team” was

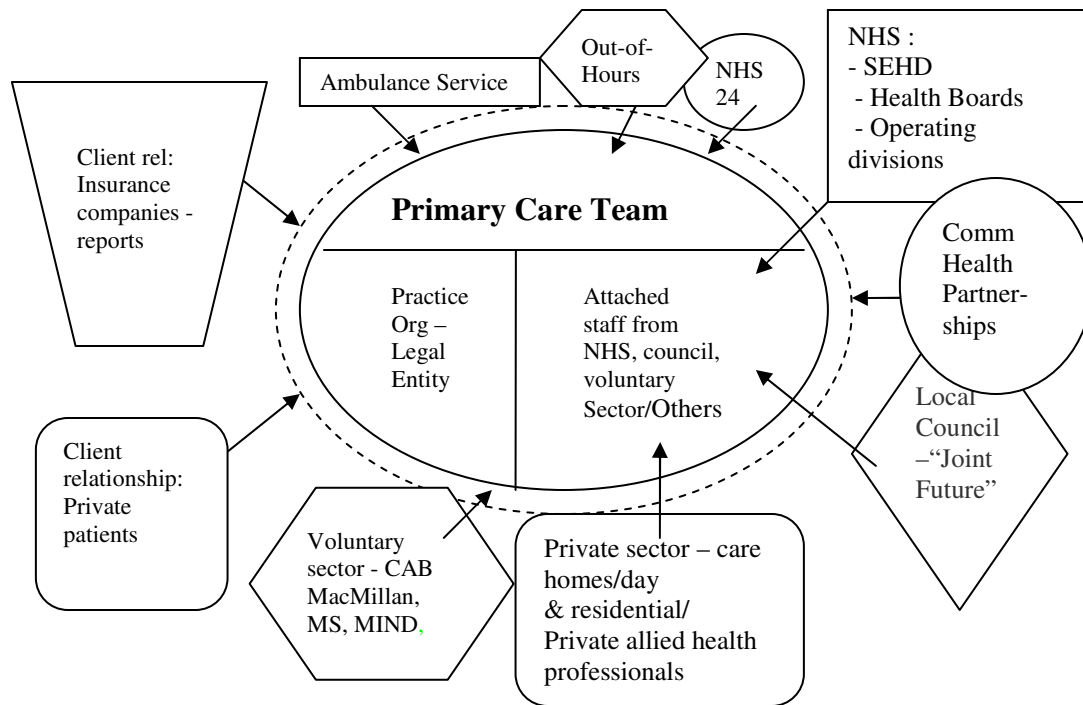
an abstract concept which may be conceptualised in a variety of ways, and that these conceptualisations depended upon ontological views and experience; for example, teams might not be viewed as groups of people working together to provide services to their patients, but rather as lists of professions or organisations working within certain contractual or legal arrangements. I was aware of the truism in primary care that “all Practices are different”, and I had had personal experience of the existence of differences between primary care teams in that other teams seemed to be differently composed and did (some) things differently from what was accepted practice in my own team. I was, however, unclear about the validity of the idea beyond my own sphere of experience. Although, as explored in chapter 2, the idea of diversity is discussed in the literature there is little discussion about the reasons for its existence. This indicated that the idea might be worthwhile exploring.

Therefore, I conceptualised primary care teams as complex, flexible collectives of people, formed differently depending on the needs of their specific patients, drawn from a variety of formal structures including organisations and professions, responsible for performing a partly determined and partly emergent range of activities involving a range of other groups of people and structures, within defined geographical boundaries (see figure 3).

In this way, I was able to identify the important theoretical idea of “intra- and inter-organisational learning” in relation to primary care teams. This introduced new aspects of the concepts of organisational learning and primary care teams: complexity became evident because I introduced the idea of different conceptualisations of primary care teams, therefore casting them in the role of abstract concepts. More than one organisation might be involved in primary care teams, so processes relating to them needed to be understood not just *within one* organisation, but *across* organisations. But the word “team” implied that there was some mutual focus for this collective unit, which involved some sort of collective “doing” or activity. Altogether, ideas of flexible composition, membership, roles, structure, boundaries, rules, negotiation, conflict, tension, competition, collaboration, professionalism, practice, action, variation and context were implied in my conceptualisation. Clearly, this had implications for the choice of research paradigm and

perspective, which in turn influenced my interpretation of my data and its explanatory potential.

Figure 3 – conceptualisation of the primary care team



Conceptualising organisational learning

As discussed in the review of relevant literature(s) in Chapter 3, “diverse” could best describe conceptualisations of organisational learning: perhaps the only area of agreement is that there is no agreement! This reflects the range of research paradigms within which it has been studied and their sometimes mutual incommensurability (Easterby-Smith *et al.*, 2000; Guba and Lincoln, 2005). No doubt the choice of research paradigm reflects the axiological, ontological, and epistemological views of the researchers involved. There has been an apparent bias within the organisational learning literature, especially within the management science/studies discipline, towards adoption of the positivist paradigm (Huysman, 1999), although this has been balanced somewhat in recent years as discussed.

In light of my own axiological, ontological and epistemological views, I am unable to conceptualise organisational learning in a way which would be commensurate with the either the positivist or post-positivist paradigms. I do not regard organisational learning as an entity existing independently in the world. Such an approach seems to me to be a good example of attributing Bateson's "false concreteness" to what is essentially an abstract concept (Bateson, 1941, p62). Therefore, my reaction to such a view may be neatly summarised as follows:

For the purposes of this discussion, it is enough to say that we are persuaded that objectivity is a chimera: a mythological creature that never existed, save in the imaginations of those who believe that knowing can be separated from the knower.

(Guba and Lincoln, 2005 p.208)

For this fundamental reason, such conceptualisations tend to create more confusion than clarity for me when thinking about the phenomenon of organisational learning, resulting in both ontological and epistemological tension. Given the strong presence of such views, which informed my identification of "foreshadowed problems" through my early review of the literature (Malinowski, 1972), how could I conceptualise organisational learning in such a way that would enable me to design a coherent research project, through which some aspect(s) of it may be known? It seemed to me that it would be difficult to study a phenomenon about which there was little agreement and about which there were basic questions about its very nature. Indeed, much of the existing literature was theoretical rather than empirical, and I found that a common theme of discussion amongst fellow participants at the British Academy of Management Conference centred upon the difficulty of "operationalising" or conducting empirical research on the notion as it was generally perceived (BAM conference, 2004, St Andrews).

Perhaps the "conventional" conceptualisation itself was problematic. A central difficulty it raised for me was, how would I know that learning was occurring? I was interested in the notion of *organisational* learning and the main-stream literature suggested this involved issues about *levels* of learning (individual, group and organisational). If, as suggested, learning related to changes in behaviour, how might they be attributed to organisational learning? What if people at whatever "level" (assuming one accepted the existence of such

levels) learned, but it was in their interests not to demonstrate or act on it for other reasons – or did that constitute a different form of learning? Given my conceptualisation of primary care teams, was *inter-organisational* learning different to *intra-organisational* learning, or did that not matter? And what (if any) difference did ‘situation’ make to interpretations of organisational learning given the reputed diversity of primary care teams?

These questions raised fundamental ontological and epistemological dilemmas for me. The prevalent theoretical assumption of organisational learning as an independently existing entity created obvious epistemological and methodological problems from which great effort was then expended by scholars in trying to escape (Gherardi, 2006). I hoped that an iterative-inductive research process (O’Reilly, 2005), characterised by “a combination of loose and strict thinking” (Bateson, 1941 p.55) would allow me to find a commensurate way of conceptualising organisational learning as something other than an independent entity, and therefore enable me to address my topic of concern. The communities of practice and situated learning literature (Brown and Duguid, 1991; Lave and Wenger, 1991; Wenger, 1998) offered an initial glimmer of hope as a useful way to proceed.

However, in terms of the research process over time (in this case, a three year funded studentship), I was required to complete a task specific to my research setting which meant I had to make fairly committed choices at a relatively early stage in relation to social science research. This situation presented me with a methodological challenge which I shall now explain.

A methodological challenge - obtaining ethical approval

Institutional regulations require that all research projects, conducted in National Health Service premises or involving NHS-employed staff, be approved by the relevant Medical Research Ethics Committee (Local or Central) and obtain NHS Management Research and Development approval from the relevant NHS organisations, before any empirical work may begin, including approaching potential research participants. This requires, amongst other things, a full description of the research design. The outline and to some extent the content of that description is pre-determined by means of a mandatory questionnaire

application form more suited to the requirements of clinical research, which obviously forms a large part of health service-related research. (This may be viewed at <http://www.corec.org.uk/>). Given the time constraints involved in conducting research for the degree of PhD, and the potential length of the ethics approval process (based on colleagues' previous experiences) this had to be prepared and submitted sooner than social science projects might usually allow. Therefore in order to resolve this challenge, I decided to include my dilemma about conceptualisations of organisational learning as part of my overall research design.

The exploration of possible conceptualisations of organisational learning in primary care teams therefore became the aim of the first stage of my research. Issues emerging from the data generated during this phase, together with existing literature on the phenomenon, would act as a basis to proceed with further empirical work and analysis. Through this process I would be able to identify *specific* research questions to address aspects of intra- and inter-organisational learning in primary care teams. This initial phase was based upon critical reviews of the extant main-stream organisational learning literature and related to a proposed conceptual framework which sought to incorporate all aspects of organisational learning so that it might be managed (see table 2). Upon this basis ethical approval from the Multi Centre Research Ethics Committee for Scotland (Reference Number 05/MRE00/19), and NHS Research & Development managerial approval for the relevant area in which my research was to be conducted, were obtained in March 2005. I could begin to explore my topic of interest empirically.

Table 2: Framework for empirically exploring organisational learning conceptualisations:

(What the theory should look like)		←→ (How the theory can be operationalised)	
Questions within theory of OL (Prange 1999)		Conceptual framework headings (Pawlowsky 2001)	
<i>What does OL mean?</i>	<i>Definition</i>	<i>Conceptual framework</i>	
Who is learning?	Learning subject	System levels	Individual Group (&/or collective) Organisation Interorganisational
What is being learned?	Content of learning	Learning modes	Cognitive Culture Action-learning
When does learning take place?	Incentives/motives for learning	(<i>Not defined</i>)	
What results does learning yield?	Efficiency and/or effectiveness of learning	Learning types	Single loop (type I) Double loop (type II) Deutero (type III)
How does learning take place?	Processes of learning	Learning process	Identification/creation Diffusion Integration Action
Not included – where?		(Not defined)	
Not included – why?		(Not defined)	

(Prange, 1999; Pawlowsky, 2001)

(Note: Although the questions on the left side of this table demonstrate the fundamental questioning of the notion of a theory of organisational learning, they, together with the criteria proposed as a comprehensive conceptual framework for “managing organisational learning” shown on the right of the table, highlight the acontextual nature of many existing views of organisational learning. Therefore an open-minded approach was initially required to identify possible means through which this issue could be addressed.)

Identifying the pieces of my intellectual puzzle took shape through the iterative-inductive and dialectical process of actually conducting my research (O'Reilly, 2005; Mason, 1996). The focus of my research developed over time. The issues identified at the outset, which enabled me to deal with the particular requirement of gaining ethical and managerial approval to enter my field of research, allowed me to explore some of those initial ideas. The first phase of the research process explored how (if at all) organisational learning occurred within and/or between organisations represented within primary care teams.

Here I was seeking to explore conceptualisations of organisational learning. Through the initial theoretically-informed generation and analysis of data, themes and issues emerged through which my research developed. These emergent issues seemed to chime with Weick's observation that:

...the gap between living forward and understanding backward may be created by theories that are insensitive to context and situational particulars.

(Weick, 2006 p.1732)

Therefore my attention became focused on more specific issues based on practice- or activity-based conceptualisations of collective learning characteristic of the process in the everyday working of primary care teams. From this theoretical perspective, which incorporated the concerns set out in table 2, the concept of *context* emerged as a key issue worthy of exploration in relation to primary care teams. This threw the apparent conceptualisation of organisational learning, as an independently existing measurable and transferable entity, within current public policy into relief and allowed me to address the lacuna within the literature regarding this theoretical aspect when viewed through the prism of cultural historical activity theory (Engestrom, 1987; Blackler *et al.*, 1999a; Engestrom *et al.*, 1999b; Nicolini *et al.*, 2003a). From this perspective, primary care teams may be regarded as activity systems which is commensurate with my conceptualisation of primary care teams (see figure 3) and, as discussed in chapter 4, offers particular theoretical and methodological benefits in relation to studying contextual collective learning. The research questions to which this thesis is addressed, which this approach enabled to be identified, are discussed in the next section.

Research questions, purpose and aim

This thesis addresses the following research questions:

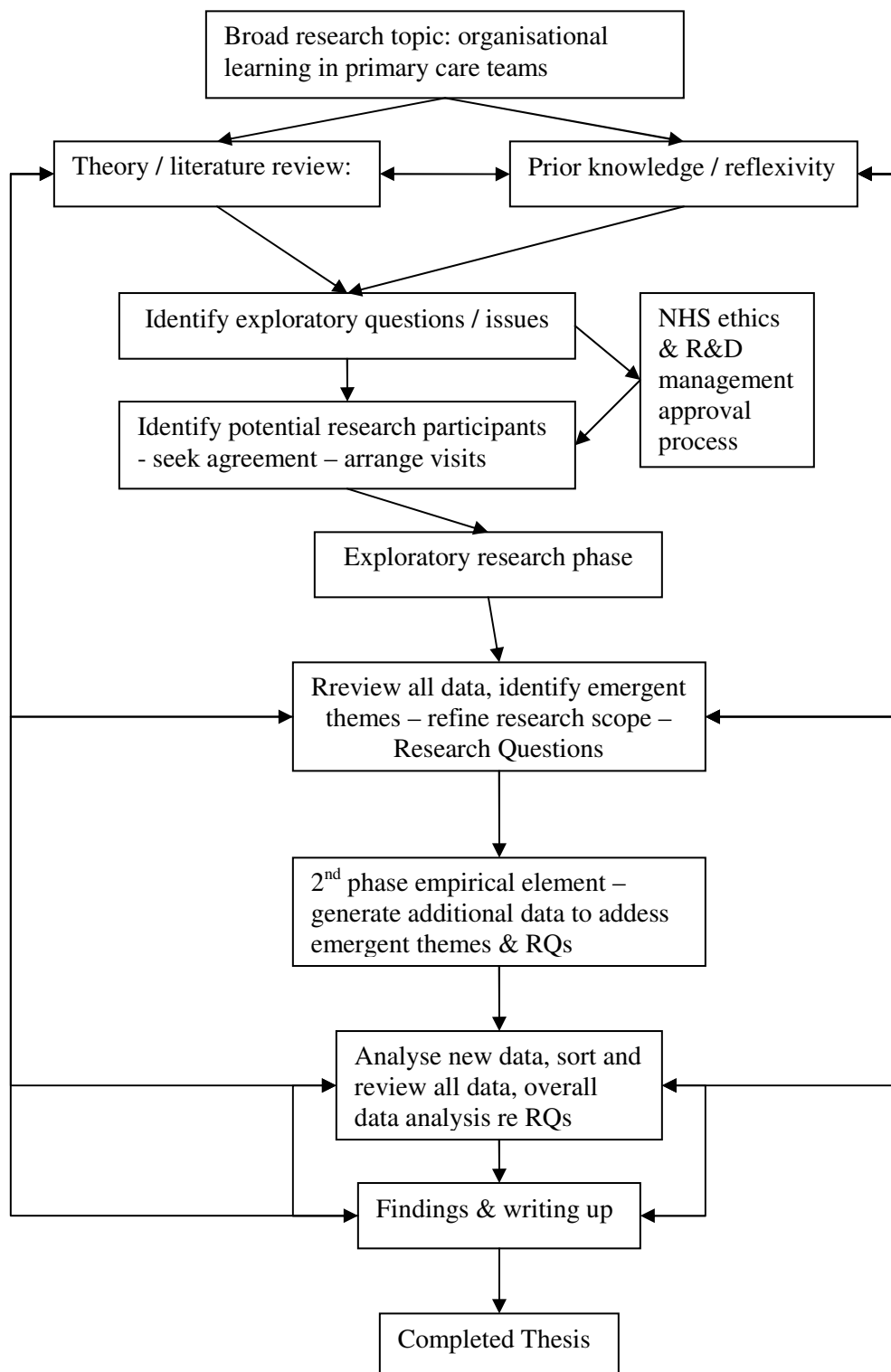
- How is context relevant to organisational learning, as exemplified in Scottish primary care teams? and
- Why is this so?

The purpose of my research is to explore the process of organisational learning and explain the relevance and role of context within that situated process. I am doing this for a variety of reasons. One aim is to contribute to the current literature in relation to the previously identified gap in our understanding of organisational learning concerning context. But I also seek to offer some explanation of the potential difficulties created through the adoption of conventional conceptualisations of all three of the abstractions with which my research is concerned (organisational learning, primary care teams and context) based on the data generated through my research process. In this way I hope to share what I have learned about alternative approaches which may stimulate fresh thinking about the concept of organisational learning amongst anyone with an interest. However, I would wish to avoid prescriptions, having learned through the course of this research that these are often counter-productive. Instead I hope readers will find a resonance with their own practice in this study, based on the experiences of those who kindly agreed to participate, and glean some helpful insights to assist them in their day-to-day activity (whatever that might be).

The overall interpretive approach of my research is ontologically, epistemologically and methodologically consistent and commensurate with various aspects of the perspectives within the complementary critical theoretical, constructivist and participatory paradigms (as illustrated in the shaded areas of table 1).

Having set out the rationale behind my research questions and the position of my research in relation to social science research paradigms, I shall now link my methodology to the strategy through which I have enacted my research.

Figure 4: My iterative-inductive research process



Research strategy

Moving on from the methodological discussion, this section sets out the strategy adopted in the conduct of this research. First, the case study approach will be discussed broadly prior to identifying the particular version adopted here. This leads to discussion of the unit of analysis for this study and the framework within which sampling occurred. The rationale for the selection of cases will be explained in relation to the methodological issues discussed previously in order to prepare the reader for the introduction of the individual cases, prior to which the process of securing informed consent from participants will be discussed briefly.

Studying cases

The case study is regarded in various ways within the social sciences. Some describe case study as a complete methodology (Yin, 1994), some as a research strategy (Eisenhardt, 1989; Gherardi, 2006), and others as a research method (Dyer and Wilkins, 1991; McKee *et al.*, 2004; Locock *et al.*, 2005). It may be tempting to attribute different descriptions to different research paradigms, and within those to different perspectives and related methodologies. However, this would be a fruitless exercise, since the descriptions do not fit such a pattern: for example from the selection of authors cited here, both Yin and Eisenhardt work within the positivist paradigm, whilst Gherardi adopts an interpretive approach incompatible with the positivist paradigm. Therefore, the description of case study may not be linked to the research paradigm of the researcher. Following this line of thinking, it is not possible to attribute the differences to the researcher's chosen methodology either, nor even methods: both quantitative and qualitative approaches may be supported within a case study, as well as a range of methods from conducting a survey to ethnographic methods (Stake, 2005).

It is perhaps more helpful to regard such disparate descriptions as mirroring the different ways in which case study has been utilised within the research of the various authors, as each clearly explains. This suggests case study is a malleable approach and that disparity of

definition is less important than the role it has played in the authors' research and their accounts of it.

That the case(s) may be studied in various ways, depending upon the questions the researcher wishes to answer, means the approach may be utilised in conjunction with a variety of perspectives and for a variety of reasons. For example, within the positivist paradigm a researcher may wish to identify and test hypotheses in order to find out what the relationship is between two or more characteristics, by studying specific variables across cases so that generalisable theory may be constructed (Eisenhardt, 1989). Alternatively, within the constructivist paradigm, a researcher may wish to explore a specific issue which characterises a particular case in order to provide a rich account which offers insight into otherwise hidden processes or happenings (Light Jr, 1979; Dyer and Wilkins, 1991). The former aim is usually best achieved through the study of multiple cases and the latter by the study of single cases. But this is not an absolute rule either: single cases may be best placed to fulfil the aim of the post-positivist researcher seeking falsification of a theory in the manner of Karl Popper's white swans, where all swans are white - until you see a black one (Locock *et al*, 2005; Stake, 2005).

The case study approach has attracted widespread criticism due to its reputed lack of theory-building capacity (Stake, 2005). This seems to occur especially within fields of academic study arguably dominated by positivist approaches to research, such as health services or management, prompting discussion and/or denial of this problem by authors working within those disciplines (Eisenhardt, 1989; Locock *et al.*, 2005). Proponents of case study research argue that the criticism concerns the assertion that generalisations may not be made when studying the particular (McKee *et al*, 2004; Stake, 2005). This suggests the presence of underlying assumptions about research quality criteria and an implicit, culturally-based hierarchy of research evidence which affords statistically-based generalisability the highest theoretical status (Giacomini, 2001; Locock *et al.*, 2005). However, since the case study approach may be employed within a variety of research paradigms and perspectives, and across a range of academic disciplines, these criticisms seem unfounded. A more logical approach may be to judge each case study against the quality indicators relevant to whichever research paradigm, methodology and methods

which have been employed to answer the specific question(s) the research has set out to address.

As Yin (1994) argues, case study utilises a different form of generalisability more in keeping with, but not exclusive to, qualitative research approaches in the form of what he calls “analytic generalisation” (Yin, 1994 p.30). Here theory comes from the process of theoretically-informed, but not pre-determined, data generation gleaned from cases chosen specifically to enable learning about the phenomenon of interest to take place (Stake, 2005). Explanations may be derived through dialectical theory-building strategies such as demonstrating a “chain of evidence” between the issues identified as theoretically relevant prior to commencing data generation, and the issues arising from the data in relation to the prior theory, enabling researchers to identify new insights about the phenomenon of interest (Mason, 1996).

Stake (2005) identifies two main types of case, intrinsic and instrumental. Intrinsic cases are those which are of inherent interest to researchers due to their particularity. These are usually singular. Instrumental cases are those which “provide insight into an issue” (Stake, 2005 p.445), through their particularity, to facilitate greater understanding of something else. These may be singular or multiple cases. However, in the study of instrumental cases it is important to ensure the focus remains on the cases, from which any meaning about the phenomenon of interest may be drawn (Yin, 1994; Stake, 2005).

Howsoever one regards case study is of less relevance than the central point identified by Stake:

Case study is not a methodological choice but a choice of what is to be studied.

(Stake, 2005 p.443)

This observation focuses on the reason for choosing to study cases: namely, that the researcher has some interest in the particular case (or multiple cases) as the focus of study. Taking an ethnographic approach, an instrumental study of multiple cases has been chosen to address the research questions posed here.

Why choose case study?

There are two major benefits of such an approach for this research. The first is the ability it offers to study the “dynamics present within single settings” (Eisenhardt, 1989 p.534). This has been helpful given the conceptualisation of organisational or collective learning as a dynamic process which is an inherent part of situated practice or activity. The second benefit is that the cases are *in situ*, thereby unavoidably including the concept of context as part of the focus of study (Yin, 1994).

Studying multiple, rather than single, cases offers the opportunity to identify differences as well as similarities in the ordinary happenings of real-life contexts (Yin, 1994; Stake, 2005). The value of such an approach has been highlighted in relation to learning in context, through the study of “contrasting performances in contrasting settings” (Lave, 1997 p.67) in order to understand how people deal with new problems in their everyday settings. However, the aim of this research is different: everyday problems in everyday settings particular to the cases under scrutiny are to be studied. Any differences (together with, and in relation to, similarities) discerned between cases offer an opportunity to consider the relevance of context in relation to organisational or collective learning theory.

Differences may be identified by paying attention to various aspects of the cases being studied. According to Stake these include:

1. the nature of the case, particularly its activity and functioning;
2. its historical background;
3. its physical setting;
4. other contexts, such as economic, political, legal, and aesthetic;
5. other cases through which this case is recognised; and
6. those informants through whom the case can be known.

(Stake, 2005 p.447)

In order to gain some understanding of each of these aspects of cases, multiple sources of data may be drawn upon. These include documentation, archival records, interviews, direct observation, participant observation and physical artefacts (Yin, 1994). In this research, each of these data categories has been employed in relation to each case. Participant

observation was not undertaken in any capacity other than limited participation in conversations during meetings or informal gatherings outwith formal interview sessions, when the researcher became part of the setting (O'Reilly, 2005).

Generation of data from multiple sources within each case adds to the rigour of case study research in two ways. Firstly, it enables the presentation of a rich picture of the case, thereby demonstrating the particular. Secondly, by considering each aspect of the case in relation to multiple sources of data, the overall validity of the research is enhanced through internal case triangulation (Yin, 1994; Mason, 1996). This exercise brings to light internal tensions or contradictions between the same aspects, or between different perspectives of the same aspect of each case, thereby enabling the interpretive researcher to “get beneath stated objectives and surface behaviour” (Light, 1979 p.552). If multiple cases are being studied, these differences may be examined across all cases. Light argues that observation is the best means of accessing these less obvious aspects of what is happening. Whilst observation is undoubtedly helpful, in this particular study the use of multiple data sources achieves this aim more successfully. The conceptualisation of primary care teams as activity systems, and the use of activity as a theoretical framework for the research as discussed in chapter 4, is compatible with this approach as it has been suggested that:

...the ideal data for an application of activity theory consist of longitudinal ethnographic observation, interviews, discussion in real-life settings, supplemented by experiments*

(Christiansen, 1996 p.177)

(*The use of the term “experiments” here does not refer to laboratory experiments, but rather to various exercises conducted by the researcher with participants using “epistemic objects” such as concepts and models (Miettinen & Virkkunen, 2005) to confirm, or otherwise, themes or findings emerging from observation, interview or documentary data in respect of the cases being studied.)

Therefore the research strategy of studying multiple instrumental cases is compatible with the theoretical framework of cultural-historical activity theory (Cole *et al.*, 1997a; Tolman, 1999).

“Units of analysis”: primary care teams

A central requirement of case study is to clearly delineate where cases begin and end in both spatial and temporal terms (Stake, 2005, Yin, 1994). Cases in this study are primary care teams (see figure 3), theoretically conceptualised as activity systems (Engestrom, 2001). The nature of activity systems makes this case study requirement potentially difficult:

Activity systems evolve through long historical cycles in which clear beginnings and ends are difficult to determine.

(Engestrom, 1999b p.381)

However, the object-oriented nature of activity systems is actually helpful in this study: the scope or range of the primary care team as the unit of analysis becomes easier to identify precisely because it has been conceptualised in this way. Since the focus of the research is processual in relation to contextual organisational learning in primary care teams, change and flux are to be expected and welcomed: teams will have been in existence prior to the research and will continue after it ends. An open-ended theoretical approach is therefore helpful in providing space for changes in the unit of analysis itself for the duration of the research.

Another benefit of conceptualising primary care teams as object-oriented, cultural-historical activity systems is that this overcomes the potential difficulty of levels of analysis which often besets organisational research (Light Jr, 1979) and has been a feature of research in this topic area:

...it is important to make explicit the problems of using data derived from one level to represent something at another level in order to avoid misinterpretation. For example, processes of individual and organizational learning may be constructed quite differently at different levels. If researchers make inferences about organizational learning on the basis of data about individuals, they are at risk of making a cross-level misattribution.

(Bryman and Bell, 2003 p.60)

Therefore, the boundaries of the cases in this study of primary care teams, conceptualised as activity systems, may be identified by various means: the scope of the activity system, in terms of the collective subject or team membership, may be identified through the subjective determination of team participants in relation to the object of their activity in each case rather than through arbitrary organisational boundaries and structures; the activity of this functional, object-oriented team takes place within specific geographical boundaries (defined by where their patients reside), again transcending entirely structural constraints. Therefore, the spatial extent of the cases has been determined by the activity in each one.

The temporal extent of the cases has been determined by the time frame of the research, specifically the period of ethical approval to conduct fieldwork, rather than any feature of the cases themselves. Therefore, the empirical aspect of the research covers the period from March 2005 until October 2006, although the use of archival material has meant that cases have stretched further back in time if necessary, to deal with emergent issues throughout the research period.

The study of cases, or “units of analysis” (Yin, 1994), generates the data through which research questions may be addressed. This means sampling is crucial in relation to the overall quality and validity of the final research: poorly chosen cases do not facilitate good quality research and convincing theoretical explanations about the phenomena of interest (Mason, 1996). Bearing this in mind, the sampling strategy employed in this research will now be discussed.

Sampling strategy

Since there are a relatively large number of primary care teams in Scotland, it would not be possible to study each one in depth for this research. Therefore, a sampling strategy is needed in order to generate data which will enable the research questions to be answered. Given that the research questions concern the concepts of context and collective learning by members of primary care teams, and the research strategy is to do this by studying the activity of particular cases or primary care teams in line with the theoretical framework of

activity theory, a sampling strategy which involved a representative sample of all primary care teams in Scotland would not yield appropriate data through which to address research questions.

Therefore a purposive sampling strategy has been adopted. This means cases (primary care teams) have been chosen to reflect a range of types of primary care team, so that comparisons between these activity systems may be sought. The chosen teams are not intended to be representative of all primary care teams of that type or in that range; rather, they have been chosen for the theoretical purpose of helping provide in-depth insights into differences and similarities in the processes of their own specific and particular contextual collective learning:

Qualitative researchers have strong expectations that the reality perceived by people inside and outside the case will be social, cultural, situational and contextual – and they want the interactivity of functions and contexts as well described as possible.

(Stake, 2005 p.452)

Accordingly, cases have been selected in order to provide rich and, if possible, contradictory accounts of activity so that theoretical propositions about the relevance of context in relation to organisational or collective learning may be developed and explanations sought (Mason, 1996; Stake, 2005).

Primary care is apparently characterised by diversity as discussed briefly in Chapter 2. Despite claims that it has become progressively more industrialised and isomorphic in nature (Iliffe, 2002) there are still variations in the types of Practice evident throughout Scotland (RCGP, 2005). An obvious and assumed cause of diversity within primary care rests within the urban/rural dualism, often approached from a public health perspective into the different health outcomes of people living within these different types of area (see, for example, (Campbell *et al.*, 2000) regarding cancer outcomes). However, a more nuanced approach has been pursued by medical geographers who have recommended a more sophisticated view of these apparently homogenous groupings: by including social,

cultural, spatial and temporal aspects, a more diverse picture of urban and rural healthcare may be seen (Gesler, 1991).

Therefore, four ‘types’ of primary care team were initially identified: three were identified to offer different ranges of membership within different settings, so that the nature of organizational learning could be studied and comparisons made between the sites. This is known as “literal replication” (Eisenhardt, 1989; Yin, 1994). A fourth type of site was identified which sought to identify a particular sort of primary care team in terms of range and scope but about which (through the on-going work of the supervisors of this research and colleagues from the NHS) something was known in terms of organisational learning, as it exhibited some of the characteristics claimed to be present in the prescribed model of the “Learning Organisation”. This offered the opportunity for literal replication in terms of range of service and scope of membership within a specific context (as with the other three teams), but offered additional theoretical comparisons known as “theoretical replication” (Eisenhardt, 1989; Yin, 1994), due to prior knowledge about its Learning Organisation characteristics. Table 3 demonstrates the range of case study sites and the selection of primary care teams which met these selection criteria will be discussed in the next section.

Table 3: selection of types of primary care teams

	Urban	Rural
Nuclear	Case Study 1*	Case Study 4
Extended	Case Study 3	Case Study 2

(*The terms “nuclear” and “extended” are used in the familial sense to denote the potential variety and range of membership. Since the research design has been an iterative-inductive one, sampling could be changed during the process without compromising the rigour of the research itself. This proved helpful because it became clear through conducting the project that the “nuclear urban” primary care team type probably no longer existed due to changes in the way NHS staff attached to Practices were distributed, therefore it was omitted from the sampling strategy.)

Selection of cases

The spatial aspect of primary care teams as cases became important when considering precisely which teams to approach. Since they are geographically defined, in relation to the location of their registered lists of patients, an organisational issue arose in relation to the selection of cases. Primary care teams are, as demonstrated in figure 3, inter-organisational groupings. This can mean that members, drawn from one local council or health board organisation, may straddle more than one primary care team; or teams may include members drawn from more than one local council or health board organisation (as illustrated in figure 5). Health Boards are the main organisations in Scotland tasked with implementing government policy in relation to the commissioning and overseeing of primary care services on behalf of the Scottish Executive Health Department. They also have a duty to work alongside the relevant departments of Scottish local government organisations to jointly deal with issues of mutual interest (such as free personal care for those who require nursing care as well as social care in their homes or in Care Homes)

Since a central focus of the study was to be context, it was possible that the involvement of more than one health board, in particular, could introduce too much complexity an already complex and complicated sampling situation. Therefore, it was decided that teams would be selected from within one Scottish NHS health board organisation if possible, in order to minimise confusion at the analysis phase of the research.

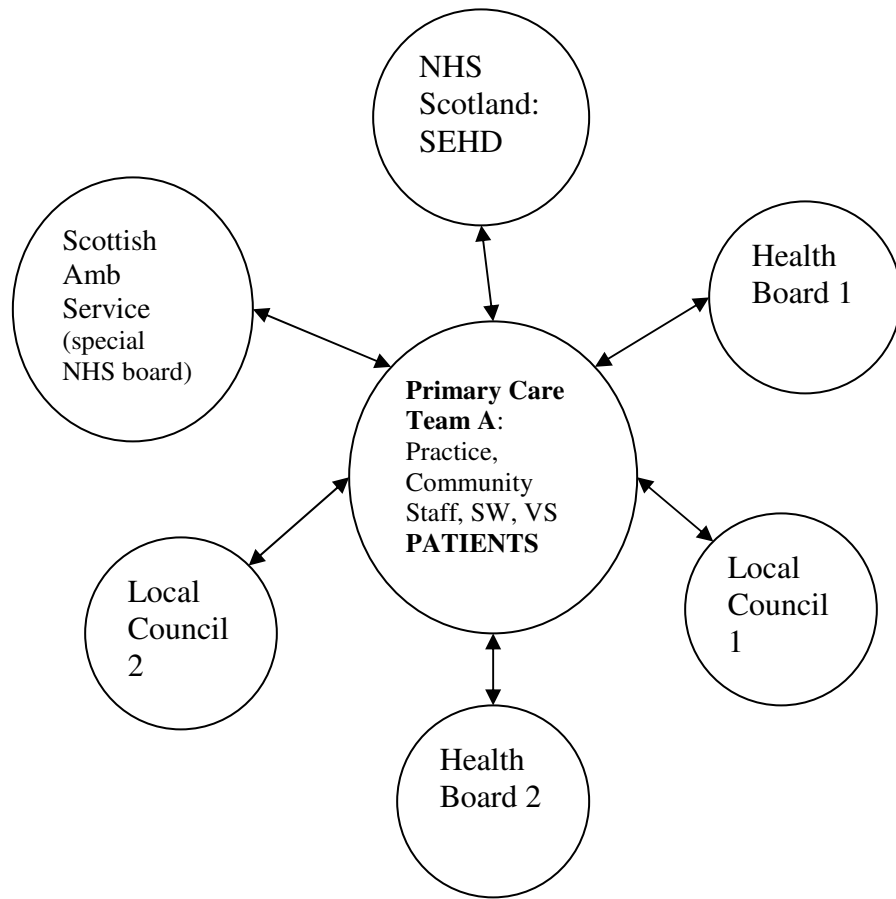


Figure 5: possible NHS / Local Council involvement in Scottish primary care teams

When this research began in 2003 there were fifteen such Health Boards in Scotland (Mackie, 2005). One of these, Argyll and Clyde NHS Board, incorporated all of the types of primary care team included in the sampling framework. Having obtained the necessary ethical and NHS Management R&D approval, three primary care teams were approached within the area covered by that single health board (the boundary of which may be seen, highlighted in blue, in Figure 6 below).

All of the teams approached kindly agreed to participate in the research upon initial contact. Each was chosen for specific reasons in order to provide the maximum opportunity to investigate contextual collective learning, according to the types identified for sampling. An explanation of how these teams were identified will be explained next.

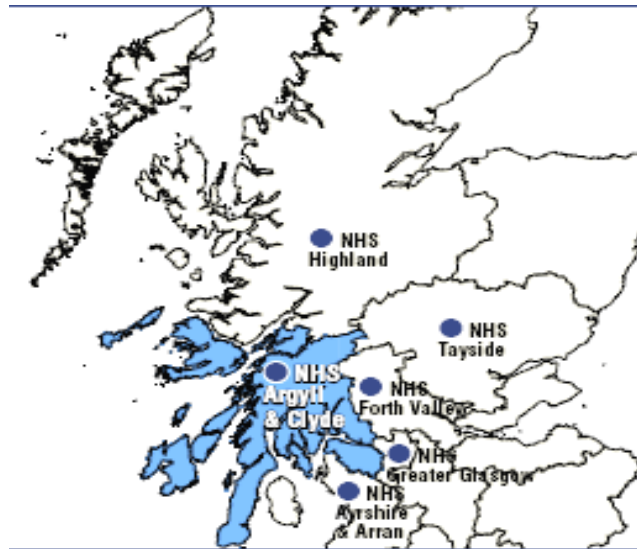


Figure 6: NHS Argyll and Clyde Health Board: SEHD, 2006 p.2

The nuclear rural team had been involved in a rural “Skills for Health” (Skills for Health, 2004) project meeting attended by the researcher, during which a presentation was given by one team member. This indicated that characteristics highlighted in literatures related to organisational learning were present in this team, including learning from mistakes, not being afraid to take risks and try new things, and fostering a “learning culture” (Senge, 1990).

The extended rural team was known to the researcher through previous work in relation to extended clinical roles for primary care team members, including the availability of a local community hospital as part of the primary care facilities and team. This particular team had developed this aspect of their work substantially, including the creation of specific educational courses and training for well established medical practitioners, and less experienced practitioners, to undertake various aspects of “intermediate care” thereby extending the more widely recognised primary care medical role (Temple, 2002).

Finally, the extended urban team was suggested by colleagues from NHS Education for Scotland, with whom the researcher and her supervisors had been working as part of another project concerning team learning.

Initial contacts and internal case sampling

Contact was made with each team following initial discussion with the Practice managers from each during which the aims of the project were discussed, as well as how those might best be addressed. A series of dates were agreed for visits to each case study site during which time semi-structured interviews with team members and observation of the day-to-day work of the teams would be undertaken. This might also involve attendance at meetings between team members.

The Practice managers discussed various team members whom the researcher may be interested to meet during the visits which reflected the pre-identified list of preferred team member participants in each case, who had been purposively sampled in relation to their roles. Given the anticipated difficulties anticipated (based on prior knowledge) of contacting such peripatetic professionals, the offer extended by each Practice manager to arrange most of the appointments with participants during the planned visits was gratefully accepted. In addition, some participants were identified during the visits in the manner of snow-ball sampling (Mason, 1996) and were invited to participate then.

Other visits were directly arranged by the researcher in relation to two groups of “additional participants” who were relevant to the participating teams. One group comprised people involved with each team in a managerial, organisational capacity, but who were not directly involved in the day-to-day activity of each team. Five participants fell into this category: four were drawn from the NHS organisations, three of whom related to two of the participating teams whilst the fourth related to the third team; the fifth participant within this group was from the local council and related to two of the three participating teams. The other group related to the extended rural team and were a day-to-day part of the local team. These were people working at the local community hospital, and visits to meet them were arranged by the researcher separately from the Practice visits for purely logistical reasons.

Informed consent and confidentiality

In accordance with the requirements of the ethical and NHS Management R&D approval granted for this research, when meeting each participant for the first time, each was given a one-page project summary, a participant information sheet and a consent form to consider, each on headed university note-paper. If the participant agreed to the terms of the research, the form was signed by both the participant and the researcher thereby granting the participant's informed consent according to the information they had been given.

One of the main considerations during this research has been the maintenance of participant confidentiality, in terms of anonymity. Scotland is not a large country and within healthcare there are many informal networks and connections between people across the country. At the outset it was agreed that the anonymity of each primary care team and the participants from those teams would be maintained and therefore all place names and personal names have been removed from all findings and discussions.

However, during the course of the research, a major organisational happening occurred in that the NHS Board in whose area the participating teams were situated was disbanded and ceased to exist. Since this has not happened previously, anyone with any interest in Scottish healthcare would be able to identify that the sample had been drawn from within the former NHS Argyll and Clyde Board area because teams' locations influenced the research findings for each participating case or team. Therefore, at the outset of the second research phase in 2006, the matter was discussed with participants. It was agreed members of each team that the disclosure of the originating Health Board area was somewhat unavoidable given those unforeseen circumstances, but that anonymity could and would still be provided in relation to exact teams and personnel. Therefore, each has been assigned a case "name" (a Scottish native flower/tree) and this, together with a brief description, is set out in the next section.

Case study sites

“Primrose”

Described as “nuclear rural” in table 3, this case concerns a primary care team located within an area covering approximately 800 square miles which may be categorised as rural, with some of it classed as remote. The team serves a defined population spread across three main villages, with significant areas of sparsely populated hinterland. Each village has Practice premises from where services are provided and/or co-ordinated. The team has a Practice at its core, with a total of six general practitioners. They, together with nursing and administrative staff employed by the Practice partnership, serve a total local population of around 4,500-5,000 along with NHS-employed colleagues, including a range of community nursing staff such as district nurses, health visitors and healthcare assistants. The Practice undertakes medical undergraduate and postgraduate training, including 4th year medical students and doctors training within the specialty of General Practice. The villages within which this team works are between five and thirty miles from the nearest small district general hospital, with the nearest large secondary and/or tertiary healthcare facilities located a minimum of two hours away. The Practice opted out of Out-of-Hours service provision in 2004, although the local general practitioners undertake Out-of-Hours sessions for the wider area within the new service arrangements.

“Rowan”

Described as “extended rural” in table 3, a large rural and remote geographical area covering approximately 400 square miles is the location for this team, centred upon a small town. The topography of this area is complex, featuring a challenging stretch of coastline, together with inland waterways (some natural and some man-made) which were once the main routes of travel for the area. This team serves the local population of just under 7,000, and comprises the Practice with ten general practitioners in total, together with a range of Practice-employed nursing and administrative personnel. The team also includes a range of NHS-employed community-based nursing and social work-employed AHP and social care colleagues. This team also incorporates the local community hospital where a range of in-

patient, out-patient and casualty/A&E services are provided. Many of these are provided by the local general practitioners from the Practice. The Practice undertakes a full educational role in relation to undergraduate and postgraduate medical training, and also introduced an extended training programme in “intermediate care” for doctors already qualified in the specialty of General Practice, which is the first formal training programme for “extended primary care” in the UK. The central part of this area is situated a minimum of two and a half hours from the nearest secondary or tertiary care facility, at least one hour from the nearest district general hospital (the same hospital serving the Primrose team), but local to the community hospital which provides more than eighty per cent of the inpatient care required by the local population. The Practice continued to provide a full 24-hour service when the choice was offered to opt out when the new GMS contract was introduced in 2004, and also provides Out-of-Hours coverage for some of the surrounding Practices in the region.

“Harebell”

Described as “extended urban” in table 3, this team is located in a densely populated urban location, around thirty minutes away from the tertiary healthcare and other facilities of a major Scottish city. There is a fairly large district general hospital within the locale. The Practice at the centre of this team works within a large health centre, which also plays host to many other health and social care services. The team comprises a core Practice organisation of four general practitioners in total who, together with Practice-employed nursing and administrative colleagues, provide a service to a Practice population of around 6,000 patients, within a local population of around 85,000. They do this with NHS-employed colleagues, including a range of community nursing staff such as district and community psychiatric nurses, and health visitors. The Practice fulfils an educational role by training doctors in the specialty of General Practice. The Practice opted out of Out-of-Hours service provision in 2004, although the general practitioners undertake Out-of-Hours sessions for the wider area within the new service arrangements.

Having discussed the research strategy and introduced the primary care teams, conceptualised as activity systems, which provided the empirical setting for this research, the way data were generated through the study of those three teams will be explained in the next section. The research was conducted in two main phases over the course of a two year period.

Initial research phase - case study questions

In the initial research phase eighteen working days were spent visiting the three teams between June and September, 2005, during which time relevant empirical and theoretical issues were identified to enable the research questions to be refined and methodological implications to guide further work identified (Foote Whyte, 1984). Based on the issues identified, initial case study questions were posed as explained, in table 4, in relation to the preliminary questions (see table 2) which guided this first exploratory research phase.

These theoretically based questions, addressed to the researcher, were designed to focus the generation of data and its analysis to enable exploration of the topic of interest (Yin, 1994). They provided a framework for considering the different levels of analysis within the multiple case study research design: for example, whilst some findings may stem from data concerning single cases, others may only be made possible by analysing data from all three cases. The questions were addressed by linking them to the various methods of data generation employed throughout the research, including observation, informal contacts made during the course of visits to teams, documentary sources, and questions posed to research participants during semi-structured interviews to act as a guide for conversation (Mason, 1996). Therefore, the first empirical phase of the research was conducted within a framework of interrelated issues and questions (see table 4).

Table 4: Framework of inter-related initial visit case study questions

Overall topic of inquiry: How, if at all, does organisational learning occur within and/or between organisations represented within Scottish primary care teams?			
Case study questions:			
CSQ1: how are functional primary care teams and/or communities of practice composed in a variety of settings and why? (Who is learning and at what level?)	CSQ2: What is the nature of the services they provide in relation to the context and vice versa, and how is this changing over time? (What is being learned and why?)	CSQ3: How is knowledge of various sorts acquired and how do knowledge workers within primary care teams learn? (How does learning take place, where and through which processes?)	
CSQ4: What are the underlying values, beliefs and vision of the various members of the primary care team, and how do these impact on intra- & inter-organisational learning? (Where & when does learning take place?)	CSQ5: How and to what extent is knowledge transmitted within local primary care teams, and to other primary care teams? Is there evidence of how this is done? (Through which processes does learning take place?)	CSQ6: How does the primary care team fit within the whole healthcare system? Is there any evidence of suitable “architecture” to facilitate the transmission of learning from the micro to the macro levels of the organisations involved in primary care service provision? (What are the learning processes & how effective is the learning?)	
CSQ7: How & why does the wider healthcare system have an impact (if at all) on the work of primary care teams, e.g. relating to culture, values & beliefs? (Where does learning take place and what are the situational constraints, if any?)	CSQ8: How do issues of power and conflict impact on the ability of primary care teams to learn within and between their parent organisations? (How do teams learn and does it result in changed behaviours?)	CSQ9: What are the implications for management of primary care services (and perhaps the whole health & social care system) of issues of accountability, organisational structure and cultures? (How does learning occur and at which levels?)	
Participant Questions:			
PQ1: Given this research concerns primary care teams, how would you describe the primary care team in this area? (Addressing CSQs 1 & 2)	PQ2: How would you describe the way “the team” is organised to carry out day-to-day clinical (or other work-related) activities? Why is it like that? (Addressing CSQs 3 & 4)	PQ3: How much interaction/contact do you think is needed between yourself and other colleagues to allow you to provide services to patients & is that available to you? Could you give me any examples of clinical / work situations which would help me to understand this a bit better? (Addressing CSQs 3, 4, 5 & 6)	PQ4: If you have an idea about improving the way something is done in your daily work practice, how would you go about trying to implement that? Could you give me an example to help me understand what happens? (Addressing CSQs 3, 4, 5, 6, 7 & 8)

Following the initial research phase, interviews which had been recorded were transcribed and all data were reviewed so that emergent themes could be identified. These pointed to specific areas of theory and literature which proved helpful in interpreting what was emerging from the fieldwork. In particular the practice-based approach to knowing and learning, especially those areas concerning activity theory and expansive learning, proved valuable at that stage. The major emergent issues of importance seemed to be similarities in learning processes, which were off-set by differences in activity. Therefore, the concept of context, initially identified through the review of literature, was confirmed as the central issue of importance and as a result the research questions were refined to enable further empirical investigation to be undertaken.

Second research phase – use of experiments and interviews with key respondents

The difficulties of studying phenomena in context are not inconsiderable, but they are magnified when context itself becomes a specific topic of interest, especially in relation to learning as explored in the discussion in chapter 3. Attempts to focus on context are fraught with difficulty, in that it is difficult for research participants to identify, discuss or reflect on an abstract concept which is an intrinsic part of their experience of everyday life (Frake, 1997). However, the use of activity theory as a theoretical framework assisted greatly in this aim.

An epistemic object was created in order to confirm some of the differences in primary care teams' activity across the three case study sites, as identified during the initial research phase, and to seek explanations for their existence (Miettinen and Virkkunen, 2005). This acted as the focus for group discussions with members of each primary care team, creating artificial discontinuities of practice (Gherardi, 2000) so that they could collectively reflect on their practice. It was hoped that the inherently contextual issues and influences relating to their activity would become more visible during that process. The "epistemic object" concerned a clinical scenario which has become more prevalent within primary care over the past ten years or so and now accounts for a large share of the rising trend in emergency admissions amongst older patients with complex needs (Kendrick and Conway, 2003). There was good reason to believe that this would be

familiar to all teams, regardless of activity, situation or contextual issues (see page 150, chapter 7 for description).

Second visits were arranged with all three primary care teams in order to discuss this hypothetical situation, together with up-dates of what had been happening since the first phase visits. In addition, follow-up interviews were conducted with key participants including: one registrar who had been interviewed at the beginning of his training and who was now at the end of his training period; a GP who was undertaking further training in-depth to enable him to provide a full range of “intermediate care services”; the community hospital professionals who had been interviewed previously; and the lead clinicians for each team within the organisational structure of the NHS.

These visits took place during five working days, over a six week period. All interviews were subsequently transcribed and all data reviewed. Twenty-three days were spent in total within the three case study sites. Fifty-six semi-structured interviews were conducted, five of which were group or joint interviews, lasting between 30-90 minutes each. Three formal meetings of various sorts were attended, together with informal gatherings and “chats” over the course of the days. Observation was undertaken on every visit, both at the teams’ workplaces and in the local areas which also formed part of the “natural setting” for the teams’ activity (Mason, 1996).

In this section, the way the empirical element of this research was conducted has been explained. The data generated through this process formed the basis for the findings and contribution of this research, following analysis. In the next section, the process of data analysis conducted during this research will be set out.

Analysis

Data from all sources were analysed in respect of each primary care team in order to address the research questions. On-going analysis has been a feature of the iterative-inductive research design used in this study, moving back and forth between theory and literature, prior knowledge and empirical data amassed during the research process. This has facilitated triangulation of the various data sources relating to each team or case, and specific issues across teams, in order to add rigour to the subsequent findings

(Mason, 1996). Research participants have not been invited to become involved in triangulation efforts, other than to verify factual information with them during the second research phase because as argued by Stake (2005), asking participants for their interpretation of data - over and above the views gleaned during the research process - adds little to the final researcher interpretation of the data, and therefore adds nothing in terms of internal validity of the eventual research findings.

Based upon the theoretical categories identified from the relevant literature(s), and the prior knowledge which informed the original research design, emergent issues were identified from the data. Two analytical approaches were used in order to achieve this: non-cross sectional analysis, taking a holistic view of each team or case; and cross sectional analysis, looking at emergent issues across all three teams.

Non-cross-sectional analysis was used to look at all data from various sources relating to each of the three teams. This included processual data relating to each team, mainly generated during the second research phase (Langley, 1999), which was triangulated with individual accounts of research participants from both phases, together with documentary data and researcher observations. This has enabled the identification and exploration of differences in activity between the teams or cases in the study.

Cross-sectional analysis was also employed to look at the issues identified through the non-cross sectional analysis within each team, in relation to all three teams. This enabled the identification of similarities between the teams in relation to specific issues and, in relation to the particular research questions posed here, differences between the teams were revealed which would otherwise have remained unseen. For example, the non-cross sectional analysis of processual data was less meaningful in isolation of the other two cases. When reviewed across all three teams, new findings emerged which made more sense of what seemed to be happening and enabled the central research question, concerning the role and relevance of the concept of context in organisational learning, to be addressed. This would not have been possible if a second phase of analysis had not been undertaken in this way.

Therefore, this suggests that the methodological choices have proved helpful in enabling the research questions to be addressed: the choice of cultural-historical activity

theory as the theoretical framework has proved invaluable during the analysis stage of the research by providing an insight to what happens beneath the surface of the everyday goings-on in primary care teams of the type studied; the choice of an instrumental multiple case study has proved complementary by enabling the generation of the necessary data within and across cases so that contrasts and comparisons became possible. These complementary methodological approaches have enabled findings to be reached in order to propose an explanation about why the concept of context is relevant to organisational learning, as exemplified in Scottish primary care teams.

In this chapter a range of research paradigms employed within the social sciences have been identified and discussed these in relation to the study of abstract concepts, such as organisational learning and context. The researcher's axiological, ontological and epistemological views and choice of research paradigm in relation to those views and the topic of interest have been discussed. The research questions have been articulated together with an explanation of how these arose, and an account of the research process and the strategy used to address the research questions provided. In the next chapter the findings of the initial research phase in relation to the case study, and related participant, questions posed about organisational learning and context will be presented and their implications for the subsequent research process will be discussed.

Chapter 6: Findings and discussion – initial research phase

Exploring organisational learning in primary care teams

The aim of this research is to contribute to current conceptualisations of collective learning by focusing upon the somewhat under-researched issue of the role of context in such learning. In order to achieve this, in the initial research phase the nature of organisational or collective learning in primary care teams was explored empirically. In this chapter the issues which emerged from this theoretically informed initial scoping or exploratory phase will be presented (Foote Whyte, 1984). These preliminary findings are important as they guided the approach taken subsequently in this iterative-inductive research and identified salient issues for further investigation during the course of the second research phase, upon which the major findings of this study are based.

The whole multi-faceted and contested notion of organisational learning presented ontological and epistemological challenges as explained in chapter 5, as well as a methodological challenge given the range of potential characteristics or issues considered to be part of the process of organisational learning. As discussed in chapter 3, these potentially included a broad range of both formal and informal organisational routines (Levitt and March, 1988: see page 28 for full list), which had been criticised for being so all-encompassing that the theory may become meaningless (Prange, 1999).

The lack of theoretical consensus suggested that revisiting the underlying assumptions adopting an open-minded approach might be helpful to empirically identify the nature of the notion of organisational learning in primary care teams. Therefore, the initial phase of this research considered some fundamental issues by means of the case study and participant questions set out in tables 2 and 4; the former represent a framework through which the topic of interest could be critically explored, whilst the latter served as a guide for research conversations with participants, thereby providing space for issues of relevance to either conversational partner to emerge and be discussed (Mason, 1996).

In the initial research phase the vexed issue of levels of analysis was confronted, in relation to both the learning subject and the nature of learning itself (see table 2),

through the choice of the primary care team as the unit of analysis. The need to identify the elusive “triple loop” or “deutero” learning (Bateson, 1942; Argyris and Schon, 1996) in the potentially inter-organisational setting of primary care teams, meant that identifying examples of this level of learning, often described as ‘learning to learn’, was unlikely to be achieved with ease.

In light of these observations, the early findings from the initial research phase will be presented in the remainder of this chapter. These are broadly organised around the responses of participants to questions posed during the initial phase (see table 4, p.112), concerning who is learning, what is being learned, and how and when this happens. The issues under consideration will each be introduced first, followed by quotes from participants from each participating primary care team in response to participant questions. Responses to these participant questions will be presented and interpreted in relation to the case study questions to which they were linked. Since these initial findings set the scene for the presentation of subsequent second research phase findings, the implications of each of these initial findings will be briefly considered at this point. This will enable the emergent nature of the notion of organisational learning in primary care teams to be discussed in the final section of this chapter. Some of the difficulties of the initial theoretical approach explored through the initial research phase will then be identified and, based on these initial empirical findings, an alternative and more helpful theoretical approach will be employed during the subsequent second research phase, in order to address the research questions posed in this study.

Early findings: who, what, where, how? - the process of OL in primary care teams

The major issues which emerged from this early phase of the research were that the primary care team was not an unproblematic concept and therefore the learning subject could not be regarded as a “given”. Learning processes seemed to be the same in all teams studied, so there were similarities, but the content of the learning seemed to be at one and the same time similar and different, creating a confusing picture when viewed through the lens of more traditional, cognitive or behaviourist organisational learning theories. Indeed the notion of *organisational* learning, based upon such theoretical premises, seemed stubbornly at odds with these initial findings. These initial issues will be explored in the following sections.

Who is learning? and What is being learned?

As discussed in chapter 2, the concept of “the primary care team” is not an unproblematic starting point in this research, with various definitions in use depending on one’s viewpoint. The term is frequently used in policy documents and in everyday healthcare discussions, but its meaning is rarely explicated with any consistency or clarity. The term seems to mean an entity centred upon the core organisation, known as the General Medical Practice, together with some community-based services which are not clearly delineated. This description of a list of organisations and/or roles presents a somewhat abstract portrayal of an entity entitled “primary care team”. In the most recently published health policy document, “Delivering for Health” (SEHD, 2005), the following offers the nearest representation of a definition for the concept of the primary care team:

General practice and the development of Primary Care Teams are great strengths of the NHS. They have enabled us to deliver health care that is personal, continuous and local. They also perform a ‘gatekeeper’ function, managing patients’ access to specialist care services... Local GP surgeries will continue to provide most of the health care people need, working in partnership with community pharmacies, dental practices, optometrists, and NHS 24... But local practices must become integrated with other community services as part of the whole NHS system of health care delivery. Integration can be fostered by enabling health care professionals to work in Community Health Centres (including community hospitals), as well as in their practices. It will call for a shift in emphasis away from the independence of individual practices towards a more extended primary care team ethos.

(SEHD, 2005b pp.12-13)

This official view suggests the composition and activity of the primary care team is unclear although it seems to be taken as a “given” and its importance is clearly conveyed in that it appears to play a pivotal role in relation to all other aspects of healthcare. In light of this situation and in light of prior knowledge, the primary care team was conceptualised at the outset of this research as a flexible, multi-professional, inter-organisational group of people providing services to meet the needs of a defined population (see figure 3, page 87). A variety of compositions could therefore be

accommodated should they emerge from the data generated within each of the three case study sites.

This fluid conceptualisation needed to be explored empirically. Accordingly, participants were invited to describe the primary care team in their area (CSQ1&2/PQ1, table 4). This question brought forth a variety of responses, including the initially somewhat surprising but reasonably frequent request for clarification as to the type of information the question was designed to elicit, or what the question meant, from participants fulfilling a broad range of roles in primary care teams:

Participant 13, Harebell:

Well, I was going to - when I was reading this [the project summary provided as part of the research ethics process] I was going to ask what you mean by “primary care teams”...do you mean...?

Participant 6, Primrose:

What do you mean - you mean like the doctors and the nurses and, and the health care assistants and...?

Participants in group interview 11, Rowan:

INT: So who is in your primary care team here?

P1: In this office you mean? Who...?

INT: If somebody asked you about your primary care team, how would you characterise it?

P1: Primary care team...

P2: I'm the... [begins to describe who works together locally]

Participant 2, Harebell:

INT: So can you tell me, who is in the primary care team?

P: Do you just mean within the Practice?

The concept of “primary care team”, so readily adopted in both official and unofficial discourse, was potentially more problematic than it was assumed to be. These responses to what might be regarded as a simple question indicated a complex concept which was not immediately identified by those who were commonly thought to be part of it.

However, despite their initial responses, all of these participants went on to describe the primary care team. These more “proximal” or “articulative” (Gherardi, 1999, 2006; Nicolini, 2006) accounts seemed to reflect participants’ areas of interest, practice or activity:

Participant 13, [NHS manager] Harebell:

P: I, with my background and my role I tend to think of [the area] as a primary care team, within that you have a number of GP Practices, who have teams within themselves, you have community nursing, you have health visitors, you have dental, etc, etc. I try to think of it – well, part of my role is to *continue* the *development* of primary care and with the Clinical Strategy that’s *hitting* and facing NHS Argyll & Clyde, and the potential loss of acute services at [the local hospital] etc, etc, there will be much more emphasis on how we can safely provide and redesign our clinical services in this area, which will undoubtedly put greater emphasis on to primary care teams, whether it’s community nursing, health visitors, GPs themselves, out-of-hours teams, dentists, etc, so it’s – and you know, I try to look at it, you know, in that initial way that we are the one team, [area] Primary Care, we cover, you know, [range of places] from a GP Practice perspective – and all of these people are involved as the team –

INT: In “doing” it?

P: *Yes* [emphatic]

Participant 10 [GP partner], Harebell:

P: Right, with regard to the GP and the – well the GP, and registrar, the Practice nurses and district nurses, the health visitors, and we also have quite a close contact with CPNs within the Practice, um, I suppose in addition we have nurses who are involved with the Hospice, who are again quite closely - they gave us a particular nurse who’s been allocated to follow up on Hospice care, ehm... It’s also much wider, we’ve got the social work department... They’re all - X [name: Practice manager] and all the receptionists, and our secretary - just basically working together as a body of people.

Participant 6, Primrose:

[Regional visiting professional, works across Practices: having identified the people employed directly in the Practice, see quote page 120 above]

P: I'm not sure who else comes in...

INT: How often are you in? P: Once a week, once a week... Well they, they, they [the Practice] also have the - like the diabetic clinic - it's quite good cos they [the patients] see the doctor, the nurse and then the podiatrist comes and the dietician, so they would also be the, the sort of the wider kind of thing [team] - cos you tend to think of... the sort of the doctors and the nurses as being, you know, that's it - but there's not - there's much wider, people who visit.

Participants in group interview 11, [community nurses] Rowan:

P2: I'm the [gives designation], then we have the team leader for the district nursing.[name]. Then we have a staff nurse and then health care assistants. On the other side we've got the public health nurse and a public health staff nurse. Ehm...

P3: GPs are also in the primary care team.

P2: [The] GPs are here.

P4: And there's strong links with the AHPs as well.

P2: Yeah.

P4: We all work very closely together.

P2: Macmillan nurse, diabetic liaison. I mean we're all...

P?: -Cardiac...

P2: ...we all work together, cardiac [nurse]...

P1: Community paediatric nurse as well and there's a school nurse. We've got [name] who's a school health doctor.

P?: There's the chiropodists. [Laughter]

P1: There's those, there's speech and language. They're not, we, we've only got the district nurse and myself *here* -

INT: In the Practice?

P2: And they're out with...

P1: When the new facility comes about we'll all be in together so we mightn't be-.

INT: Right. This is at the new hospital?

P1: The new hospital. Hmm.

INT: Do you have links with the hospital just now?

P1/P2/P4: [in unison] Yes.

INT: Right. So all the people there as well really?

P4: Yeah. It's the community hospital.

INT: So where are the AHPs based then?

P2: Well they're scattered all over. This is why we're getting the new hospital. At the moment all the services are on fourteen different sites so they're going to pull everything in to one building. It's going to be *great*. I mean we'll be able to speak to each other without leaving messages on ansaphones and...

These accounts demonstrate some of the range of people involved in primary care teams and provide an insight into participants' perspectives about primary care teams. These accounts were sometimes augmented during the course of the interview when other team members were identified when discussing the work in which they were collectively engaged. For example:

Participant 2, Harebell:

[During a discussion about clinical meetings within the Practice]

"The next one is the – what they call the main team meeting, which happens, or is meant to happen, once a month. And that's when all the allied folks come down as well, so you've got the oncology nurse from the hospice nearby, you've got the district nurses, if there's extra people – for instance, recently there's a sort of employment agency have come, so we got them to come..."

Those who responded readily to the initial question about composition of their primary care team also provided a range of descriptions which, although they included core similarities, tended to vary between teams. They also included a broader range of people than may have been expected, as demonstrated by these examples given by a range of managerial, nursing, administrative and medical members from all three teams, a selection of which will be presented next. In contrast to those accounts presented above, these respondents seem to have been able to respond to the question by immediately thinking about what they do within the team to identify its membership. First, some descriptions provided by Rowan (extended rural) team participants:

Participant 1, [administrative staff] Rowan:

Well our primary care team is made up of ehm, the secretarial and admin and clerical staff, GPs, the nurses, district nurses, Practice nurses, healthcare assistants, and we have a pharmacist... who comes in as well, and we run clinics and we also have [name], she's the cardiac nurse, she deals with the - cos we have CHD clinics. We also have, we liaise with eh, dietician and the diabetic nurse cos we run a diabetic clinic too, and also work with the hospital. We know the admin staff up there and the doctors cover the hospital up there so we're part of - the nurses up there, although I, I don't see them as physically part of our team we talk to them every day, so they're part of our daily routine of work. We also have a psychiatrist comes in does clinics - we also sometimes have counsellors come in...

Participant 14, [part-time GP] Rowan:

P: Well I would say it covered the GPs, the district nurses and the health visitor – the ladies in that windowless room! – all of them, and probably, we've got [name] as well - the paediatric specialist nurse - as well, and I suppose, to some extent there's the midwives as well, and then – we tend to get a wee bit blurred between the hospital as well, because we're between that too, and we often end up overlapping things. They often give out the emergency contraception, then they refer on back to you those things, so it's quite a big extended primary care team.

Participant 8, [GP registrar] Rowan:

P: In the team, the primary care team? Hundreds of people! [laughing]

INT: Actually it probably is, literally?

P: It, maybe - it's loads, I mean especially here as well cos it's - the difference, you know you've got all the GPs, then you've got all the Practice nurses, the healthcare assistants in the Practice, you've got the district nurses, I suppose the social workers as well, the psychiatric nurses, and then all the [community] hospital side, and the pharmacist and reception staff, the manager. It's *massive*. Big [exercise in] name learning! [laughter] – you think, who else can come?!

So these quotes provide a glimpse of what concerns participants in relation to their particular roles within the overall activity of the primary care team. The first participant's answer raises issues of how work is organised, who does it, and where they do it, which reflects the administrative, organising content of this person's team role. The second participant demonstrates an interest in children's and women's health issues, which reflects a specific interest in these areas of primary care team practice, as well as the "extended" nature of the clinical work undertaken there, in relation to the Practice and the NHS-owned and run community hospital. Finally, the third participant's answer emphasises the broad range of the team and reflects a concern for learning something about the team as a whole and what everyone does, in relation to this participant's status as a doctor in training within the specialty of General (Medical) Practice.

The following quotes from Harebell (extended urban) team participants demonstrate similar complexity, again focusing on participants' practice or activity within the primary care team:

Participant 3, [GP partner] Harebell:

INT: Who is in your primary care team..?

P: Well, I suppose there's a core team in the Practice which consists of GPs, and other sort of doctors like doctors in training or retained posts, and Practice nurses, and management, admin and clerical staff. And that would probably be the *core* team, if you would say, that's the *Practice*. And then attached to them we have various other professionals and health associated workers like midwives, who are employed through the hospital [fairly large district general hospital locally situated along the road] or through the acute services [non-primary care services], but who are attached to our Practice. We have CPNs, we have occasionally drug counsellors from social work, and we have community nursing colleagues – health visitors, district nurses, and there are other agencies who link in from time - or who need information from us, who you wouldn't probably say were necessarily part of your primary health care team, but they assist you in the management of your patients. So I'm thinking of employment people – you know, the DSS people, works doctors who deal with employment, works nurses who would be working with you for the benefit of your patients – the *big* area that we work with but who aren't as *key* to our team as they might

be, would be the social work department. And I think that, I know there are some areas where that does work better, and I think, that's a *big* area where we could integrate more. I mean I know that's not what you asked me, but...

Participant 11, [Practice nurse] Harebell:

P: Right, well there's a group of GPs and nurses who are attached to the Practice, so we are attached to the Practice and care for the patients who are registered with us [the Practice], and we also have Practice reception staff and a Practice manager, who are also – so that is a nucleus who are employed by the GPs. And outwith that we have health visitors, district nurses, community mental health team who are attached to the Practice and we obviously use them – oh, a phlebotomist, and then we have like the wider side of things: chiropody, we've got a treatment room, we've got x-ray upstairs, we've got a dentist upstairs, they're like the extension of our nucleus, but it does certainly extend out – that's one big thing about this Health Centre, that we've got everything, well not everything, but we've got most things in this building, which does make – for patient care it does make a difference when you can just say...but one of the things, some Practice Nurses do - we don't - we don't do dressings. Because we've got a treatment room, so it wouldn't be a good use of our time when there's treatment room nurses round there and that's what they do – they do dressings and even do bloods, although we still do them [take blood test], we get quite a lot of bloods – but they do all sorts of stuff like injections, so we can use the treatment room staff.

Although the Harebell team members share their Rowan colleagues' views regarding complexity and a focus on activity, they identify a different range of team membership, although there are also clear similarities. The identification by the GP of the “employment people” reflected the recent introduction through a joint health and benefits agencies' initiative which aimed to reduce the disproportionately large numbers of local people, particular to this post-industrial area, on incapacity benefit often for reasons attributed to mental health problems (participants 7 and 14, 2005). This gave the accounts a distinctly urban tone. However, the broad thrust of Harebell participants' accounts were echoed in the descriptions offered by participants from the Primrose

(nuclear rural) team. Here the distributed nature of the primary care team, in both spatial and organisational terms, became evident as a local concern:

Participant 1, [administrative staff] Primrose:

P: I would say it's all of us, the GPs, all the staff, [name – Practice manager], the community nurses, I mean the LHCC staff aren't really part of our team although they're invited along to any training or anything like that that we do and it's good to have them down, so yes, I would say everyone who's involved in the front line of the Practice is part of our team and that's here, [place]... and [place] [Practice spread across three sites]

Participant 5, [part-time GP] Primrose:

P: It means everybody here plus the district nurses and the midwives and everybody that [pauses, thinking about what to say] but they're not necessarily Practice-based, but they're shared between... [Practices].

Participant 12, [GP partner] Primrose:

P: OK [pauses] I suppose in the primary care team certainly, everybody that works in the surgeries [Practice premises across the three Primrose sites], so that is the doctors, Practice nurses, health visitor, all our reception staff, community staff, community nursing staff, and then - I would extend that out *also* to people who are perhaps *not solely* associated with *our* team, but who nevertheless feed into our team so for example the local Macmillan nurse, the CPNs, the risk reduction nurses for people with addiction problems. So all of these people who also provide services *to other* primary care teams, but nevertheless are doing it at a *primary care level* in that, in terms of the referral system - and people can self-refer, they can access these services, directly.

INT: So is it people who come in to work with your Practice population?

P: With our Practice population, yes, yes.

These examples, quoting members of each team, were similar to the accounts of their team colleagues and demonstrate both the complexity and diversity of the concept of the primary care team. Some participants identified the inter-organisational aspects of teams, distinguishing between the “core” or “nucleus” of the team (the Practice) and various people from other organisations who may be more or less involved. This differentiation seemed to be related *what* was being learned as well as *who* was learning. Participants’ accounts of team membership became meaningful through their discussions of the everyday and local aspects of collective activity, rather than through structural issues. The more involved in collective activity personnel from various organisations were, the less important structural and spatial differences seemed to be in relation to perceptions of team membership. Rather, primary care teams seemed to be perceived in relation to what people did collectively, which in turn offered an indication of the types of things people collectively learned to do.

From these initial empirical findings it became possible to suggest that the notion of “the primary care team”, sometimes regarded initially by participants as an abstraction which required clarification, only acquired meaning when participants reflected upon their practice or activity. Through the performance of that activity, the primary care team became identifiable, composed of members drawn from a variety of organisations. This finding supported the conceptualisation of the primary care team as the unit of analysis adopted in this research. This approach linked the identification of the learning subject with what was being learned, in that it suggested organisational learning in primary care teams actually entailed *inter*-as well as *intra*-organisational learning focused upon local collective activity. Complexity and diversity seemed to be features of primary care teams in relation to composition and activity, which simultaneously suggested similarities but hinted at potential differences.

How and where does learning take place?

Having empirically identified who and what was being learned in the last section, the how and where of primary care team learning will be considered next. The impression of simultaneous similarities and differences in relation to primary care team composition and activity became even more pronounced when participants from all case

study sites were invited to describe how work was organised in their teams and why, in order to find out about processes of team learning (CSQ3&4/PQ2, table 4).

As with PQ1, this was apparently not an easy question for participants to answer and in many instances it had to be clarified by asking participants how they “got the hang of” working in their teams. Where people did manage to answer this question, their initial responses provided fairly abstract descriptions of the way work was organised, for example:

Harebell, participant 2:

Ehm, I guess you do it around the medical staff, so you’ve got so many surgeries going, so the GPs - and the nurses do surgeries as well - each day

Primrose, participant 10:

This is one of the most - *team orientated* Practices that I’ve ever worked in...the entire team is involved in looking after patients, so... The business is *owned* by some of the medical staff, but it’s not *led*. [Name] *runs* the Practice, and she’s the manager. .. So, she is employed by those who own it in order to run it, but she runs the owners as well. And she’s got a fair bit of clinical knowledge for somebody with no clinical training *at all* because she’s been submerged in it for so long. . [name, Practice manager] makes the decisions...*with* the, in discussion with the partners... . But who’s going to do *what* job, is her decision.

Rowan, participant 13:

I think what structures our daily work is the fact that we have surgeries at certain times and around the timetable, the surgery timetable.

As shown in the next section, through conversation aspects of work emerged which participants considered to be important. This demonstrated not only the type of activity and how it was conducted, but also revealed some of the underlying values and concerns within the teams and provided an insight into how and when learning might occur. Autonomy seemed to be important but so did the opportunity to interact and cross-check issues with colleagues. These aspects of team activities in relation to how

and when learning might occur seemed to be mediated by various aspects of primary care team activities, some material and some conceptual.

In Harebell, identifying suitable opportunities for the team to discuss issues of mutual interest was a concern, partially due to local spatial difficulties which curtailed routine interaction during the course of the day because there was insufficient space in the Practice for all doctors to have their own rooms and a communal area; in Primrose, creating and maintaining team cohesion and quality of clinical service as the Practice grew in spatial and organisational terms was an issue of concern; in Rowan, providing a comprehensive range of clinical services and maintaining team expertise and cohesion to carry out such activity was a major issue.

Harebell, participant 2:

[discussing having formally identified times for informal team meetings]

P: ...because they've [the meetings] been rescheduled recently, they're starting in the morning, Thursday morning I think, half eight through to ten, and then you start your clinics late that day. Used to be lunchtime, but it wasn't happening so we rescheduled!

INT: Right, what happened around that?

P Ehm, at lunchtime? It tended to be that people were out at house calls and nobody was getting back in time so it was staggered, and then of course you were beginning to run into the two o'clock afternoon surgery, and it was just chaos!

Primrose, participant 10:

P: ...they've [staff in newly acquired small Practice merged with larger Practice bringing the number of Practice sites to three across a large geographical area] had to adjust from being, "we'll tell you what to do because you're employed" to "this is a team decision, get on and make it".

INT: And how does that work?

P: It works really well! [very upbeat tone] All of a sudden people are *enthusiastic* because they have ownership of their decisions, 'cos they're not being told what to do. There's somebody running the show - but nobody is saying "This is how you do it"... [So if] we come across a, a difficulty... [For

example] we needed to create a, some kind of recall system in [new Practice area place name] for our cardiovascular unwell people, so, “Where am I going to start? Let’s start with what I know about!” So we had to create a diabetic clinic because there wasn’t one, so we just looked at what was there, and the Practice nurse and I sat down and said “How are we going to do this?” and then, once we worked out *what* we needed to do, we then spoke to the receptionist staff and said “Right. *How* do we do it?” and between the three of us we dreamt up a recall letter and a recall system and a fallback for when things went wrong...

Rowan, participant 13:

We organise informal meetings in the morning – enormously useful when people meet half an hour before and sit in the same place and concentrate on their own work but they also have to face each other because they will be sitting at the same table... The paperwork is always organised around the same table so people do not take their paperwork away to read in private areas and in isolation, but people meet in front of each other, and that is always important, and will always favour communication between the different doctors. I think that this is a big difference to the place I was before because everyone would be logged on the computer in their own rooms and checking their emails – eh, I think it’s a good way to start the day, it’s an informal meeting, that lasts for half an hour prior to your morning surgery...

And ehm, in terms of patients’ care, the doctors in this surgery - the surgery is very, very clinically orientated. I found there is less work related to medical reports, although all GPs will have some sort of workload in relation to medical reports for legal issues, being the owner of a patient list, I suppose. But most responsibilities will be clinical – doctors doing follow-up clinics, A&E follow-up clinics, minor op clinics, they will be on-call at the [community] hospital – 1st on call and 2nd on call – people will be stressed to actually get that piece of training that they lack because they are going to be on-call and they have to deal with this part of - the sort of emergencies, like head injuries or rapid sequence intubation, minor surgery skills - so there’s a lot of focus on clinical issues.

In summary, the way the work of the three primary care teams was organised seemed to be simultaneously similar and different. Initial responses from those who were members of Practice organisations (“the Practice”) were similar, in that work was variously described as being organised to look after or see patients, but these responses were largely unhelpful in revealing what that work actually entailed and therefore how and when learning might occur. This only became clearer during the course of interviews as participants identified issues of concern to their respective teams, through which they could explain the local organisation of work. These discussions provided a glimpse of teams’ respective activities which suggested that despite the apparent similarities in the way work was organised around seeing patients, there were differences between the three teams regarding what that work entailed which seemed to change at particular times, in particular settings and in relation to particular needs.

The process of organisational learning

If identifying who was learning, what they were learning, and how and where that was happening was not unproblematic, what of the potential processes of organisational learning? A focus on process might provide a more helpful approach to understanding organisational learning in primary care teams. A growing proposition in the extant literature suggested that such processes might be relational, occurring through social interaction (Brown and Duguid, 2001; Elkjaer, 2003). Therefore, participants were invited to discuss how much opportunity they had for interaction with colleagues during their working day (CSQ3,4,5&6/PQ3, table 4). There was a widespread view across all teams that interaction was valuable, although there was a distinction between formal and informal interaction.

Formal interaction often took the form of meetings, as responses to PQ2 demonstrate. In each team, a variety of regular meetings were mentioned, attended by different configurations of team members depending upon the purpose for which they were being held, for example administrative, business, clinical and training. Attendance at these meetings ranged from Practice partners plus or minus the Practice manager for business meetings, to meetings of the entire team (or as much of the team as possible) including team members from organisations other than the Practice. For the latter type of meeting, the introduction of “Protected Learning Time” as part of the nGMS contract which

came into force in 2004, was used by Practices as an opportunity to have a variety of developmental events including as many team members as possible, although the utility and benefit of such large gatherings were questioned by some (Primrose, participants 1, 5, 8; Rowan, participants 1, 2, 5, 10; Harebell, participant 14).

Informal interaction was identified by all participants interviewed as extremely valuable, perhaps more so as a mechanism for helping each other to find out about new things, or for verifying what to do in specific circumstances. This process was observed during visits to all three case study sites, sometimes happening during interviews when colleagues informally asked the interviewee to clarify something of which they were unsure or to assist with something they were unsure about doing (for example, during interview with Primrose participant 10, a Practice nurse asked if her colleague could come to look at the sore/inflamed eye of the window cleaner who was at the Practice that day).

Other informal interactions were observed to be an intrinsic part of the working process in each team. These usually occurred in the flow of work, for example, “in between patients”. Given the fairly structured nature of work for most primary care team professionals, whereby their time was allocated in blocks of appointments to specific patients whom they usually saw alone in a separate space from other team members, these informal contacts happened in apparently invisible spaces between patient appointments. GPs, nurses and other team members frequently interacted with each other in common work spaces, usually office space where patient records, computers, telephones and other Practice paperwork were situated. These informal momentary interactions seemed to be a common way for individual team members to ask for or provide information in quick conversations with other team members.

Coffee rooms provided other mutual spaces which often afforded members of the wider team, whose work was not carried out in the Practice building, the opportunity for this type of interaction. Conversations in this setting usually concerned how work was organised, or other informal and non-work related topics, but not clinical discussion which tended to occur within consulting rooms or Practice office space designed to support the clinical working of the team. These informal chats seemed to be a way of maintaining links between members of the teams, opportunities for “gossip” about

organising issues, or just chatting to maintain personal contacts with colleagues. Regular topics during the initial research phase were the increasingly imminent announcement of the (Health) Ministerial decision about what would happen to their Health Board and the likely impact on their day to day working practices (Primrose), the new health and social care development and Health Board situation (Rowan) and social discussion about holidays (Harebell), each of which reflected the time of the research visits and issues of concern at those times.

This type of coffee room interaction was the observed in all three sites. However, the cramped nature of the accommodation within the Harebell Practice meant that a common congregating space there was the Practice manager's office, a tiny space which was frequently the venue for impromptu gatherings of various team members. In the Rowan Practice, some of the community nursing staff had their base located within the same building, but again the filing bay and coffee room served as mutual gathering points. Informal interaction of this nature seemed to be one way in which information and advice flowed around the team.

In the Rowan team, the quote from participant 13 (see page 131) demonstrated the regularity of opportunities built into the working day, for medical team members especially, to informally interact and this was highlighted by other team members as very valuable (Rowan participants 1, 8, 10, 14), for example:

Rowan, participant 8 [discussing how ideas are handled]:

...well what'll happen is it will be raised at a meeting as an issue and then everyone will mull on it for a bit... and then what you'll find is that if, when everyone's sitting signing prescriptions in the X room or whatever...at five, six o'clock in the evenings, but that's when the sort of chats will happen and they'll often happen in kind of twos and threes and gradually people will sound everyone out and then, have... come to some kind of common feeling that everyone will have mulled over before it then comes back to a meeting.

However, in the other two Practices, such informal gatherings were less frequent and some participants felt this should be changed, although as indicated previously, lack of space was a major constraint upon such activity. In the Primrose team, the need for

informal interaction was enhanced by the spatially distributed nature of the Practice area:

Primrose, participant 13:

So I think we need to be able to, there needs to be some more, a time set aside or, we need to build it into the structure of the day that we do have that chance to sit, to, to be able to talk to each other and *particularly* because we're covering three sites.

In the Harebell team, the “paperless” status of the Practice, together with the lack of space available for ad hoc interactions within the Practice premises, resulted in the issue becoming the subject of a Significant Event Analysis, whereby particular problems arising in the course of clinical working should be recorded, discussed, and learned from, in this case in relation to problems in making a diagnosis of cancer:

Harebell, participant 9 [presenting the significant event]:

P I think probably the events leading up to the diagnosis as much as anything, ehm, certainly that's probably what the case was with this because, although the history was very short, with this person, the diagnosis was cancer at the end of the day, and it was quite a complicated way of getting around about – it was very confusing trying to get to the actual diagnosis at the end of the day. So I think it's probably looking back and seeing if there was anything that flagged up before that could have pointed us in that direction... Cause, particularly today, the things, particularly the clinical [aspect of] things were things that we couldn't really, weren't things that were going to really alter the clinical outcome at the end of the day, but the non-clinical things were probably more worth discussing. It's like a case of possibly altering the template for our appointment system so we've got more time to discuss things [informally] with each other. That's not going to happen at the moment because we don't have the room for it...

Harebell, Participant 8 [about the same significant event]:

...I think that was something that was brought up today, that you don't necessarily get a lot of chance to discuss problems – there could be three or four

doctors doing surgeries, and then you go out on house visits, then you come back and do another surgery and they've not had a chance to speak, so I think they're modifying the appointments [to] get time to sit and have a cup of tea and talk about problem patients or anything that comes up.

As indicated previously, attempts were being made to find times in the day when practitioners could have some time for informal interaction. On the return second visit, ways to address this issue were still being sought.

A similar situation was raised during second research visits to the Rowan site in regard to informal communication, as the Practice had become paperless during the preceding six months (Rowan, participants 10 & 12, 2nd visit interview). The informal morning and evening gatherings over "baskets" of documentation and paperwork had stopped due to the introduction of the same computerised method of dealing with Practice clinical records, mail and documentation through the "DocMan" software programme (also in use in the Harebell site), which was identified as a problem to be addressed:

Rowan, participants 10 and 12:

P10: Well, it's actually - It became a problem, they weren't meeting in here in the morning, they hardly - you hardly saw each other, did you? [last part addressed to P12] And we couldn't get you all together. But at the last Practice meeting there's been a decision made that, yes, we need to - and I see it has started working again. I saw everybody was in this morning?

P12: Yes, I think so - I never quite understood what this big incentive was to rush off and go to the computer in the morning was, and we just sort of -

P10: Yeah, that's what I was just saying to Gail [interviewer] - it just seemed to happen, it wasn't a conscious decision -

P12: No, it wasn't... [happened when DocMan introduced]

INT: So what made you decide to change that?

P10: Well, it was the hand-over, for one thing -

P12: ...it was the hand-over from the person who was on-call the night before to the person who's on-call during the day, but it was also just the general communication side. Because that's been the only time of the day where everybody's been - well, more or less everybody's - been together really,

because during the rest of the day everybody just tends to go off and do other things.

P10: And you can't - you were ending up having to take *everything* to a Practice meeting, cause you couldn't get everyone together - I used to just nip in here in the morning and get a consensus of opinion - but you could never get...

P12: ...There's a lot of people meet later in the morning, at coffee time and that sort of thing and do stuff then, although we've never found that works *terribly* well here, although we're kind of looking at that again - although we've gone off that idea? [turns to P10 for confirmation]

P10: Kind of got bombed out last week again...

P12: I think the last time we kind of toyed with the idea - because we're looking at the move to the new building, we'll be working in different - doing different hours and starting [surgery] earlier or starting later and working later and staggering it, and doing different things in a different way. And we're not quite sure how the nine-to-nine-thirty slot will work in that scenario, but suck it and see I guess, really - it wasn't really having the baskets, it's mostly historical - a sort of habit type thing. To be honest, I don't think people actually dealt with a *huge* amount of paperwork at that time anyway - there was a lot of a lot of interruptions and you're talking to people and things, it's not the *best* time to be looking at lab reports and letters and stuff.

INT: I suppose though, it gave you a reason to do it in a way?

P12: I think that's more, more to the point, yeah. But yeah, we'll have to start doing that [informal gathering] a bit more.

Informal interaction was also identified by participants from all organisational and disciplinary backgrounds, across all three sites, as a key way of learning at work. The most common explanation of how such learning took place was that it happened over time and through experience (see chapter 9 for further discussion).

In relation to processes through which new ideas were shared between team members (CSQs3,4,5,6,7&8/PQ4, table 4), informal interaction seemed to be the starting point in that process, at least for team members originating from the Practices, in all sites. It seemed that ideas would then be introduced within the more formal sphere of interaction, for example through Practice meetings (Harebell: participants 2, 4, 8, 9, 11;

Primrose: participants 1, 2, 3, 4, 8, 10, 12; Rowan: participants 1, 2, 8, 10, 15). However, the picture was less clear in relation to team members from other originating organisations where making choices, decisions and changes in practice seemed more formal (Primrose, participants 9, 12; Rowan, participants 6, 11), and perhaps more difficult to enact:

Harebell, participant 14:

Well, I have told them umpteen times! [laughs] Both sets [of managers in her organisation] I spoke to our management and said why don't you put a questionnaire about incapacity benefit, and that way you could safely use condition management to get those people seen and not sit on a waiting list [for the secondary care mental health team] that's just getting bigger. Um, "but that could take six months," she said [the NHS manager].

Rowan, participant 10:

INT: ...although the hospital and Practice are here, what have your links [between Practice and NHS] been like in the past? It seems pretty central at the moment, but that might be because of the new development?

P: It's more so because of the new development. I had a lot of contact because our GPs are there so much of the time... we have had a fairly close relationship with them.

INT: And so, you said that in terms of the new [development], that things for the NHS, for that that side of things, [are] very much more tied down. Is it more written down as well?

P: Yes, yes. It's red tape, it's - if you want to do something [within the NHS] it takes two weeks to get it done whereas we do it tomorrow [in the Practice].

In this section, the findings from the initial research phase have been presented and briefly discussed in turn. These will be summarised and discussed as a whole in the next section in order to set the scene for the introduction to, and presentation and subsequent discussion of the findings from, the second research phase.

Nature of OL in primary care teams based on these findings

The initial phase of this research proved to be a helpful scoping or exploratory exercise (Foote Whyte, 1984) for two main reasons. First, it offered some helpful insights into the collective working and learning of primary care teams; second, it suggested that the more traditional, cognitive and/or behaviourist approaches to organisational learning were not very helpful in understanding observations and participants' accounts of those processes across the three participating primary care teams. In summary, the findings presented here suggested the following:

1. The “who” of organisational learning: primary care teams were revealed as complex collective learning subjects. These could be conceptualised as protean collective groupings, changing shape and function across the three sites, depending upon the range of activities undertaken by people from various organisational origins, to meet various needs at particular times and places.
2. The “what” of organisational learning: this seemed to be simultaneously similar *and* different across the three participating teams and seemed to be related to what people *did*.
3. The “how” of organisational learning: the processes identified through observation and participants' accounts suggested a picture of learning through formal, informal or “formalised informal” social and situated interactions between team colleagues, rather than through institutionalised and retrospective routines and rules. Again, these processes occurred as part of everyday working activities.

Designed to explore views of organisational learning regarding levels and types of learning (see table 2, p.91), this initial research phase raised more questions than it answered. Views of organisational learning as an entity proved difficult to explore empirically: participants' reactions to the questions asked suggested that the conceptualisation of OL was too abstract and acontextual. Participants seemed bemused by the description of OL they had been given in the participant information sheet, based on this approach, and found it difficult to answer what appeared to be straightforward questions.

Theoretical issues seemed to swirl around during conversations with participants, yet remained out of reach. For example, theoretical ideas about individual, group and organisational levels of learning did not help to make sense of what participants talked about or of what was observed during case study site visits. In fact, the theory seemed at odds with the empirical data, which did not present a picture of “the organisation”, or “organisations” in the case of primary care teams, but rather illustrated people engaged in a variety of purposeful tasks in their work settings (Strati, 2003).

The root of this difficulty seemed to rest upon the theoretical conceptualisation of “the organisation”, summed up neatly by Ryle (1949):

A foreigner visiting Oxford or Cambridge for the first time is shown a number of colleges, libraries, playing fields, museums, scientific departments and administrative offices. He then asks, ‘But where is the University? I have seen where the members of the Colleges live, where the Registrar works, where the scientists experiment, and the rest. But I have not yet seen where the University in which reside the work and members of your University.’ It has then to be explained to him that the University is not another collateral institution, some ulterior counterpart to the colleges, laboratories and offices he has seen. The University is just the way in which all that he has already seen is organised. When they are seen and when their co-ordination is understood, the University has been seen.

(Ryle, 1990 pp.17-18)

The only way to achieve a fit between the idea of “the organisation” undertaking the task of “learning” would be to adopt the ontological and epistemological positions which render both “the organisation” and “learning” as entities which exist separately in the world, as discussed in chapter 5. This resulted in a feeling of trying to force the data to match the theory. But doing this would create new problems by causing the researcher to “collect individual data and aggregate it to analyze organizations” (Light Jr, 1979 p.551), thereby forcing her to make the error of “cross-level misattributions” (Bryman and Bell, 2003 p.60).

It seemed that this approach to organisational learning was characterised by the attribution of “false concreteness” (Bateson, 1941 p.62), or “category mistake” (Ryle, 1990 p.18) to the concepts of “organisation” and “learning”. Therefore, this conceptualisation of organisational learning seemed to be unhelpful for thinking about collective learning processes within work settings.

A more helpful approach was suggested by the empirical data from all three teams: participants’ initial confusion demonstrated the ambiguity and abstraction of the idea of learning as something which occurred separately from what they did in their day-to-day work, an acontextual operation apparently executed by some separate entity (“the organisation”). They overcame this initial confusion by re-conceptualising the idea and made sense of what was being asked by offering accounts which focused upon their actual practices or activities. This began to bring the “who”, “what” and “how” of collective learning into view. Suddenly, the notion of learning became accessible and understandable as something which happened continuously as part of collective and situated daily work practices. When this different light was shone upon the data, the somewhat puzzling issues of simultaneous similarities and differences between teams and their respective practices or activities emerged, confirming the importance of these “fore-shadowed problems” (Malinowski, 1972), as discussed in chapter 5.

In this chapter the findings of the initial phase of this iterative-inductive research project, carried out to identify salient issues relating to organisational learning in primary care teams, have been presented and discussed. The emergent picture portrayed the primary care team as a protean collective learning subject which changed shape and composition, depending on particular practice or activity, and differed across the three teams and from situation to situation. That which initially appeared similar on the surface (the “core team” of the Practice augmented by various “attached” staff), looked different when considered in relation to actual work or practice in each case. Team learning appeared to be a collective and social activity which was at one and the same time both similar *and* dissimilar across the three teams. This suggested that further exploration of the somewhat under-researched concept of context would provide insights about collective learning in the primary care setting. Therefore based on these

initial empirical findings an activity theoretical approach, as described in chapter 4, was adopted to achieve this research aim.

Chapter 7: Findings and discussion – second research phase

Introduction

In this chapter the process and initial findings of the second phase of this iterative-inductive research, which arose from the re-analysis from an activity theoretical perspective of the data generated in the initial research phase, will be presented. The purpose of this chapter is to show that the activity of each team is different from that of the other two, which suggests that context has a role to play in activity and therefore in collective learning. This offers a departure point for further analysis and discussion in subsequent chapters.

This chapter is structured as follows. First, the reasons for the adoption of activity theory as an analytical framework will be summarised. From within this theoretical perspective, the method used to examine the issues arising from the findings of the initial research phase (the “epistemic object” exercise, introduced briefly in chapter 5) will be explained in detail. The findings of this second phase exercise conducted with participants from each team will then be presented, followed by a brief initial analysis to identify issues for further analysis and discussion through which the research questions will be addressed.

Second research phase: from organisational learning to activity

When viewed from a reductionist perspective characteristic of cognitive and/or commodification/behaviourist conceptualisations of the notion of organisational learning (Gherardi, 2000), the empirical findings of the initial phase of this research presented a confusing picture of apparently competing, equally important attributes or “variables”, yet failed to provide any convincing evidence of learning at the “organisational level”. The case study questions set out in table 4 and fundamental questions posed in table 2 seemed more relevant than ever, although no clear answers emerged. It appeared this reflected the acontextual and abstract nature of such conceptualisations of the notion of organisational learning within which learning was viewed as a discrete work task or event, separate from everyday working within teams.

But a different picture emerged when these same empirical data were re-viewed from the perspective of cultural-historical activity theory, where such fundamental questions were central and could be “problematised” (Blackler *et al.*, 2003). Learning could be regarded as a dynamic collective feat which occurred as an inherent aspect of teams’ activity.

The purposeful, object-oriented, collective activity approach provided space for the emergence of apparent variations between these primary care teams and shed new light on their evidently protean nature. This seemed to be accounted for by the notion of “knot-working” (Engestrom *et al.*, 1999a), whereby various combinations or “knots” of team members formed for limited periods to perform an aspect of activity in relation to patients’ needs. Engestrom has recently likened ways of organising this inherently flexible notion of “knot-working”, based on combinations of members drawn from a variety of host organisations to undertake collective activity, to mycorrhizae. The term mycorrhiza, derived from botany, has been defined in the Concise Oxford English Dictionary (2006) as: “a fungus which grows in association with the roots of a plant.” According to Engestrom, such formations are:

...made up of heterogeneous participants working symbiotically, thriving on mutually beneficial or exploitative partnerships with plants and other organisms. As I see it, knotworking eventually requires a mycorrhizae-like formation as its medium or base. Such a formation typically does not have strictly defined criteria of membership. But its members can be identified by their activism... A mycorrhizae formation is simultaneously a living, expanding process *and* a relatively durable, stabilized structure...

(Engestrom, 2006 p.1788)

This offered a useful way of thinking about what had been described as the relatively stable core entity of the Practice and the enduring presence of some of the “attached staff”, for example the district nurses, but provided enough flexibility to account for the simultaneously changing nature of the teams.

By focusing on activity, a steadier lens became available through which to view the swirling theoretical issues raised by the somewhat confusing initial surface picture of similarities and differences. Teams’ mutual motives, borne by the object of their

activities, seemed to enable inter-organisational primary care teams to transcend their in-built organisational boundaries and disparate accountabilities, in order to achieve their collective culturally, historically and socially mediated aims. However, that did not presuppose harmony or a diminution of the constraining influence of this inter-organisational aspect of primary care teams: organisational boundaries emerged as a feature of the teams' daily work practices which sometimes resulted in tensions and contradictions, both within and across teams (Nicolini *et al.*, 2003a). Together, these aspects resulted in the paradoxical view of primary care teams' activities as simultaneously transcending and being constrained by their inter-organisational make-up.

These impressions were formed through re-analysis of the initial data, wherein participants raised issues of importance within their own teams and in relation to the wider health and social care community. There were common concerns across teams, such as the impact of the introduction of the nGMS contract, agreed between the NHS Confederation ("the employers") on behalf of the UK government and the British Medical Association's General Practitioners' Committee representing the specialty of general practice within the UK medical profession, in 2004 (BMA and NHS Confederation, 2003). Although the concerns raised in each team seemed to be the same, they were actually simultaneously different: the issues mentioned (for example, Out-of-Hours provision or the issue of links with secondary care or local authority services) seemed similar on the surface, but apparently meant something different within each team, and even between those who may be regarded as members of the same team. This suggested that the concept of context might be a central aspect of these apparent similarities and differences, although its exact nature, role and importance remained unclear.

As discussed in chapter 4, from the perspective of cultural-historical activity theory, activity may be understood to be mutually constitutive of context. Given the apparently simultaneous similarities and differences identified in the initial research phase, the three purposively sampled cases or teams in this study offered an opportunity to examine the relevance of context in relation to collective learning, when viewed from such a theoretical perspective.

In order to give some basis to the perceptions gleaned from the analysis of initially generated empirical data, the activity of each team would need to be analysed in relation to what might be considered a ‘constant’ object. In activity theory the object has been considered to be partially given and partially emergent, its constitution a creative achievement of inherently collective activity (Engestrom, 1995b). This, combined with the mutually constitutive nature of activity and context, suggested that provoking deliberate collective reflection and consideration of a partially given object of activity should result in that object emerging in a specific form relative to its particular context.

Accordingly, as described in chapter 5, a routine partially given object, common to all primary care teams, was presented as an “epistemic object” (Miettinen and Virkkunen, 2005) to provoke members of the three respective teams to collectively reflect on their likely activity in relation to such a routine or mundane aspect of collective primary care practice. In this way, it became possible to reveal some of the mutually constitutive contextual aspects of those systems (or teams) and their activities.

In the next section, the theoretical basis of the concept of the “epistemic object”, and the process through which it was employed, will be discussed in order to set the scene for the findings of this second research phase.

Routine practice as an “epistemic object”

The basis of activity theory rests upon the Vygotskian notion of mediated action, conceptualised as collective activity (Engestrom, 2001). A key aspect of understanding activity resides within the artefacts which fulfil the mediating role, as they have been imbued with ideal properties thereby giving meaning to activity and representing the ascent from the abstract to the concrete of specific values, norms and beliefs particular to any activity system (Bakhurst, 1997; Blackler and Regan, 2006a).

In common with other practice-based approaches to the study of learning and knowing in organisations, activity theory focuses upon the everyday routine practice of all types of working or practising. Often, practitioners are only able to discuss these aspects when a discontinuity in the usual pattern of work arises which causes them to reflect upon their practice (Nicolini *et al.*, 2003b). Such discontinuities, known as contradictions or

tensions within activity theory, may signal the beginning of a new phase in the activity cycle (Engestrom, 1999a) as problems with the current way of working become more obvious to activity system members over time and the need to address them becomes more urgent, thus paving the way for new ways of performing the collective activity in a process known as expansive learning (Engestrom, 1987).

Such contradictions may also act as a catalyst for individual activity system members to change what they are doing because they re-conceptualise the object of activity in a particular situation as they are performing an action, which may give rise to a different way of doing something, in relation to the re-conceptualised object (Engestrom, 1995b). Occurrences of this type seem to mirror the process of “reflective practice”, whereby practitioners reflect not only *on* action, but *in* action, so that they may continuously refine their practice, tailored to a specific situation (Schon, 1983). In primary care teams, this has become a feature of practice which has been included in the formal teaching curriculum for many clinical practitioners (RCGP, 2006) and has been extended to cover team members from other disciplinary backgrounds in more recent years (for example, through the multi-disciplinary Scottish Master of Science in Primary Care, details of which may be viewed at www.show.scot.nhs.uk/pcmsc, Core Module).

In order to provoke such a discontinuity and resulting process of collective reflection, an “epistemic object” representing routine or mundane practice for Scottish primary care teams generally needed to be identified. These may be regarded as

...objects of enquiry [which] are not things with fixed qualities but rather are open-ended projections oriented to something that does not yet exist, or to what we do not yet know for sure.

(Miettinen and Virkkunen, 2005 p.438)

The thing which was not yet known for sure in this situation was the nature of mutually constitutive activity and context in each primary care team and how this might relate to the paradoxes in activity or practice between these teams identified through analysis of initial data. Given the proposition within activity theory that the partially given object may be understood to gain “motivating force that gives shape and direction to activity” (Engestrom, 1995 p.397), it was hoped that collective team reflection on a partially

given mundane or routine object would reveal the other aspects of activity - and therefore context - within each team. Since reflective practice was a relatively routine aspect of primary care team members' practice or activity, it was unlikely that the task itself would become the object of collective discussion. Therefore the apparent similarities and differences in activity between the three teams would be able to be examined in order to study the relevance (if any) of context in relation to collective learning. The process of choosing a suitable "epistemic object" will be explained in the next section.

Identifying a suitable partially given "epistemic object"

The partially given epistemic object presented to members of each team in small group discussions was based upon an historical analysis of official Scottish healthcare statistics between 1981 and 2001 and concerned a growing tension within the Scottish healthcare system relating to increasing pressure on existing healthcare services and work patterns. This had become visible in the form of a substantial increase in the numbers of emergency admissions to hospital amongst older people, which resulted in an analysis of health care trends amongst this increasingly large demographic group in order to explain the reasons behind this pressure to inform future policy and decision-making - in effect, to act as an epistemic object to help assess possible courses of future action to resolve this growing tension or contradiction.

Carried out by the Scottish NHS Information Statistics Division, the analysis (available at www.isdscotland.org/wholesystem) considered a variety of possible explanatory factors including demographic trends, age-specific levels of morbidity in the population, patterns of social change which influenced the supply of informal care for older people, and the role of the formal health and social care system itself (Kendrick and Conway, 2003). The results demonstrated that despite the increasingly aged population, demographic change accounted for less than ten per cent of the increase in emergency admissions to Scottish hospitals, and although there had been an increase in the numbers of elderly frail people living in the community as a result of changes in the number of overall long-stay healthcare beds for the elderly, levels of morbidity amongst older people had either stayed the same or improved over the period (Hanlon *et al.*, 2000). Therefore neither of these factors was associated with increased emergency

admissions, so attention turned to social factors in order to seek more fruitful explanatory avenues for this healthcare contradiction.

Here, it became more difficult to access concrete data about the factors which were likely to influence the problem of increasing emergency hospital admissions amongst older people. Although only a limited amount of data seemed to be available in relation to community support for older people with long-term care needs, the picture was even less clear in relation to older people living in the community who experienced what would be termed an “acute” or crisis episode which required assistance from either health or social care services, or both. Therefore, issues of what may be understood as “social capital” (Wilkinson, 2000) became important, defined as:

...consisting of precisely the kinds of networks of social relationships and patterns of social involvement which are likely to provide the underpinnings of informal care for older people.

(Kendrick and Conway, 2003 p.35)

Issues which emerged as relevant included the increasing incidence of older people living alone or away from their families, the inability of adult children to look after elderly parents due to work commitments, and the inability of institutionalised forms of care at home to provide the same support as informal social capital networks. The authors concluded the tensions produced for these existing sources of informal care by a crisis for an older person did seem to contribute to the increase in emergency hospital admissions. Perhaps such admissions arose not only for the purposes of the acute medical treatment they were designed to offer, but in order to relieve the tension for informal or even more institutionalised forms of home care for older people.

But perhaps the most important factor they identified as influencing the contradiction of growing numbers of emergency admissions to hospital amongst older people related to increasing pressure on primary care services, particularly to the activity of general practitioners in their combined role as the most frequent first point of contact with, and gatekeeper to, most healthcare services. The analysis identified the existence of:

...a potentially powerful multiplier. Proportionately small changes in GP behaviour will produce a disproportionate impact on the acute sector [i.e. secondary care services]. It would not take massive changes in GP referral

behaviour to make a major contribution to the kind of increase in emergency admissions highlighted in this report... However, we have remarkably little direct evidence on how such dynamics would actually work out in reality.

(Kendrick and Conway, 2003 p.42)

The “epistemic object”

The focus of Kendrick and Conway’s report presented an appropriately realistic and relevant example of a contradiction or tension in current Scottish healthcare provision which would be immediately recognisable to all primary care teams. By introducing the following situation - which would almost certainly form a routine or mundane aspect of practice for any primary care team - as an “epistemic object” for collective reflection, it was hoped some insight to the dynamics of such problems may be gained which would allow activity and contextual issues to emerge. Accordingly, the “epistemic object” was presented to members of each primary care team as follows:

You receive a call from the family / relatives of an 80 year old woman, their mother, about whom they are concerned. They do not live locally / near her. She has fallen a few times at home, but there is no clear indication of why she has fallen. She is not very well and is not managing very well at home, her mobility isn’t very good and they are generally worried about her. What would happen upon receipt of such a call?

The discussion which took place in relation to this epistemic object revealed the likely activity of each primary care team, conceptualised as an activity system. Within activity theory, these systems should not be thought of in isolation, but rather as directly or indirectly inter-linked with one another. Each activity may be understood to have the potential to influence others’ activities in the here and now (described as horizontal or spatial expansion), whilst at the same time incorporating the historical aspect of each activity so that the past becomes included in the present (described as vertical or temporal expansion). According to Engestrom:

This approach implies a radical localism. The idea is that the fundamental societal relations and contradictions of the given socioeconomic formation – and thus the potential for qualitative change – are present in each and every local activity of that society. And conversely, the mightiest, most impersonal societal structures can be seen as consisting of local activities carried out by concrete human beings with the help of mediating artifacts, even if they may take place in high political offices and corporate boardrooms instead of factory floors and streetcorners. In this sense, it might be useful to try to look at the society more as a multilayered network of interconnected activity systems and less as a pyramid of rigid structures dependent on a single center of power.

(Engestrom, 1999a p.36)

These aspects of activity will be considered in detail in chapters 8 and 10. In the meantime, it is important to note that when this perspective is adopted, activity not only becomes situated and indicative of contemporary context, but also includes the influential, yet not pre-deterministic, historical aspect of current activity or practice.

In the next section the likely activity of each team in relation to the partially given epistemic object will be discussed. Each activity will be presented in two forms. First, an abstract representation of each activity is presented in the manner of a protocol or summary. Second, given the processual nature of the data generated (Langley, 1999), the possible actions which would collectively form the team's activity are presented in flow-chart format. These will be contrasted with one another in order to highlight the similarities and differences in activity which emerged through this exercise.

The process

At the outset of each collective meeting each team was given a description of the situation upon which they were being asked base their collective reflection on possible activity. Those present during each discussion gave a narrative account of likely team activity in relation to the epistemic object presented, responding to the situation freely and in relation to one another in the manner of a collective conversation. The linear flow chart representations, drawn from that narrative, depict a series of actions not necessarily linear in nature, which together constitute the activity in each team. The

narrative accounts began with consideration of what would happen upon receipt of such a call from the patient's family. The researcher role was to ask clarifying questions as the discussion progressed, but to leave the content and direction of discussion to participants as much as possible. Each discussion, all of which took place in 2006, lasted for between thirty to sixty minutes and was recorded with participants' consent. This phase of the research involved personnel who held a range of positions within each primary care team or activity system:

Primrose Team: Those present were: one GP partner in the Practice who was also the lead clinician for the locality on the Local Health Care Co-operative (LHCC), which had just been established as the Community Health Partnership for the area; a second GP partner in the Practice who was also a GP registrar trainer; the Practice manager; the LHCC locality manager from a nursing background; and a 5th year medical student undertaking an attachment with the Practice.

Harebell team: Those present were one GP partner in the Practice, one salaried GP employed by the Practice who had undertaken her GP specialist training with the Practice, the Practice manager and one of the Health Visitors "attached" to the Practice but employed by the NHS.

Rowan team: Those present were one GP partner in the Practice who was also the LHCC locality lead clinician for the area (same type of role as colleague from the Primrose team), the Practice manager, and one of the Practice nurses who had previously worked at the local community hospital.

Therefore, members from each team or activity system represented a range of medical, nursing and managerial perspectives on the presented epistemic object thereby providing space for the multi-voiced nature of activity (Engestrom, 2001).

Similarities and dissimilarities in accounts of (epistemic) object-oriented activity

When presented with this routine or mundane example of practice, participants from each primary care team activity system responded in similar ways: they identified similar required actions upon receipt of such a call; the same most likely diagnosis, based upon their experience of such situations over time, of the presence of an infection, most likely a urinary tract or perhaps chest infection which often results in the person being “off the legs”, a term which indicates a normally reversible condition usually encountered in older people in which the person becomes temporarily incapacitated, confined to bed and sometimes confused as a result of infection (Ritchie, 2007); and discussed commonly experienced problems in relation to responding to the needs of patients in this type of hypothetical situation. These similarities were identified through a process of abstracting commonalities from each narrative account, whilst filtering out dissimilarities. This approach provided the following distal account (Gherardi, 1999; Nicolini, 2006) of what might happen in primary care in the face of such a presenting problem:

1. call received
2. initial triage/response – information gathering
3. decision made about response to the presenting problem
4. assessment of patient need vis a vis condition and circumstances
5. investigations/tests to aid diagnosis and/or treatment or referral
6. confirm diagnosis – test results: interpretation
7. treatment plan & treatment – usually antibiotic treatment for infection
8. disposal options as required - home care package or hospital admission
9. discharge back into community normally or on-going care at home/nursing home

However, this revealed nothing about actual activity, those in a position to collectively learn, nor the organisations involved. In order to identify these details in relation to the likely activity, the accounts provided by team members were analysed. A not dissimilar picture of activity participants was produced across teams:

Table 5: participants in “epistemic object”-oriented activity

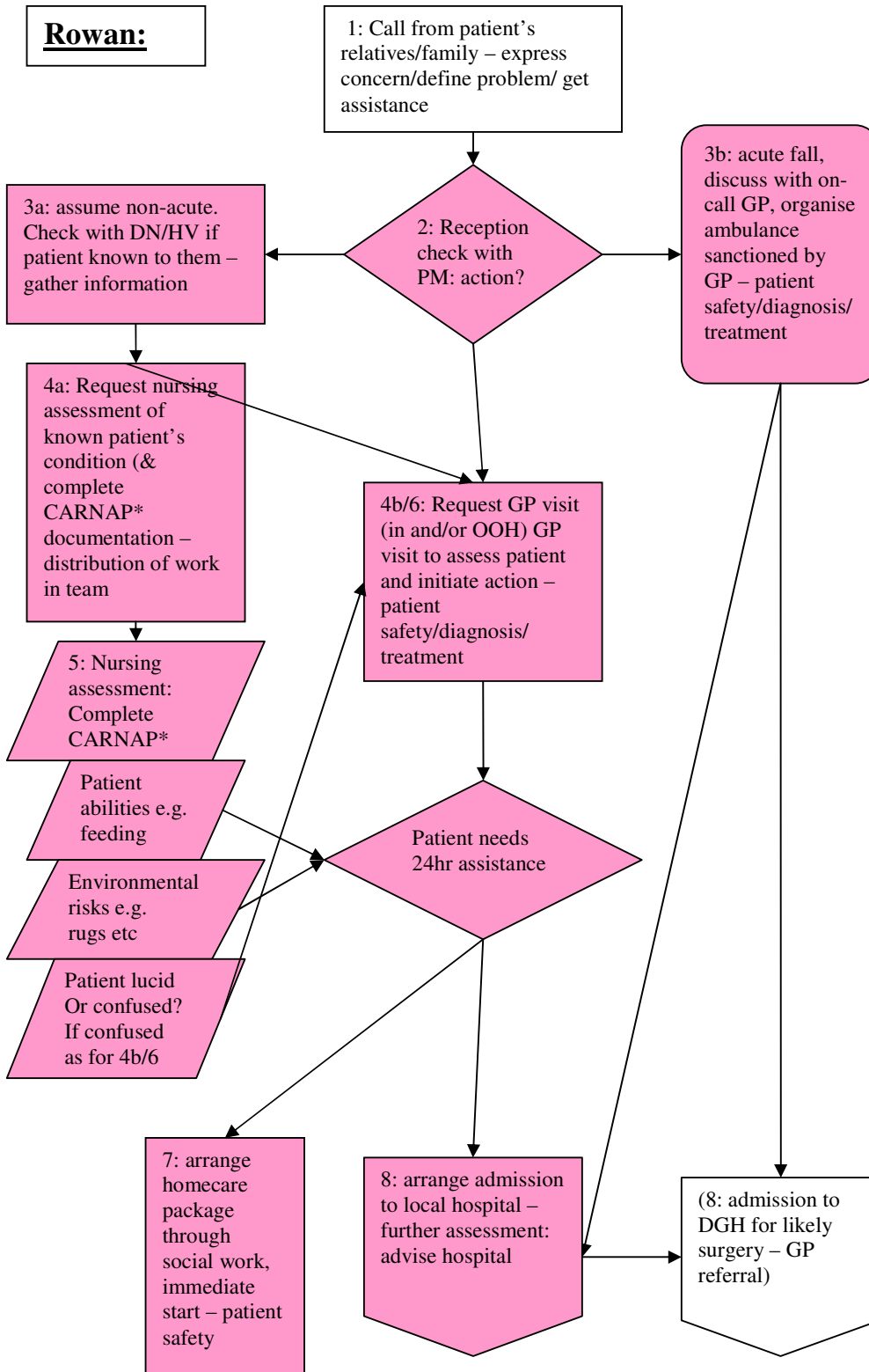
(italics denotes those outwith the local primary care team in broadest sense)

	Rowan	Primrose	Harebell
1	<i>Patient’s family</i>	<i>Patient’s family</i>	<i>Patient’s family</i>
2	Patient	Patient	Patient
3	Receptionist at Practice	Receptionist at Practice	Receptionist at Practice
4	General practitioner	General practitioner	General practitioner
5	District nurses	District nurses	<i>DGH: on-call medic</i>
6	Health Visitor	<i>NHS24</i>	Ambulance service: - <i>hub (Paisley)</i> - local crews
7	<i>Mental health professional</i>	OOH GP (maybe local)	OOH Doctor/GP (maybe local)
8	Ambulance service - <i>hub (Paisley)</i> - local crews	Ambulance service: - <i>hub (Paisley)</i> - local: hospital transport - local: patient transport	<i>NHS24</i>
9	Community hospital in-patient staff – nursing	Police	District nurse: - on-call DN - “own” DNs
10	<i>NHS24</i>	Community alarm key holder	Health Visitor
11	Community hospital out-patient/triage staff	Neighbours	Neighbours/friends
12	Social work dept care manager	OT from nearest DGH	Mental health team
13	<i>999 call operator</i>	Social work care manager	S.W. care manager
14	Community alarm key-holder	<i>Mental health officer and psychiatric staff</i>	Rapid response team
15	Hospital transport van for tests	Pharmacy service within dispensing parts of Practice	<i>Geriatrician, local DGH</i>
16	<i>Biochemistry lab – nearest DGH (?linked)</i>	Local pharmacist in 3ed Practice area	<i>Specialist care of the elderly unit, local DGH</i>
17	CH Radiographer	<i>DGH nearest:</i> - <i>on-call medic</i> - <i>geriatrician</i>	Van for transporting tests
18	CH OT	<i>Rapid response team for 1 Practice area</i>	<i>Biochemistry lab at local DGH</i>
19	Social work dept OT	Private nursing home	Electronic patient record
20	CH Physio	<i>999 call operator</i>	Health centre pharmacist
21	CH SALT	<i>Hospital OT, DGH</i>	Local pharmacists
22	<i>Tertiary orthopaedics</i>	<i>Biochemistry labs:</i> - <i>nearest DGH</i> - <i>Glasgow</i>	Domicillary OT
23	Practice nurses	Van for transporting tests	Domicillary physio
24	Neighbours		

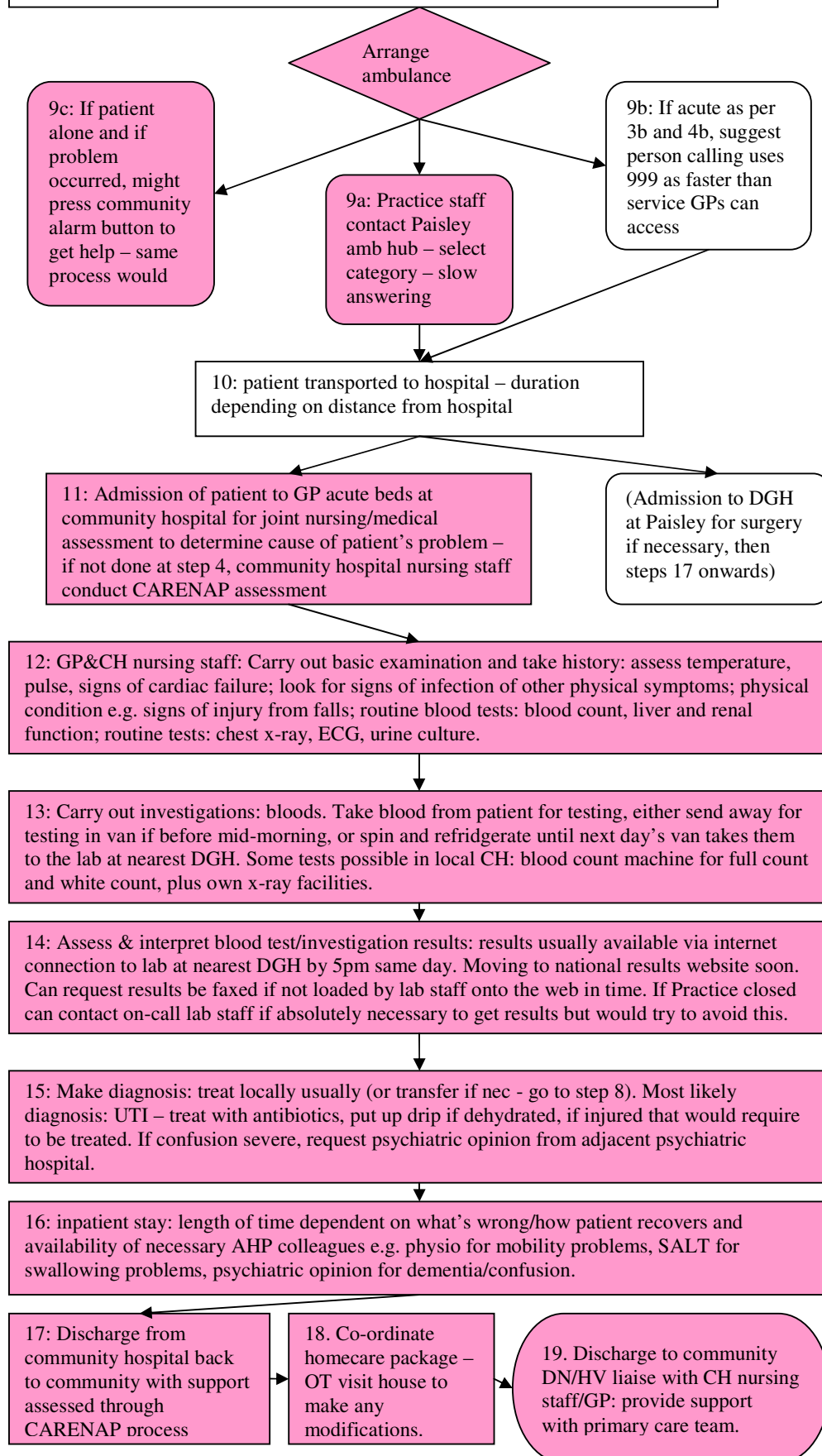
From this perspective, it would appear there were not many differences between the teams and the way they approached the same activity: a similar number and type of agencies and professionals seemed to be involved in the activity surrounding the elderly lady's hypothetical encounter with health services; a similar picture of activity seemed to be presented, including the initial contact by the patient's family or relatives with the Practice, the response from the Practice, the steps taken to assess, investigate and treat the apparent problem including the use of various diagnostic tests and possible admission to hospital, the likely steps taken in order to discharge the patient from hospital and to go back to living in her own home.

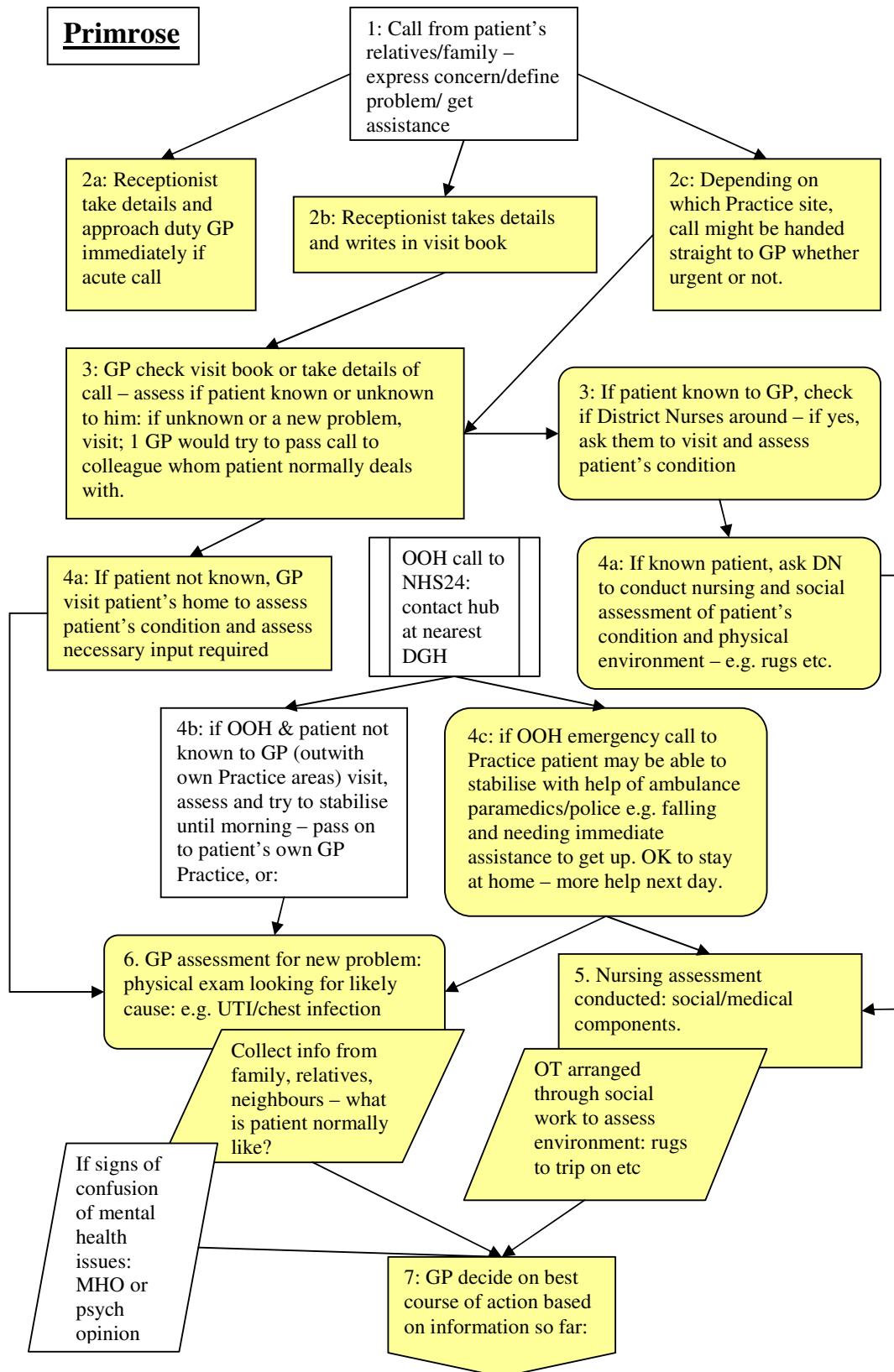
All in all, it seemed the process was similar across the three teams, and therefore the collective learning involved could be presumed to be similar too: a protocol or guideline for health and social care professionals setting out the process for dealing with such patients might be based upon, or look similar to, the list provided on page 153. It would not be unreasonable to suggest that the development of such a guideline or procedure, encapsulating the activity involved in the care of such patients presenting frequently to primary care teams (Kendrick and Conway, 2003), could be regarded as an organisational routine or standard operating procedure. As such, it could represent organisational learning from a commodification/behaviourist or cognitive approach. But such an approach would render this type of everyday routine or mundane aspect of primary care team practice acontextual, and would fail to account for differences which would have a material influence on actual activity in such instances. This could therefore have implications for the patient's experience of health and social care services, as well as the organising through which such activities would be enacted.

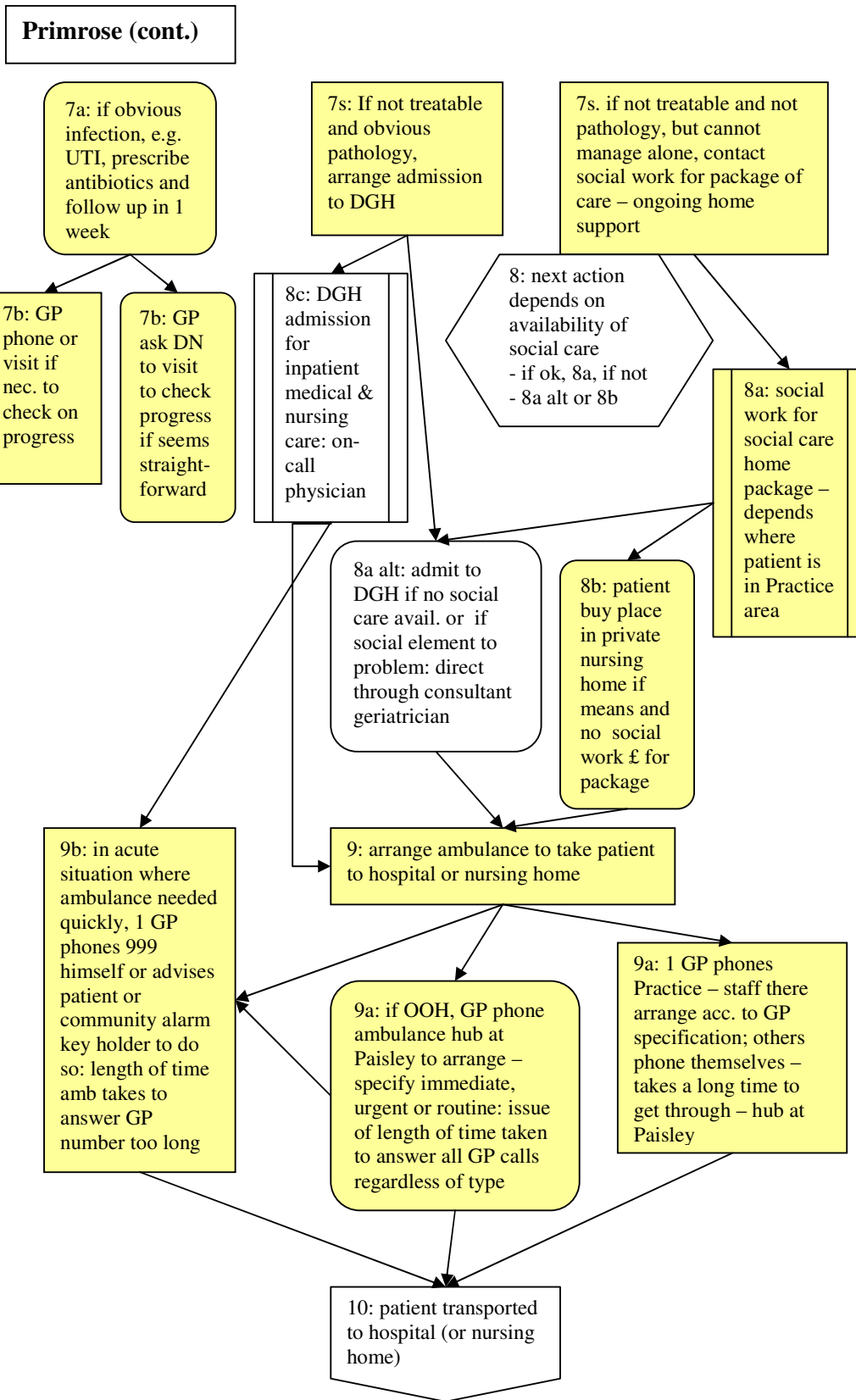
Processual representations (Langley, 1999), based on participants' articulative or proximal accounts (Gherardi, 1999; Nicolini, 2006) in relation to the epistemic object presented, revealed a different picture of team activity. These accounts are presented next in diagrammatic form, beginning with the Rowan (extended rural) team, then the Primrose (nuclear rural) team, and finally the Harebell (extended urban) team. Coloured parts of the diagrams signify activity enacted within the primary care team activity systems, where pink represents Rowan, yellow represents Primrose and blue represents Harebell.

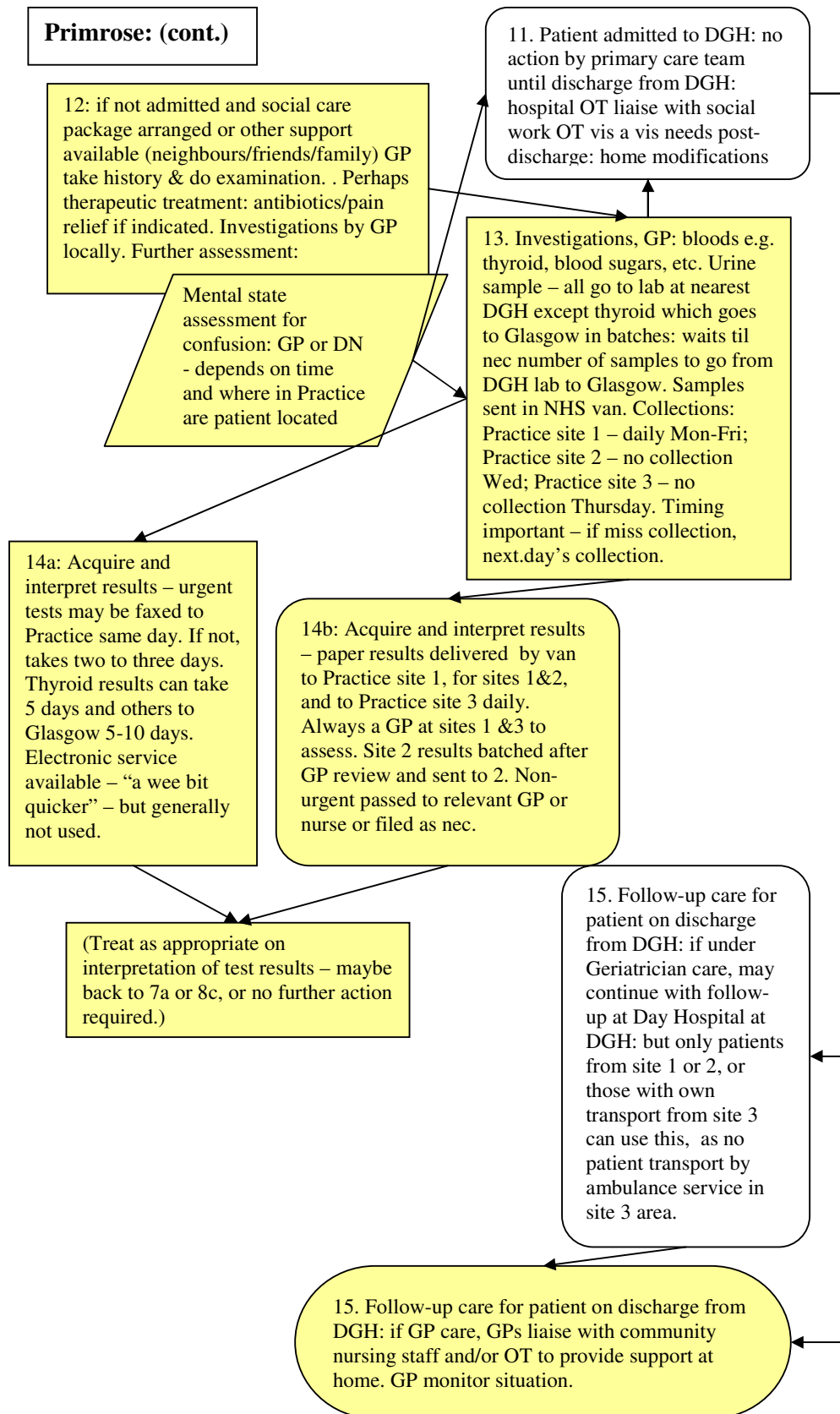


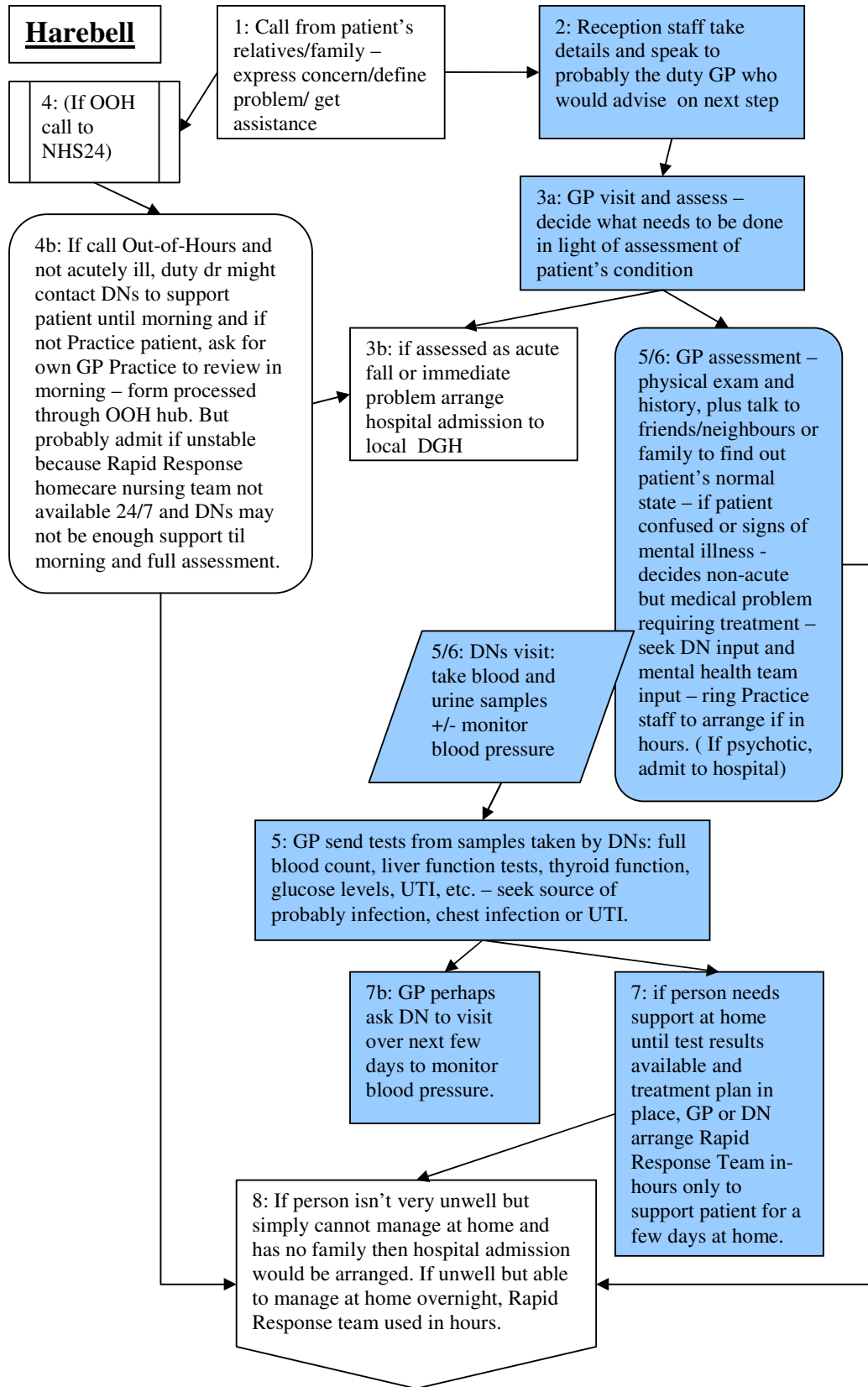
Rowan (cont.): following on from action 8

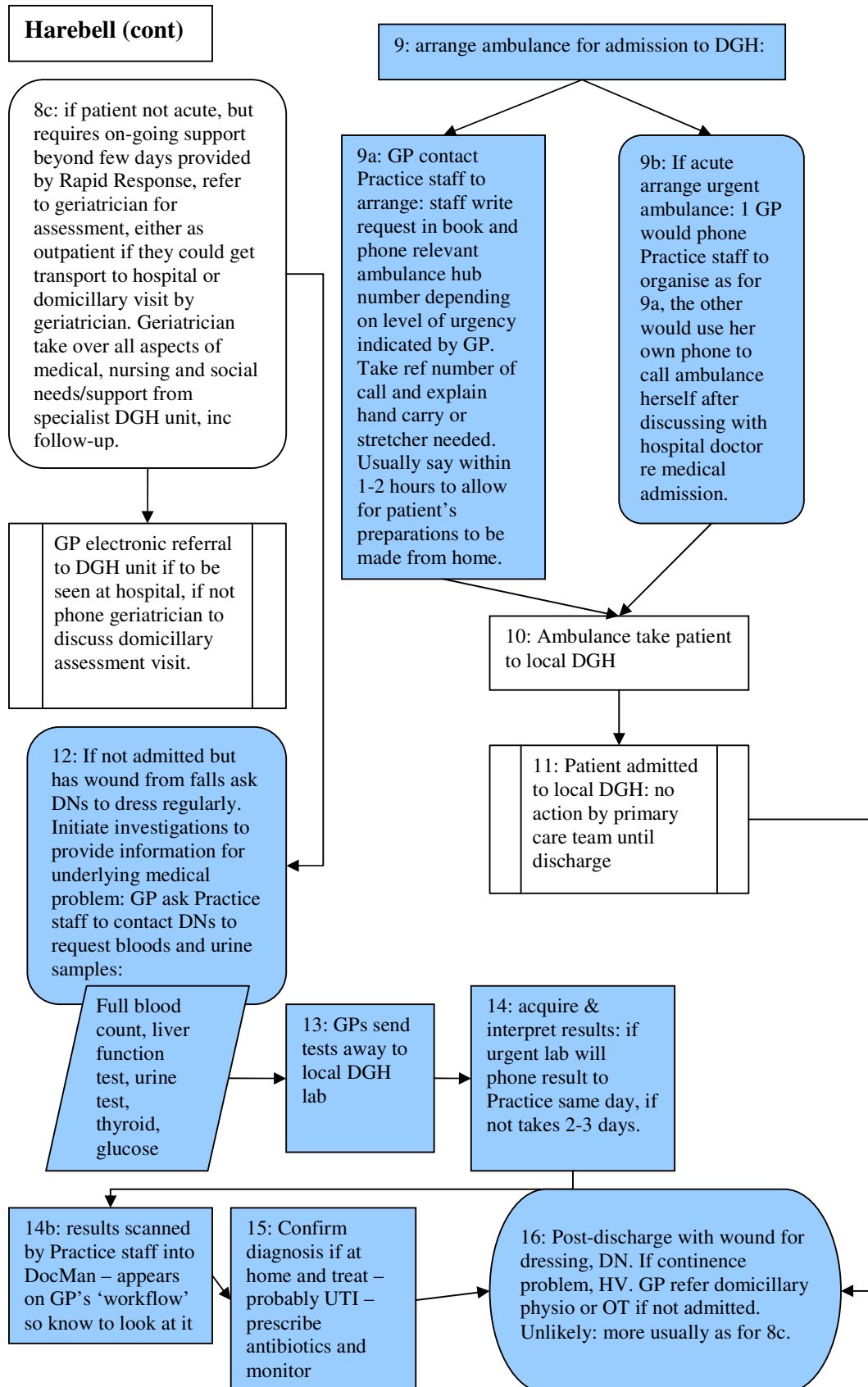












Signposts to context: differences rather than similarities

A focus on similarities is characteristic of certain research approaches when the aim is to generate theory or “good constructs” from data concerning the social phenomena under scrutiny (Eisenhardt, 1989). This reflects the idea that the complexity of social phenomena could or should be reduced in order to identify general issues which may then be universally applied to phenomena within the category under inquiry. As discussed in chapter 5, the focus of this research was practically the reverse: here, the aim was to identify specific issues and attributes about particularly chosen instances of the phenomena of organisational learning in primary care teams, in order to identify exactly the type of characteristics which would be “filtered out” within a reductionist or positivist research paradigm. In other words, the aim was to seek a contextual account of organisational learning in primary care teams through which theoretical insights may be achieved, albeit within a different research paradigm.

The results of the “experimental” exercise conducted with participants through their collective reflection on an “epistemic object” (Miettinen and Virkkunen, 2005), drawn from routine or mundane primary care practice (Kendrick and Conway, 2003) and presented in diagrammatical form, revealed a very different picture to that produced when seeking similarities between accounts. It became evident that activity was undeniably similar across all three teams which echoed the distal view, but from the visual depiction it became equally and importantly evident that activity was simultaneously *different* in each team. This paradoxical finding mirrored the issues raised in the first phase of this research when participants raised self-identified issues of importance within their primary care teams to illustrate their answers to the questions posed about the “who”, “what”, “where”, “when”, “how” and “why” of organisational learning.

In effect, the findings of this second research phase initially suggested that each team *appeared to be doing the same thing differently*. When these differences were considered from an activity theoretical perspective, context began to emerge from the shadows:

For activity theory, contexts are neither containers nor situationally created experiential spaces. Contexts are activity systems. An activity system integrates the subject, the object, and the instruments (material tools as well as signs and symbols) into a unified whole.

(Engestrom, 1993 p.67)

These differences will be introduced next, grouped in two categories: first, the aspects of activity only mentioned as routine in relation to one team's activity but not the activity of the other two; and second, aspects of activity mentioned in more than one team's activity, but where there were differences between teams in relation to such mutuality.

As will become clear through subsequent discussion, these two categories of differences were not as clear-cut as they appeared initially: significant overlaps between them will become evident. However it is helpful to delineate them from one another at first in order to show subsequently the complexity of the linkages between them in relation to the activities of the three teams. This will provide an important insight into the central importance of the relational nature of context and activity, so that it will be possible to discern that not only were teams doing things differently, but that the object of their activity was not the same, despite first impressions.

The two categories of differences ("absolute differences" and "internal category differences") are presented separately in the following two sections. The "internal category differences" will then be discussed in more depth which sets the scene for consideration of the overlaps between these and the apparent "absolute differences" between the three teams' activities.

"Absolute differences" in activity

Given the regularity with which the scenario, presented through the epistemic object exercise, seemed to occur in the routine work of primary care teams, it was illuminating to identify the things which participants from one team either mentioned when the other two teams' participants did not, or did not mention when the other two teams'

participants did. These have been termed “absolute differences” and have been set out in table 6:

Table 6: Absolute differences between teams

Team	Mentioned	Did not mention
Rowan	Community Hospital: - inpatient service - outpatient service - Radiography - SALT - Physiotherapy - Occupational Therapy	- OOH GP - Consultant Geriatrician - DGH medical admission - Rapid Response Team - Pharmacy
Primrose	- Private Nursing Home - Police	- Health Visitor - Physiotherapy
Harebell		- 999 call operator -Community alarm key holder

“Internal category differences” in activity

As well as these absolute differences between the three primary care team activity systems, there were “internal category differences”. These signified apparently similar things mentioned by all teams but which, upon closer consideration of the activity system within which they were identified, exhibited differences which could only be discerned by viewing them through an activity theoretical lens.

These differences related to the following aspects of the activity surrounding the hypothetical, but nonetheless routine, care of an older female patient in primary care teams, including:

- the hospital;
- occupational therapy service;
- mental health input;
- pharmacy provision;
- Rapid Response Team;
- Ambulance service.

On the face of it, these postulated “absolute” and “internal category” differences look unconnected and could be viewed as demonstrating nothing more than that primary care teams were, perhaps predictably, different from one another. It could be argued that this in itself was reason to take a reductionist approach, seeking out the similarities rather than the differences, in order to ‘correct’ for these apparently confounding and seemingly universal contextual differences between each situation and the next.

However, this would be to miss the point entirely and fail to take the opportunity afforded by studying routine activity across the three purposively sampled participating teams. When combined, these differences in teams’ accounts of their usual activity, in relation to the object of identifying and meeting the complex needs of an older female patient, enabled some purchase to be achieved on the slippery concept of context in relation to collective learning. But in order to see this alternative picture, each aspect of each activity system needed to be considered in relation to internal system dynamics, as well as to inter-linked activity system dynamics. In short, the activity of each primary care team required to be seen “in context” in order to demonstrate these differences and from there, to go some way towards explaining why this occurs.

Taking the findings of the initial research phase as the departure point, this chapter has introduced the process and initial findings of the second research phase from an activity theoretical perspective. Findings from the epistemic object exercise have been presented which showed that the activity of each team was different from that of the others, despite surface similarities suggested by more abstract approaches. These differences have been identified and form the basis for discussion in the next chapter.

Chapter 8: Analysis of second research phase findings

The introduction of an “epistemic object” to each participating primary care team in the second phase of this empirical study revealed that their likely object-oriented activities were different from one another despite surface similarities, as illustrated in chapter 7. In this chapter this initial finding from the second research phase will be subjected to further analysis through the theoretical framework of activity theory, in order to account for those emergent differences in activity in relation to the same partially-given (epistemic) object. The findings from this closer analysis of the data offer an explanation for the apparent similarities, but paradoxical differences, in each team’s activity: activities were different across the three teams because the object was constituted differently through the activity of each team. Since activity and context are conceptualised as mutually constitutive in activity theory, this suggests a way of accounting for diversity in the practice or activity of primary care teams which will be discussed in subsequent chapters. In the meantime, the purpose of this chapter is to account for the differences in activity between the three participating teams.

The chapter begins with further analysis of the “internal category differences” identified from the initial analysis of each team’s account of their (epistemic) object-oriented activity in chapter 7. Each of these will each be considered in turn, in relation to their role as mediating artefacts of each participating primary care team’s activity. The “absolute differences” in activities identified in chapter 7 will then be re-considered briefly in light of this exercise. Finally, the way the epistemic object was mutually contested and constituted differently within the three primary care teams, conceptualised as activity systems, will be re-considered through analysis of *internal* activity system tensions or contradictions.

Through this closer analysis of the data, the linkages between primary care teams as activity systems and other related activity systems will be indicated, which provides a necessary step in order to address the research questions posed here.

Introduction: interpreting differences through activity theory

The three accounts of activity presented in chapter 7 demonstrated an everyday aspect of primary care practice which was clearly both complex and complicated in terms of the collective aim and the necessary organising in order to bring that aim to fruition. The partially given object was identified as being broadly similar across the three teams (the elderly lady's problem generated broad agreement about likely assessment, diagnosis and treatment). However, each team's account of their ensuing likely activity related to this apparently common object was different from that of the others.

In chapter 5, the mediated, collective nature of activity which incorporates cultural and historical attributes, was discussed at length. The key concept of mediation was discussed in relation to the philosophical "concept of the ideal", through which meaning could be understood to be attributed to objects (Illyenkov, 1977; Bakhurst, 1997). Using this theoretical concept, analysis of the mediating artefacts employed within each primary care team or activity system, will show that the object was *not* constituted the same way despite initial similarities, but was in fact contested and mutually constituted differently through collective team activity (Blackler and Regan, 2006b).

In the next section, things identified as mutual mediating artefacts in the activity of each team will be analysed further to account for the differences in activity between the three participating primary care teams. These objects, termed "internal category differences" in the initial analysis presented in chapter 7, included the "the hospital", "the ambulance service" and "the rapid response team", which will now be discussed in turn in relation to the activity of each primary care team.

Mutual mediating artefacts of activity: "the hospital"

Each primary care team mentioned "the hospital" in their collective account of activity and in general discussion during the first research phase. During the second phase, through the "epistemic object" exercise, each team's account suggested that the activity surrounding the care of the elderly lady in the example might well involve an admission to "hospital". This arose in discussion sooner in two out of three teams and bears further examination: members of the Harebell and Rowan teams mentioned hospital admission

very early in their collective accounts, which might be thought to indicate similar activity in these two teams. Meanwhile Primrose participants gave a different account of likely activity including the place of the hospital in their narrative, which provided a complex picture of inter-related issues, of which potential hospital admission was only one.

Through fieldwork and reviewing documentation gathered during this research, the complexity of the term “hospital” in relation to the three participating teams became obvious. Although from a distal, acontextual perspective the phrase “hospital admission” may appear to be the same, in fact this is not the case. The term “hospital” carries a variety of meanings, as demonstrated by the following definition:

An institution providing medical or psychiatric care and treatment of patients. Such care may be residential (in-patient), including the care of patients for a whole day and their return home at night (day care). Out-patient services include consultation with specialists by prior appointment, X-rays, laboratory tests, physiotherapy, and accident and emergency services for those requiring urgent care. Most health districts have a *district general hospital* (DGH), which provides sufficient basic services for the population of the district. Some larger hospitals have resources that are more highly specialized, to meet the needs of a wider population, providing so-called *regional* or *supraregional (national)* services. Such hospitals often provide training for medical students (*teaching* or *university hospitals*) and for postgraduate education. Some smaller hospitals – known as *community hospitals* – may be staffed by general practitioners and are intended for people for whom home care is not practicable on social grounds.

(Concise Medical Dictionary, 2007)

If this multiple definition were being followed, two main types of hospital seemed to have mediated the teams’ activities at first glance: two could be classed as “DGHs”, whilst the third could be classed as a “community hospital”. But like so many other terms in the social world, “hospital” is a contested concept and its meaning tends to differ depending on context. As the data presented here will show, the medical dictionary definition proved inadequate when analysing “the hospital” as a mediating artefact of teams’ activities in this research.

In order to gain some insight into the apparently similar but actually different activities of the three participating primary care teams, the place of “the hospital” as a mediating artefact of the likely collective activity of each primary care team will be considered within the teams’ accounts of activity, beginning with the Rowan team.

The hospital within the activity of the Rowan team

The activity of the Rowan team in relation to the epistemic object exercise was very quickly identified as being mediated by the presence of the community hospital as part of this extended primary care team:

Rowan, 2nd stage group interview, epistemic object exercise, 2006:

P1: I suppose the basic thing with the assessment is first of all whether they [team members responding to the call portrayed in the epistemic object exercise] think that person is at risk. If they think they’re [the patient] at risk in the environment, then they would probably look to get them out of that... And that would basically be, well practically most people would arrange admission to hospital – I mean, in theory they should be able to offer social service input at that stage, but rarely that would happen and would be that immediately, and if the patient was at risk, then usually it would be hospital admission for physical assessment first of all and then possibly psychiatric assessment as well.

INT: And where would you – which hospital would she be admitted to?

P1: [community hospital name] usually.

INT: And which type of admission would that be?

P1: It’s an “acute”.

INT: GP beds?

P1: Yeah.

The decision to admit to hospital here reflected the difficulty of accessing adequate home care support through the inter-linked activity system of the local council social work department as it was organised locally. But it also reflected the place of the community hospital within the primary care team. As the data presented in this chapter and chapter 9 will show, the description of “community hospital” within the definition of hospitals on page 169 does not adequately reflect the breadth of activity related to the

community hospital within the Rowan team. A better insight may be offered by the following definition of a community hospital, all aspects of which were present in the Rowan community hospital:

A local hospital, unit or centre providing an appropriate range and format of accessible health care facilities and resources. These will include inpatient and may include outpatient, diagnostic, day care, primary care and outreach services for patients provided by multidisciplinary teams. Medical care is normally led by general practitioners in liaison with consultant, nursing and paramedical colleagues [now called Allied Health Professionals] as necessary. Consultant long-stay beds, primary care nurse-led and midwife services may also be incorporated.

(Ritchie, 1996 p.11)

Community hospitals also routinely dealt with admissions for complex problems, such as that presented by the hypothetical patient in the “epistemic object” exercise, which would be dealt with by the specialty of general practice (Temple, 2002).

The explanation of one participant during an initial research phase discussion about the nature of the work of the local primary care team indicated that the community hospital was an important mediating artefact of local clinicians’ working practice:

Rowan, participant 5, 2005 [GP previously practising in city area]:

INT: So your type of Practice - with the inpatient work at the community hospital and...all of those things - are there other Practices that you know of...that do similar types of role?

P: Not really, no. I mean there *are some*, there are other GP surgeries who have some responsibility with community hospitals... [but] the amount of work that you’re involved in the community hospital - there are not many, as far as I’m aware, there aren’t many Practices that do that... to the extent that we do. But I mean I’m not saying it’s completely unique, I *know* that there are definitely other Practices who have the extended role of looking after inpatients. [Place name] would be an example not far from here and there would be others, presumably in the Highlands.

INT: And what difference does that make to your...working, this extended role?... What are the actual practical implications of that for you?

P: [Pause] That you always feel you should be somewhere else. [Laughter] That's probably the practical implication but, I think it, I mean - on the positive side it provides you with variety, there's no doubt about that and I think it also provides you with a bit of support in that if you [pause] feel that something is *just* outside the remit of ["normal"] general practice you can admit the patient to the hospital quite often for investigation or treatment, and I think actually that's sometimes a *support* rather than - some people might see it as an extra *burden* - but actually it takes a lot of the load off some of your clinical decisions. So I think that's a *benefit*, and a definite practical implication of seeing a patient here in the surgery - if you think that it *might* be something that's maybe that little bit more serious, it can, certainly base line investigations can be done at the hospital *very easily*. And so a chest x-ray, a full blood count - if they've got chest pain you can exclude a heart attack *much* more easily than you could in the ordinary GP setting.

Routinely collected data show that this community hospital had amongst the highest activity figures in Scotland (<http://www.isdscotland.org/isd/4434.html>), which would appear to support this participant's view that it was slightly different from other areas where the primary care team includes a community hospital. There was little doubt from the various accounts gathered in this research that the hospital met a locally perceived need, particularly in view of the geographical positioning and history of the locality. (These issues will be discussed in more detail in chapters 9 and 10).

The local population had never known any other approach to healthcare services, and all the practitioners within the area seemed committed to this model of service:

Rowan, participant 5, 2005:

INT: ...in terms of where you are here in [Rowan], is the hospital a necessary resource for you here?

P: For this area?

INT: Yeah.

P: *I think it is and I think you'll find most of the doctors here will say the same thing. We think it is *very much* a necessity and because of the geography, the distance, the time that it takes to get to a bigger centre - when you think [about] that, it's sometimes a necessity.*

This integral position of the hospital within the local extended primary care team was confirmed by other participants, who explained the extent of integration between the inter-organisational elements of the primary care team, but also the way in which services were being realigned to reflect contemporary healthcare issues without compromising the level of importance attached to this crucial clinical facility:

Rowan, participant 3, 2005:

P: I don't know what you know about the Practice and what we're doing and where we're going, but we've got a big commitment – we're a community hospital Practice, we're an intermediate care Practice... We're in the process of building a new hospital in fact which is just up the hill... The hospital dominates a lot of what we do and... very soon the hospital will be *us*. Because at the moment, you come along here to the Practice and you're only seeing a third of what we do. Out there we've got community hospital practice [GP beds], we've got long term care of the elderly beds, we've got an A&E unit, we've got a maternity unit. We do police surgeon work, so this [gestures to the building where the interview is taking place] is the bit that is recognisable as a Practice to everybody else. I suppose the way I can put it across to you is that if you came back to see us in a year and you walked into the hospital, and you, you'd say at Reception "Where's the Practice?" they'd say "You're in it". And that's how we view it...

This heightened sense of the centrality of the community hospital in local team activity was perceived very positively by the Rowan team, but this did not mean that there were no changes taking place within their view of the way services were organised. Whilst many other areas were trying to focus on what they could do to develop their range of services delivered in primary care, in line with government policy (such as those already provided here through the mediating means of the community hospital), the Rowan

team were reconsidering their provision of what might be regarded as core general practice or primary care, common to most general practices and primary care teams:

Rowan, participant 12, 2005:

INT: So the hospital is really quite central to what you do here?

P: Ehm, possibly too much. I think that's been among the major criticisms in the past – to some extent, it has been difficult to make as many gains on the primary care side as I would like to have seen, and to that extent I think the new GMS contract [2003] has helped because that has refocused a lot of effort on the primary care side [routine general practice]. Also we've been involved with, in the Primary Care Collaborative...and that was quite a positive move in terms of focusing on the primary care side of things and – I mean, I don't think it's been harmful in the sense that the work we've done on the hospital side has questioned a lot of automatic assumptions about what can be done in the community hospital, and the links we've built with some of the more forward-thinking consultants, I think have helped that. But I think it's probably gone about as far as it can go... and I think we do need to refocus, particularly in light of demographic change, about the increasing number of the elderly and this kind of thing. We have to refocus services on providing services in the community and not in hospital beds, but we're quite well placed to do that now really. We've brought back [to the community hospital] quite a lot of stuff that some people think would have to go to a District General and shown that it can be done... locally, and I think we now maybe need to move to towards looking at community services, and as I say, most of these are pretty well on track, so that hopefully, in future, the hospital will not be where everything revolves around, it will be in the Resource Centre for the area... I think that because we have quite a large team there's quite a lot that can be decided here – it's one of the big advantages of the extended primary care because you have the hospital resource there, and people involved on that side, and the community services and the AHPs and so on, and there is quite a lot that can be done. It is quite complex because people have different ideas and not everybody agrees...but it does give you the possibility if you *can* get people to agree and work together on developing services in a particular way.

As this participant indicated, even within primary care teams of an apparently similar nature, this particular team had pushed the extent of their practice as far as possible in order to deal with more serious problems. This had resulted in a distinctive form of practice locally which might be regarded as unwise or even unsafe amongst other clinicians who did not understand the clinical challenges posed by the geographical and topographical location of the team. Again, the issue of labels masking actual activity was raised by participants to illustrate this point:

Rowan, participant 3, 2005:

P: The trouble with intermediate care is that ...I've read things in...something like "GP" or "Pulse" - ..."we do intermediate care", in the comics [vernacular for the GP popular non-academic press] and you know, intermediate care down south [England & Wales] means that you keep [elderly patients] at home with a urinary tract infection... People are bidding [for extra money as a locally enhanced service through the nGMS contract] for things like doing INRs [blood monitoring for warfarin treatment] and, you know...

INT: Have you always done that?

P: Yes we have, so we don't even think about that. The nurses do that now. We don't get involved in that any more.

INT: So how do other Practices react if you say, "our nurses do that. We don't"?

P: I think they find what we do *frightening*. They're so far removed from it that they *worry* about, well, there's usually a worry that what we do is not *safe*, or, "shouldn't a consultant be doing that?" or "will that be as good as a consultant led service?" And we say, "well in actual fact, it *is* as good because we audit it"... I suppose at the very sharp end of what we do is things like - we were one of the first practices to thrombolyse patients, and we *retain* them after thrombolysis. We look after them ourselves. We are one of the few Practices to have a rural cardiac rehab nurse .. and we've got our own rehab programme that links in with physiotherapy. So we take them through from initial presentation, straight through to the end of rehabilitation, twelve weeks down the line. We do *all* of that, bar sending them off for exercise tests and echoes and things like that. And we've done that by building links with quality units like Dr X [consultant] in the [tertiary hospital] in Glasgow.

Therefore, through its mediating role the hospital in the Rowan activity system carried a range of values and beliefs of local clinicians from various disciplines. This enabled the local extended primary care team members to provide many services, frequently the activity of secondary care District General Hospitals, for their local population. This also seemed to reflect the values of the local population which became evident through the major organisational restructuring of health services in the area during the course of the fieldwork for this research and resulted in the dissolution of the Argyll and Clyde Health Board in 2005. This meant that, although no patients were included within the sampling framework granted ethical approval for this research, patients views were expressed during a series of public consultation meetings held in each area affected by the change, focusing on future healthcare provision in the Argyll and Clyde area (SEHD, 2005d). These meetings were recorded and made available through the internet for public consideration (at www.sehd.scot.nhs.uk/argyllandclyde/Publicmeetings). In October 2005, a public meeting was held in the Rowan area and during the discussion support for the local community hospital was expressed by the members of the public attending.

Perhaps this was due to the obvious support their local hospital was receiving in the form of a substantial development project, for which the Practice partners had long fought (participants 3, 4, 5, 6, 10, 11, 12, 2005). Dating back to the early 1980s (participant 12, 2005) the local clinicians had advocated a new facility to support their increasingly complex clinical practice which led them to place the hospital at centre stage in the organisation of their own Practice in order to facilitate their clinical practice or activity. This had been done to the extent of developing a unique “integrated” model of organising for all those who would be working within the new health and social care facility, as this would incorporate the Practice as part of the overall provision. As indicated by participant 3 (see page 173), this meant more than simply locating their Practice within a new building: their Practice manager would be managing all administrative staff regardless of their originating employing organisation, in a new hybrid role (participants 1, 2, 3, 4, 10, 12, 2005). This suggested the presence of inner contradictions within the activity system driven by local needs to move away from a lower complexity/high centralisation model often seen in healthcare services, towards a “collectively and expansively mastered” activity model (high complexity/low centralisation):

As complexity increases, it seems that the inherent cognitive, communicative and motivational contradictions of both rationalized and humanized activity systems press toward novel solutions. Essential in these solutions is that decentralized work teams begin to reconceptualize and plan the *objects* and *products* – and thereby also the organizational forms – of their work on a long-term basis. Instead of asking only, How? as in humanized activity, teams and work communities start asking also Why? For whom? Where to? As a consequence, work teams and communities are engaged in modeling and reconstructing their own entire activity systems. This implies that high-level theoretical and conceptual instruments are collectively developed and employed as part of the everyday activity.

(Engestrom, 1993 p.71)

The hospital could be seen to be an important aspect of the life of the local community as a whole, where a distinctive and sometimes crucial service was provided by local clinicians from all disciplines, in liaison with visiting clinicians from tertiary hospitals, to meet local needs. Its mediating role in terms of clinical activity within the area both supported, and was supported by, a wide primary care team membership. The mediating artefact of the community hospital could be seen to influence the collective subject within the activity system and also acted as a pivot for the way local clinicians organised their practice or activity in order to meet local population healthcare needs.

The content of local mediated practice or activity will be discussed in chapter 9 and the historical and spatial aspect of activity will be discussed in chapter 10. For the purposes of this chapter, the important issue is the way the workforce was organised in relation to the object of collective activity within which “the hospital” played a crucial mediating role as part of the local pattern of extended primary care. In specific terms of the activity identified through the epistemic object exercise, the hospital provided a safety net which enabled local team members to maintain and support the local population as near to their homes as possible. This included the provision of an alternative to home care support due to the dearth of social work capacity in the area, which would often have met some of these needs just as well.

The hospital within the activity of the Harebell team

The hospital for the Harebell team mediated their activity in almost as immediate a way as in Rowan, but in a quite different sense. In relation to the epistemic object exercise, the hospital was central to the most likely activity identified by team members. The visual representation of their activity demonstrates the less extensive primary care role within this case study site, with fewer actions being undertaken within the team and fundamentally different expectations of the role of primary care within this area, in contrast to the Rowan area in particular, as exemplified by participants' quotes.

Beginning with the description of the most likely activity in relation to the same partially given object as that presented to the other two teams, those within the Harebell area revealed a form of activity different from that of the Rowan team. Depending on the patient's condition, the team would try to investigate and treat the person at home if they were not in need of 24 hour nursing care. However, if the doctor felt the patient was acutely ill or unable to manage at home, the activity was likely to involve hospital admission. This would be the case particularly if no social work support care package was available. In such instances, this would involve a referral to the DGH consultant geriatrician either for a short hospital stay in order to treat an "acute" problem such as a chest or urinary infection, or to deal with a more persistent potential problem:

Harebell, group interview, epistemic object exercise 2nd stage, 2006:

P2: You would probably end up having to go out to see the person, and assess them for yourself and then - depending on whether it was an acute situation or something, you might need to hospitalise. But more times than not you probably wouldn't - you would probably be looking to get some investigations done – maybe some blood tests and maybe getting the district nurses to go in if it was more an issue – because if they had fallen they might have a wound or something like that...

P3: ...I think it's usually obvious if you need an acute admission, because the situation is usually that they're either physically very unwell or it's – if there's family involved, usually that would be the situation. Sometimes with people, where there are no family involved, it will be an admission because they maybe are just not able to look after themselves. But if there's family involved, it would

really be down to probably somebody being physically unwell, either through a chest infection or... [but if the patient cannot manage at home but does not seem to be acutely unwell] I think then basically you're looking for something like a geriatric assessment.

P2: Hmm-hmm.

P3: I think if things are going to be prolonged, then I think you're looking at having one of the geriatrician's having a look at them and – because they can provide a package of care long term with regards to home help and *anything* the patient might need, so I think that if there isn't an easy answer to the problem then I think we have to refer on and they get more professional input.

INT: OK, and that's also at the local hospital?

P3: Yeah, it's a special unit within the hospital called the [name] which specialises in care of the elderly, looking at *all* aspects of their care, not just the medical...

INT: Do you have any input from physios or OTs for people like this, or...? In what circumstances would you use their services?

P3: Well I had someone this morning. I'd gone out to see him and he was having mobility problems and I asked the domiciliary physio to go and see him, and she'd been in and assessed him and... she then suggested that he was having difficulty breathing... We organised Occupational Therapy... this morning. So, it's usually just a chain of events but - the advantage, you know, as I mentioned of [the DGH consultant geriatrician unit] is that they possibly try to tie that all up, and send the patient home with all these things.

INT: so it's a co-ordinated approach?

P3: They tend to be very good at co-ordinating it and giving somebody a *package* of care. They're probably *better* than we are at organising individual...

Although the account of primary care team activity ended when a referral was made to secondary care services at the DGH to enact collectively the same likely set of actions as those identified in Rowan, there were two major differences in this activity. Firstly, although the referral to the DGH geriatrician would be highly likely to result in the same actions as those performed in the Rowan community hospital, this did not mean that the same activity would take place. This is because the mediated activity may have

been characterised by different values, beliefs and motives as frequently noted in relation to different approaches to medicine (Engestrom, 1993).

This was also characteristic of the conceptualisation of the role of primary care within the area, where views about health services were centred upon the importance within the locality of the District General Hospital. This was reflected in the public meeting as part of the consultation process in October 2005 over the future of Argyll and Clyde area services, as well as in the quotes from participants (SEHD, 2005d). Fieldnotes from the second research phase also recorded the presence of posters in the local Member of Parliament's office window urging people to "Fight the Cuts" at the local hospital (research fieldnotes, August 2006).

The widespread public support for the existing secondary care-driven model of care reflected the values within the area, which in turn may be seen to be reflected in the activity of the primary care team, although the relationship between these two areas of local healthcare provision were by no means harmonious. This resulted in various tensions or contradictions in relation to the respective roles and activity of the DGH and primary care team:

Harebell, (clinical) participant 3, 1st stage interview, 2005:

P: ...in a place like [Harebell locality] – it would make sense to have *everything* in [locality] in the CHP, which would be the hospital [DGH], the whole - everything under health would be in the CHP. But, that's a step too far at this stage, and... the CHP will just be primary care and the community. And that creates - it makes it simpler in some ways, but it means you lose a potential opportunity. ...I'm talking about various barriers – one of the biggest barriers is between primary and secondary care, in terms of communication - we're [all] in health but we're totally different animals: behave differently, resource differently, sometimes collaborating but sometimes - not competing, but just not integrating as well as we could. There's areas where we do, but across the patch it's not really...

However, public support for local secondary care was exposed as a tension by the publication of the clinical strategy of the former Argyll and Clyde Health Board (Argyll

& Clyde NHS Board, 2005), which in turn reflected the direction of stated government policy to move away from centralised hospital services provided in specialised units (for patients like the one in the epistemic object exercise), towards services provided within the community or within community resource centres based around extended primary care teams (Kerr, 2005a). In contrast to the reception it received in the Rowan and Primrose areas (participants from the Rowan team even wrote a letter to the national press supporting the proposed clinical strategy), the clinical strategy was not received favourably locally within the Harebell team's area:

Harebell, participant 3, 2005:

P: I think a lot of it gets caught up in party politics and hospital, close the hospital: the big issue here, "close the hospital". And the thing was, that Argyll & Clyde - which centred around having one hospital in [place] and then closing [local DGH] and [another DGH in another place within Argyll & Clyde]. Which didn't go down very well here –

INT: With the local population?

P Yes.

INT: And what about with yourselves? [local GPs]

P Well, I suppose there was a degree of fatalism about it, and there was a feeling of, "well if that's what you're going to do, well, that's what you're going to do", you know? And there wasn't a massive ground swell from the medical community against it, from primary care anyway. A few of us sort of tutted and said "okay what does that leave us?" and "what are you going to give us?" Because what I was thinking – from a personal point of view – was, yeah, you maybe don't need an acute blue light hospital right here, but you do need lots of access to diagnostics and give us all the things that are going to help us keep people out of hospital in the first place. Then we can maybe say, "right, if you're really sick then you go 18 miles up the road and get Rolls Royce treatment, and as soon as you're stable you come back down into some kind of intermediate, integrated care process." The problem was there was never any actual chance to have that conversation. The strategy was botched in the first place, so even the good things they were saying got tainted by the [political] nonsense. Anyway, here we are.

The issues identified by participant 3 (above) were not markedly different to those facing the other two teams within this study, in relation to primary care activity when the District General Hospital was situated at some distance from the team. But for the Harebell team, it was literally just along the road from the Practice and therefore in the heart of the local community. This central role for the hospital in overall local clinical activity, and therefore its impact upon the activity of the Harebell team, was identified clearly by another participant:

Harebell, (managerial) participant 13, 2005:

P We're going at best to have less services in the [name local DGH] serving the population of [locality place name] How can we configure our services and utilise the resources or redesign the resources that we have within [locality] *currently* to provide the healthcare in a safe and sustainable manner as part of that redesign process?... But I think that big, *big* issue of how our services are going to be configured and what it's going to mean for primary care, and how we provide our services in conjunction with secondary care here and then in conjunction with other hospitals who it may well be that we refer directly to, the [tertiary hospital] for example, rather than the [local DGH], and that's still going to be a huge change. It shouldn't be, but in terms of mentality, in terms of public perception, it's going to be very difficult...

INT: So the focus is very much on the Acute side?

P It's been driven by the ac[ute] – very much so... The clinical redesign is very much around problems within Acute services, in my opinion certainly, yes. There are other aspects around mental health and care in the community, and [the] closure of hospitals, but really [what's] of concern is in terms of the secondary care aspects and how that will impact on primary care.

INT: Rather than the other way around – how primary care impacts on the Acute services and how it drives that demand?

P I think it's pretty much ever been reactive rather than – if we had sufficient doctors and sufficient money and there was no limit to how we spent our money, then everyone I think would be happier to continue to work as they are working in primary care, rather than –

INT: And have that full service?

P I'm generalising a bit, but yes. I think obviously there would be things one would like to change, there would be developments that could be considered and implemented to improve services from a primary care perspective – you know, greater infrastructure within secondary care – but really I think that what's happened over the past few years is that it's the other way about really. We have an impending crisis really in terms of the way we provide our secondary care, and that's going to impact clearly on how we provide primary care services...hence some of the resentment that's already been there.

It is possible to see that although the hospital mediated the activity in the Harebell team, just as “the hospital” could be seen to mediate the activity of the Rowan team, the hospital itself represented a completely different set of values, beliefs and norms in relation to the Harebell primary care team as an activity system. The Harebell team did not have a role to play in the hospital other than to make referrals to clinicians there. They did not (in this situation) actually carry out any actions themselves, in direct contrast to their colleagues in the Rowan area. This was reflected in local concern to protect the status of their local District General Hospital: in the public consultation over the future of healthcare services in 2005, the protection of the hospital and reversal of the published Argyll and Clyde Health Board's clinical strategy were the main issues raised by members of the public (view at www.sehd.scot.nhs.uk/argyllandclyde/Publicmeetings).

This seemed to be creating a source of tension for the Harebell team as an activity system, which was likely to become more obvious: government and professional policies concerning the move of services from secondary care in the form of the DGH to primary care, were likely to place a strain on certain aspects of the local activity system or team, through the so-called “redesign” or “reconfiguration” of services discussed by participants. These efforts were intended to produce a different range of clinical activities performed by a newly extended primary care team:

For example, when new types of patients begin to enter a medical activity system, the doctors' material and conceptual tools for diagnosis and treatment may become inadequate. A secondary contradiction thus arises between the novel object and the traditional instruments of the doctors' work activity. These secondary contradictions of the activity are the moving force behind

disturbances and innovations, and eventually behind the change and development of the system. They cannot be eliminated or fixed with separate remedies. They get aggravated over time and eventually tend to lead to an overall crisis of the activity system. In this process, practitioners may experience them as overwhelming “double binds”, dilemmas where all available alternatives are equally unacceptable.

(Engestrom, 1993 pp.72-73)

In the meantime, the District General Hospital continued to play a crucial mediating role in the activity of the Harebell team.

The hospital within the activity of the Primrose team

The activity of the Primrose team was perhaps the most obviously complex in terms of the way it was mediated. As the diagrammatic representation of Primrose activity in relation to the “epistemic object” exercise demonstrates, “the hospital” was one of a range of mediating artefacts identified to deal with the hypothetical patient’s problem; other options identified by participants included support provided through the local Council social work department (in the form of the Rapid Response Team) or the use of local private care home facilities in particular circumstances. Through the example of the Primrose team, it became evident that the mediating option employed in any given situation would have a direct influence on actual activity. A variety of issues involving other aspects of the Primrose activity system, as well as the other activity systems with which they overlapped to an extent, seemed to contribute to this complexity.

Perhaps the most obvious influence on likely Primrose team activity in relation to the particular patient scenario presented was the location within the overall Practice area of the hypothetical patient’s home. The highly spatially distributed nature of the Primrose team’s location meant that quite different activities occurred within what could be regarded as one Practice area. In fact it would be more accurate to acknowledge that the structure of the Practice organisation incorporated three distinct communities or mini activity systems, although there were considerable overlaps between them. This was evident in that services provided by related activity systems, which would be available routinely to patients in one area of the overall Practice, were not available in other areas

of the Practice. This spatial distribution also meant that time became an important factor in local team activity, since the travelling time between parts of the Practice area had an impact on the nature of the services provided, and vice versa. Therefore, these spatial and related temporal characteristics of the team's area meant the patient's location immediately suggested the possible range of mediating artefacts relating to the team's likely activity. This was especially the case in relation to other interlinked local activity systems (for example, the social work department and the private care home), although different team members might take different courses of action from one another in the same situation:

Primrose, group interview, epistemic object exercise, 2006:

P2: You'd have to decide if she's safe to be on her own, and if she's not safe to be on her own, can you get extra help?... If you can't - you'd have to get social work.

P4: Directly or through the [District] nurses?

P2: I would go directly at that point. If you're there, and –

INT: So what would you do? Would you phone them from the house, or would you...?

P1: I think you would phone them from – it depends on the circumstances - because sometimes you phone social work and they phone you back, so sometimes it's easier to get back to the surgery...

P2: Yeah. I must say, I probably don't phone them that often in that situation, because it's difficult just in that snapshot and you think “well, this patient needs *a lot more* input than they're getting right now and they need it today”. And in my experience [social work] can't necessarily arrange that package on that day, so they'll end up going into hospital.

INT: So where would they go?

P2: Into [name of nearest hospital].

The nearest hospital to the Primrose team had the title of District General Hospital, but in actual fact it would perhaps be better described as a “Rural General Hospital” (RGH). This as yet ill-defined term generally refers to those small secondary care hospitals found in rural areas with small conurbations, which provide a limited range of consultant-led services but which have been under pressure following the increasing

specialisation within the medical profession since the 1993 (DoH, 1993; Temple, 2002). The following description, taken from a key policy document, offers a good approximation:

We see the RGH as providing care in the following areas.:

- > Emergency medical care: triage, diagnosis; resuscitation and stabilisation – treat where possible, transfer when necessary;
- > Locally based routine elective care: diagnosis, treatment or transfer and follow up;
- > Care for chronic illness: care of the elderly, stroke and diabetic care and renal dialysis.

Collaboration is key to ensuring that this model is effective. All rural general hospitals must have defined links (e.g. shared posts, shared rotas, etc) to each other and with larger hospitals.

(Kerr, 2005b p.41)

The local complexity of Primrose team activity arose early in the collective discussion and demonstrated an interesting aspect of activity within the Primrose team, in that the nearer to the RGH the patient lived, the less likely they would be admitted to the RGH, since the GP would be able to request assistance for the patient from the social work Rapid Response Team (see collective discussion below). This service provided support for patients so that they could remain in their own homes, although it excluded nursing provision (participant 9, 2005). However, the more remote or further away that the patient was located from the nearby town where the RGH was situated, the less likely they would be to receive such support to enable them to remain at home, and the more likely a hospital admission would become. The difficulty for the Primrose team was that most of their patients would be unable to receive such a service because they were too far away, with obvious implications for team activity:

Primrose, group interview, epistemic object exercise, 2006:

INT: So where would they go?

P2: Into [nearby RGH]. That's not ideal, but...

P1: Hmm.

P2: ...if they were unsafe to be at home - that doesn't necessarily mean they need to be in a hospital, but in order to get care for them at home, it's virtually impossible to do that in a few hours really.

P1: I think that's the sort of thing that depends on site [within the overall Practice area] – if they were closer to [place where RGH situated], if they were on the [place] road way –

P2: That's true, then they would get the RRT –

INT: Is that the Rapid Response Team?

P1/P2: Yes / Yeah

P1: So you can get –

P2: Yeah, I think we tend to forget, well, we don't forget, there is that I suppose...

P4: It's a 24 hour service, it's the only 24 hour service that there is. The district nurses are only 9-5.

P2: But it only goes as far as – it only covers a small patch of our patient population. It covers the [name] area and [place name at one end of one of the three overall Practice communities], I think...

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As the segment of collective discussion suggests, hospital admission was not necessarily viewed by the Primrose team as the clinically indicated course of action. The discussion indicated that local clinicians perceived a more appropriate form of clinical care in such a situation might be to support the patient at home with clinical input from the patient's local GP and primary care team colleagues. However, aspects of the local inter-linking activity systems meant that this was not always possible, principally due to the way related support services, such as the district nurses, were organised (division of labour) and funded (mediating artefact of budgetary constraints together with funding rules). This seemed to give rise to a situation - identified as "not ideal" by participant 2 - whereby patients who did *not* require the type of service provided by the Rural General Hospital were admitted to it, apparently because one team object (patient safety) was in contradiction with other aspects of the activity system (the way the primary care team activity system and inter-linked activity systems' services were organised across the whole Practice area):

Primrose, group interview, epistemic object exercise, 2006:

P3: ...if they needed to go in [to hospital] for medical reasons, because they were unwell and they needed medical attention in hospital, straightforward – you just phone the Medical SHO and admit them directly. If it was a social admission because they were not coping at home and there was nothing else you could do, then I would try and get hold of [name], who's the geriatrician, and say –

INT: Is that the one that comes here to talk to you?

P3: She comes to the [name] - to the nursing home - once a month, yeah. So I would speak to the on-call geriatrician and see if she would admit them directly. I think that it would be more likely that they would go in under the medical physician.

INT: So basically, you may get forced into doing that just because you can't do anything else?

P3: Yeah.

The mention here of the professional interaction with the geriatrician from the nearby RGH offers an insight into the range of activity with which the local team were involved. The allusion is to work undertaken by the local team in providing clinical services for elderly patients residing in local care homes (previously known as nursing homes) following a change in policy within the nearby RGH regarding elderly patients who had been in what were known as “long stay” beds, under the care of the consultant geriatrician. Changes in service had seen the responsibility for such patients shift from NHS responsibility to local council social work responsibility, with a resultant relocation of patients from District and Rural General Hospitals into local care homes, where places were funded by the social work department and patients were registered with local GPs just like other local residents.

In the case of the Primrose team, the local GPs had established a professional link with the local geriatrician in order to smooth this process and to alleviate local professional tensions which had been created, offering the geriatrician some reassurance about the standard of care her previous patients were receiving as well as providing a mechanism whereby she could retain an on-going role in their care and offer professional support for the local GPs (participant 2, 2005). This demonstrated the potential range of activity

which could be undertaken by the team in relation to the patient in the epistemic object exercise, in that similar patients were cared for by the local team in local care homes.

In fact, the primary focus of the Primrose team's likely activity in relation to the epistemic object exercise seemed to be risk stratification and managing the situation safely for the patient. But this decision would not always be clear-cut and contextual issues were at the heart of the choice made in relation to the situation. If adequate support could be provided for the patient to remain at home, primary care team members would carry out the necessary investigations themselves resulting in a quite different pattern of activity from that which was evident when adequate support was *not* available, or if the clinician felt that inpatient care was clinically indicated:

P1: Yeah, because you're still trying to strati[fy] – well, you're trying to risk-manage it. You try to stratify – is this immediate? If the person's got obvious pathology – and not only pathology, but needs a hospital admission, do you think there's obvious pathology that needs some more investigation? Do you think they might have something? So do you do an investigation and then do the pathology? Or is there no sign of pathology at all, in which case you'd be looking at disposal for this woman, and is it disposal via social care or is she more able? And if she is, is it disposal via nursing input?

Although the team members present seemed to agree about what would be the most likely course of events in such a situation, new aspects of this activity came to light during the course of the collective discussion which demonstrated how much local knowledge practitioners needed about other inter-linking activity systems:

Primrose, group interview, epistemic object exercise, 2006:

INT: Who's involved in that team [Rapid Response Team]?

P4: It's a social work team, but the officer in charge *is* a nurse but she's a social work employee – she's not employed as a nurse, but she does have a nursing background...

INT: So if you're ringing social work for patients who live in *other* areas in your patch, is that a different social work office?

P2: No, it's the same... office.

P1: Yeah, but it's a different number –

P2: Oh yes, sorry –

P1: You have to use a different number, whereas you normally go through and generally speak to the on-call social worker. If it's a really urg – or otherwise you go through to an OT – who again, is [a] social work [employee]

P4: Would you not phone eh, [name], at [Practice site 3] – the home help organiser?

P1: I wouldn't actually, no [sounds surprised, as if didn't know about this option] – I could find out if, is this something that she does?

P4: Could you?

P1: I could, yeah.

P2: I have found the duty – the social work department helpful, but they are constrained, so in that situation if I phoned them and asked to speak to the duty social worker - and usually you do get one fairly quickly on the phone - but then you're left for a few hours, leaving this person who's precarious, then maybe more than a few a hours – it could be a day or two, so...

INT: So then you end up admitting them to the [name] Hospital?

P2: Hmm, hmm – yep.

As the discussion presented here demonstrates, “the hospital” was only one of several mediating artefacts upon the object of activity for the Primrose team. Sometimes decisions about how to mediate the object presented in the epistemic object exercise were not confined to the professionals within the primary care team activity system: one team representative present indicated the active presence of the obvious activity system subject who often remains silent in such discussions, namely the patient themselves:

P1: I have come up quite recently with a similar sort of case, where someone wasn't coping. They were self funding and they bought themselves into...the local nursing home and by-passed the whole lot [social work rules regarding funding for free personal care] – they just said “we'll pay for it just now, and then we'll go through social work and try and get the funding, but it'll save time”, and the family then said, “go ahead”. Then again, the person didn't have an acute medical need, she had medical problems but not an acute thing. So again, that was something that we – because there are beds available in the local residential institutions. The difficulty is funding them...

Therefore within the Primrose team the local version of “the hospital” was an important mediating artefact but it did not necessarily occupy the same central role as the local versions did in the other two teams’ accounts of likely activity, as discussed in more detail in chapter 10. However, the hospital did mediate the activity of the Primrose team to a greater or lesser degree and this had an impact on Primrose team activity in relation to other inter-linking local activity systems as they sought to meet the healthcare needs of the local population:

Participant 9, Primrose, 2005:

P9: ...keeping people at home for longer, early hospital discharges, this kind of thing - which we don’t have so much of because the culture in the hospital is actually to keep people *in the hospital* locally... [for] as *long* as possible - and then chuck them out at half past four on a Friday afternoon! [laughs]

INT: Why do they do that?

P9: I don’t know. It’s a very *medically* led hospital and the doctors don’t think that people should be at home. I think. Basically.

INT: Well... you’re trying to actually do the opposite?

P9: Yeah. So the district nursing service is nine till five. [uptone, ironical].

INT: So who does all the - you know, in the evening?

P9: In town [place name where nearby RGH located] there’s an outreach team that do sort of crisis interventions and that kind of thing, and they’re there till about nine o’clock. Palliative care - cancer people can get Marie Curie out-of-hours, but - it’s a nine to five district nursing service. And that has - that’s quite constraining.

INT: What impact does that have then?

P9: It means you can look after palliative patients with cancer, but you can’t look after other palliative [patients], like end stage patients with end stage cardiac, end stage COPD, stroke... And we can support carers, but if there’s not a *fit* carer then, that’s not really very helpful. [Out-of-hours it sometimes] just goes wrong.

INT: So what happens then?

P9: They get admitted [to the RGH].

It seemed the hospital performed a safety net role within the Primrose primary care team but it also created some of the need for its own service by mediating team activity in particular ways.

The mediating role of “the hospital” in the responses of each of the three teams studied to the epistemic object exercise offered an insight into the complexity and inter-linking nature of activity systems involved in providing local services. This was most obvious in relation to the response of the Primrose team participants, where “the hospital” was explicitly only one of a range of possible mediating options. However, the same complexities were also evident in the accounts of the other two teams. This directed attention to the other “internal category differences” between mediating means, especially in relation to the Ambulance Service and the Rapid Response Team. The nature of the Ambulance Service as a mediating artefact of teams’ activities will be analysed in the next section.

Mutual mediating artefacts of activity: Ambulance Service

Whilst everyday experience might suggest that differences between hospitals serving different local areas were likely to arise, this may seem less likely in relation to the Ambulance Service. Arranging an ambulance to go to hospital would probably appear to be a routine action to most people, an unlikely subject of discussion. However when primary care team members reflected on an area of routine practice or activity, through the epistemic object exercise, this otherwise mundane area of practice became a topic of lively discussion. This process revealed the ambulance service as a mediating artefact of teams’ activities which exhibited similarities and differences across the teams in much the same way as the other related mediating means identified through the exercise.

The ambulance arose in all three group discussions as the mutual method of facilitating teams’ actions of admitting the patient to hospital. However some unexpected differences in activity emerged in relation to the way individual clinicians practised and in the way ambulance services were organised. These issues were more salient in some teams than others, a situation which could be accounted for by conceptualising activity as context.

Individual clinicians' practice – how to arrange an ambulance

When talking through the process of admitting the hypothetical patient to hospital, differences emerged in the way individual clinicians within the same team approached this task. This occurred in all three participating teams, apparently for similar reasons. Through their accounts of this aspect of their activity, clinicians exposed difficulties with the way in which ambulance services were organised. In order to demonstrate the impact of the way services were organised on team activity, it is first necessary to explain how this mundane task was approached by different practitioners.

There were a variety of possible situations identified by participants relevant to arranging an ambulance. One important aspect common to all the teams related to whether the ambulance was being arranged “in-hours” or Out-of-Hours. This was relevant because all Practices would be closed during the Out-of-Hours period, regardless of whether the local Practice had “opted out” of Out-of-Hours work or not under the terms of the 2003 nGMS contract (BMA and NHS Confederation, 2003). This in turn was related to other issues, such as whether or not the doctor was the “on-call”, “emergency” or “duty” doctor for his/her Practice during the day when the ambulance was required. For some doctors, this would influence the actual action taken in arranging the ambulance which in turn related to who else (if anyone) would be involved in the actual collective activity of arranging an ambulance.

In all the teams, participating clinicians took one of two approaches to this task if it needed to be done during normal working hours: either they phoned the Practice and asked the administrative/reception staff to organise an ambulance, or they would organise it themselves directly. The fact that some GPs contacted the Practice staff to carry out this task for them surprised some of their colleagues who would complete the task themselves (Harebell team discussion). However, when the actual actions required to organise an ambulance to take a patient to hospital are considered, the decision to pass this task on to the Practice staff became self-explanatory. The most succinct account of this task, which was the same across all three primary care teams, was provided by the Primrose team participants (Primrose, group interview, 2006):

P3: How do you get them in?

P2: By ambulance.

INT: Do you arrange it?

P2: Yes, at that time of the day, yes [Out-of-Hours on-call rota]. If it was during the day you would maybe phone back here to the surgery and ask one of the reception staff to arrange an ambulance. If it was during the night, I would phone it myself.

INT: At night time who would you phone – are you allowed to phone ambulance control, or do you phone NHS 24?

P2: Yes, you would phone ambulance control.

P1: Yes, ambulance.

P2: Well, you would phone the ambulance hub, they're on a Paisley number.

INT: So they have a hub there?

P1: Yes, it's a national number, but it just goes through Paisley, but at night-time you have to use the same number and then you have to do a code, so which hub is available to you. But at that time, you phone up – I think Paisley's 3, Edinburgh's 1, and somewhere else is – but it's a national number, it's an 0870 number, which – but yes, you use the same number as you use through the day. I usually just phone it from the patient's house. Just – except, they're slow.

INT: And do you have to stipulate what sort of –

P1: Yeah, you can actually say what you think the condition is, and then you have to say how quickly, what degree of urgency you want, so – you have to prioritise it properly.

P3: That can be a really time-consuming thing because the ambulance can be really, really slow at answering.

P2: Which is why I phone the Practice if it's open. [all laugh]

P3: It is a really big issue –

P2: It really is difficult if you're busy –

P3: Yeah, and it's the same for all Practices.

The length of time taken to answer the dedicated GP request line was an issue raised by the Rowan and Primrose teams. For these two rural teams, the time it would take the ambulance to get to where the patient was, as well as the time to take the patient from her home to the hospital had to be considered. This was a problem because as the data

extract suggests, the ambulance service had been organised around regional hubs. The common organising point for ambulances which would serve all research participating teams was in Paisley, although calls may have been directed to other centres (as mentioned by participant 1). Although all three localities had “local” ambulance crews, the effect of centralising the allocation of ambulances meant the local ambulance may not be the one sent to transport the patient to hospital, particularly if it had already been allocated a call which had resulted in it being out of the local area.

All in all, the lengthy time which could elapse between identifying the need for an ambulance and the patient’s arrival at hospital meant that, depending upon the severity of the patient’s condition, local clinicians in the Primrose and Rowan teams sometimes side-stepped procedure:

Rowan team, group interview, 2006:

P2: Although sometimes we would suggest to the person who’s there [neighbour, community alarm person, etc] that they can get an ambulance quicker if they phone for one...

P1: Hmm-hmm, phone 999 themselves.

P2: ...Yes, because that ranks higher on the ambulance priority than if we phone and ask for an urgent ambulance.

P1: They’ve got to have a response time –

P2: They’re more likely to get a priority response, so if the patient’s lying on the floor and in pain then if they’ve got somebody compus mentus with them then we would probably on the whole tend to ask them to phone treble 9.

This was echoed by Primrose participants. During their discussion the inconsistencies of the system when calling an emergency ambulance as a GP who had assessed the patient, in contrast to any member of the public dialling 999 for an emergency ambulance whether it was a clinical emergency or not, were revealed:

P4: You can be on the phone for half an hour or longer – and that's for an urgent response.

P2: That's for an urgent ambulance, but if I were in that situation I phone 999. It's not – if I've got someone at home with chest pain I don't go through that [GP] number –

P3: Oh yeah, the emergency number is –

P2: I would try them first of all, but –

P1: Sometimes it works –

P2: Nah, I just don't bother, because what's the point? You're going to delay it by another 5 or 10 minutes. If someone dials 999 they get priority over that number that we phone, the GP emergency number. [laughs ruefully]

P1: Well, I tend to stick to the rules a bit more, or I try to. I will try that number, but if they don't answer quickly then I will dial 999. Because they do answer quickly sometimes...

P2: Well that, for instance, just that chest pain the other day, we just phoned 999 – the guy in the car at [?], and he had a definite MI.

P4: so is the GP emergency number different from the one you would use for an ordinary ambulance?

P2: no, it's the same number. No, oh for planned [e.g. clinic attendances] – no sorry, that's definitely a different number...

P3: Yes, but the GP emergency number can also take ages –

P2: ...it's the same number you phone whether you want a 999 ambulance – like, a blue light ambulance – or you want a one hour, or two hour, or four hour ambulance. It's the same number. So you by-pass that by phoning 999 yourself if the person's obviously ill...

This was a problem for the two rural teams as demonstrated by the way they circumvented the rules for GPs calling emergency and other unplanned ambulances. The rural nature of these two Practice areas probably accounted for this, together with the way each primary care team linked to other related activity systems. For example, the urban Harebell team did not seem to have the same difficulties as the two rural teams with accessing emergency ambulance provision. This may have been due to their proximity to the ambulance service hub, or to the nearby DGH Accident and Emergency Department: Harebell patients who thought they needed an emergency call were

perhaps more likely to call for an ambulance or go directly to the DGH A&E department themselves, rather than contact the primary care team in such circumstances. In contrast, patients in either of the two rural team areas most often contacted the local primary care team (Primrose, participant 4, 2005; Rowan, participant 6, 2005). For patients within the Rowan team area, the local community hospital provided the nearest A&E, where medical input was provided by the local GPs anyway (Rowan, participants 3, 4, & 9, 2005).

The problem seemed most acute for the Primrose team as exemplified by another situation raised by a Primrose participant which reinforced the difficulty practitioners faced in their day-to-day working practice. The incident offered a contrasting view of a similar situation which took place before the rules for GP access to ambulances had been changed to reflect the centralisation of the service. As it is of direct relevance to the epistemic object exercise and gives a good insight into local contextual issues within team activity, it is presented in full:

Primrose, group discussion, 2006:

P2: I have been called to someone before, who was in a wheel chair, and he'd fallen – a big guy, and he couldn't get up – so I got called. (I was on-call.) And there was no way I could lift him. The neighbour who was the key holder was older than he was and failing, so we had to phone an ambulance in order to get help to lift him back into his wheelchair. He didn't need to go to hospital though, but that was a *real* hassle 'cause we had to wait for three or four hours to get him back up...

P4: The police will come as well.

P2: I don't know if they will, actually, I don't think so – they didn't that time and that was about three years ago.

P4: Did they not? Because they used to...

P2: No. I phoned the one in [one of the three villages in the Practice area] and [he] said, "no, you'll need to phone an ambulance because we don't have lifting and handling training".

P4: Right, ok.

INT: Okay, so what do you say when you phone the – presumably you have to phone that number that takes a long time to answer – what do you ask them for?

P2: Yeah, well, fortunately actually this was before that new number came into place. I phoned them to ask advice, and it was one of the guys I knew, one of the [local] paramedics, and he came round and helped me to lift him back in. It was a Sunday afternoon. But the guy didn't need to go into hospital - all we had to do was lift him back. But we were stuck, really.

P1: That should happen less with NHS 24. I mean, NHS 24 would triage them ruthlessly out of the system –

P2: And? Do what?!

INT: Yes, what would they do with them?

P1: I don't know, [everyone laughing] but they wouldn't send the doctor – they might, they might alert the ambulance, because the paramedics are good and will do that sort of thing.

P2: I don't think the police will do it, but the ambulance – in case there's someone broke in [to the property to help the person] or - But a lot of these elderly people, who have got all these neck alarms, have people who are key holders. But a lot of them are not particularly fit.

P1: It's as bad as - when you get a call like that the nurses are often great, because often in situations like that, whereas I'll try and warm them up by making teas and coffees and things like that, but I've seen nurses go in and – I know it's personal care - but they will light fires, and all these things which are often, that's what's wrong and will do a lot more good...

INT: Yes, because when you said the person might be so hypothermic that they might be confused or whatever [earlier in the discussion], it's maybe just a case of trying to warm them up a bit?

P1: Well, there's a threshold below which you couldn't. But if it's mild, then they tend to respond.

Clearly, the introduction of regional hubs to deal with requests for service had introduced a difficulty for those primary care teams at a distance from the area near the ambulance control hub. Although local crews in rural areas were still stationed within the primary care team area and were regarded as part of those teams, they had no discretion over their workload in relation to the local team population and primary care configuration. This alteration in the mediating artefact of ambulance service provision was an issue which was raised throughout the research relating particularly to Primrose

team activity. It neatly demonstrated the dynamic, inter-linked relationship between organising and practising and the role of context as activity in that process.

In the next section data will be presented to show the implications of changes in one activity system for another in relation to the ambulance service and the two rural teams, especially the Primrose team.

Organising services – changing mediating artefacts and the impact on local activity

Extracts from the Primrose group discussion presented so far relate to tensions concerning the use of the mediating artefact of ambulance provision in emergency or “acute” situations. During the earlier research phase, similar tension in the local activity system had arisen around the mediating artefact of ambulance services in connection with less acute or urgent, but none-the-less central, object-oriented activity relating to transporting patients for routine, planned procedures. This exposed a variety of contradictions in between the ambulance service and primary care team as activity systems.

The issue was discussed at a locality meeting during the first research phase, attended by primary care team participants from the Practice and LHCC management staff. Researcher fieldnotes made at the time of the meeting in May 2005 recorded the problem and the example used to illustrate it: a patient who had been booked to have a minor surgical procedure to remove a cancerous facial growth removed, who lived at a distance from both the Practice and the RGH and had no means of public or private transport, could have an ambulance to attend a hospital clinic at the RGH in the nearby town to have the procedure done; but the same patient could not have ambulance transport to attend the Practice (which the crew would have to drive past to go to the RGH) to have the same procedure done as part of local primary care activity. The patient had declined to go the RGH for a variety of reasons, but had been persuaded to come to the Practice to have this important procedure carried out by the GP in the team who provided various dermatology and minor surgery services in primary care.

The problem identified through activity by the Primrose team was that the ambulance service seemed unable or unwilling to respond to changes in the way patient care had

been re-configured under existing healthcare policies so that more was done in primary care rather than secondary care (SEHD, 2003). Related to this problem was the way the ambulance service was organised locally, with too many paramedic crews (to deal with emergencies) and not enough patient transport crews in order to deal with routine runs for planned procedures. The locality team were exploring the possibility of using the formal complaints procedure as a mechanism to bring this contradiction to a crisis in order to force those, the object of whose activity was to organise local ambulance service provision, to address it. The history behind the problem was explored further during a subsequent interview with a clinician who had attended the meeting:

Primrose, participant 4, 2005:

P: It comes down to - a lot of it's gaming, in that the ambulance service historically has *always* gone for - they have to meet their eight minute response time. And most of the 999 calls are down in Paisley and that area, because our patients don't use 999 that much, they call us first of all. And even us, we don't, we will often try to make things...[not to use the resource unnecessarily].

INT: You don't want to be having [people] travelling unnecessarily?

P: No, that's right. As I said it's a different [pause] strategy. And so the ambulance service historically has *always* focused on the fact that they have to meet the 999 thing, cause *that's* what they're measured against, and *that's* what MPs and all MSPs will ask questions about...and that's what the Chief Executive will be called to Edinburgh for. And we're sort of an add on, and a relatively small part of the population.

The problem had obviously become clearer, in that it was having a constraining effect on local activity. Discussions had been ongoing in the period between the first and second research visits to participating teams in order to try to address this developing contradiction between the object of Primrose team activity and the mediating artefact of ambulance service provision, as participant 4 indicated during a follow-up interview in 2006 after the group epistemic object exercise discussion:

P: ...Already at our first meeting we had a more senior ambulanceman - we were talking about that the last time you were here – again, services depending on where you have the ambulance. You can use the day hospital in one part of

the patch, in another part of the patch you can't, even though it's the same distance. But that comes down to [availability of] ambulances. So we had quite a senior ambulance official at the CHP Board who gave us a briefing [and] we're having a meeting...to bottom-out some of our unhappiness.

INT: So that will presumably be a fairly operationally based discussion?

P: Yes, it will be. It's operational in that we would feel that they can't offer a reasonable service. They in turn will argue back that there's inappropriate use, and we in turn will argue back that their configuration is inappropriate to deliver the reasonable service. Because, as I say, one of the things they complain about is the use of paramedic type of ambulances for doing transfers. And I would agree there is inappropriate use, in that we're sending paramedics to do almost like taxi runs. But that's because there is no transfer ambulance and that's, in a way it's not our fault – patients need to get transferred and they can't sit there and wait. The fact that the ambulance service doesn't have a transfer ambulance and so therefore uses their own paramedic teams – it's an inappropriate use of the service but it's their configuration. They're the type of ambulances... So it's that type of discussion that we're going to have! We're trying to get the operation on the ground... [to mirror actual practice]. I think we'll get them to change their strategy, or certainly to do things a little bit differently.

It seemed that for a variety of reasons, the ambulance had ceased to mediate the Primrose team's activity in a helpful way. Changes introduced in another activity system (the organisational aspect of Ambulance Service as a Special NHS Board) came into conflict with the primary care team's activity and a contradiction developed within the local activity system which included the local ambulance crew engaged in the actual activity, in contrast to those at a distance who organised it.

From an activity theoretical perspective, the developing double bind required that the problem be addressed, and this process was underway during the research period as this was having a detrimental effect on local activity. The ambulance service as a mediating artefact had ceased to have legitimate meaning within the Primrose team, and efforts were underway to alter the ambulance provision so that it could once again be used to mediate the changing object of local activity (in the form of providing more services through the Practice rather than the RGH). It seemed the status and meaning attributed

to the ambulance service had changed: it was descending to be an abstract concept in its centrally configured formation, in contrast to its previous concrete status through its use as a mediating means of local activity.

In this section the similarities and differences of the ambulance as mediating artefact between teams have been analysed. All three participating teams identified the length of time taken to answer a GP call for an ambulance as a problem within their daily activity as revealed through the epistemic object exercise. This had different implications for local activity in each team and seemed to affect the two rural teams more than the urban team. Each rural team adopted similar approaches to side-stepping the problem when an ambulance was required in an “acute” situation, thereby re-mediating the object of activity in order to achieve what was necessary. The problem seemed less pronounced for the Rowan team which seemed to be due to their use of the community hospital as the venue for much of their extended primary care team activity. Therefore, the problem of ambulance use as a mediating artefact of routine activity was more extreme for the Primrose team given its particular form of activity.

Mutual mediating artefacts of activity: “Rapid Response Team”

Two of the accounts of likely activity in relation to the epistemic object presented to the three participating teams featured the term, “Rapid Response Team”. This arose in response to the nature of the hypothetical object presented to the teams, in the form of the healthcare needs of the elderly female patient who may have been unwell. In this section, data relating to role of the mediating artefact of the Rapid Response Team in relation to teams’ activities will be presented and analysed from an activity theoretical perspective. First, a brief account will be provided of the background to the introduction of the Rapid Response Team concept.

In chapter 7 the reasons for selecting such a hypothetical patient’s needs were explained, in light of growing concern about the challenges presented by Scotland’s changing demography for healthcare policy-making and services (Kendrick and Conway, 2003). It was in this context that Rapid Response Teams were brought to the attention of the public and the wider health and social care audience in the Report of the Joint Future Group (Joint Future Group, 2000). Set up by the Minister for Health and

Community Care and chaired by the Deputy Minister for Community Care, the group was part of a wider effort to promote “integration” within Scottish health and social services. Greater links were advocated in health services between primary and secondary care services, and between health services and social services, which operated under the aegis of Scotland’s local authorities or councils. The remit of the Joint Future Group was:

...to find ways to improve joint working in order to deliver modern and effective person-centred services... Its primary task is to agree a list of joint measures which all local authorities, health boards and trusts should have in place to deliver effective services, and to set deadlines by which this must be done.

(Joint Future Group, 2000 p.54)

Amongst other issues, a key concern of the group was to seek to improve home care for elderly people, partly to prevent them from being admitted to hospital for what were deemed to be social rather than medical reasons. A key recommendation made by the group, which was officially accepted by the Scottish Executive in (SEHD, 2001b), was that:

Every local authority area should have in place a comprehensive, joint discharge/rapid response team by mid 2001-02.

(Joint Future Group, 2000 p.6 and p.14)

This recommendation drew upon an example of existing practice identified in Aberdeen, where such a team was in place to

:

...prevent inappropriate admissions by providing short periods of intensive home-based support. Teams need to be multi-disciplinary, comprising a mix of health and social care and, where appropriate, housing professionals... The [City of Aberdeen Rapid Response] team comprises a social worker/care manager, dedicated home nurse, physiotherapist, occupational therapists, and an occupational therapy technician/assistant.

(Joint Future Group, 2000 p.1, underlining in original.)

Implementation of the recommendation was apparently not achieved as widely or within the timescale envisaged by the Joint Future Group. The concept of the Rapid Response Team was revisited in 2002 when an Expert Group on Healthcare of Older People, chaired by the Chief Medical Officer, was convened to consider existing services and to make recommendations for improvements in the care of older people by the NHS. The group's findings were published (EGHOP, 2002), including some discussion of what should be done in situations such as the one presented to the participating teams in this research through the epistemic object exercise. The report re-emphasised the concept of the Rapid Response Team from a healthcare perspective, particularly in relation to the growing number of emergency hospital admissions amongst older people:

Avoidance of Unnecessary Hospital Admission

Some older people, many of them with only minor illness, are admitted to acute hospital care because the kind of care they need at home is not readily available. Simple domestic, nursing and rehabilitation support, combined with medical care from the patient's own GP may provide a safe and welcome alternative to acute hospital admission – which, for the very frailest, may lead to permanent, long-term care... In many areas of Scotland, Rapid Response Teams provide extra nursing, domestic and rehabilitation support for older people in their own homes, through an acute episode, often averting an admission to hospital.

(EGHOP, 2002 p.22)

Therefore, a preference for avoiding hospital admission for such patients was expressed in various policy-related documents by a variety of groups, the members of whom were drawn from a range of disciplines within the health and social care communities. A more thorough reading of the various policy reports and documents cited here reveals a number objects of activity for the group engaged in considering the issue including: assessing (and hopefully refuting) the validity of claims of ageism within the NHS; preventing or reducing secondary care hospital admissions; ensuring a more effective or efficient use of (presumably human as well as financial) resources; re-configuring or re-designing secondary healthcare services and moving the responsibility, along with the money, for such services to another agency (local councils); “integrating” the efforts of health services and local councils by placing each older person's needs at the centre of organisational activity.

Whichever object of activity the respective groups had in mind, the presence of a Rapid Response Team within local health and social care activity systems was regarded as a helpful way of achieving the overall aim by mediating the local activity of caring for such patients. This view was reaffirmed in 2005 when a wide-ranging review of Scotland's health services, commissioned by the Scottish Minister for Health, was published (Kerr, 2005a). Again, activity relating to patients such as the one presented in the epistemic object exercise came under the spotlight and again the mediating artefact of the Rapid Response Team was highlighted:

Frailer older people – especially those with cognitive and/or sensory impairments – are at most risk on the boundaries between the acute sector, primary care and social care provision. Although current organisational reforms (the introduction of Local Health Care Co-operatives now to be succeeded by Community Health Partnerships) and innovative multidisciplinary interface services (such as Rapid Response Teams and Early Supported Discharge) have mitigated some of the problems, there are continuing concerns about the vulnerability of frail older people in a complex system of care... If we are right in believing that many of the pressures on the acute sector, in so far as they arise from the health care needs of older people, are pressures of mis-provision [sic]; how are we to provide the co-ordinated, comprehensive system of ongoing care that we require? There are some grounds for optimism. A significant and increasing proportion of the oldest patients admitted as emergencies have no new specific diagnosis (diagnostic category: 'symptoms and signs') and have few needs that can be met only in the acute sector. Their use of acute beds is high and arguably harmful to them.

(Kerr, 2005a pp.46-47)

Although the report acknowledged that the presence of such a means of mediating activity in relation to such patients' needs was not comprehensive, its desirability was nonetheless re-emphasised and continued to be thereafter. Given the apparent consensus on the issue, the findings of this research present an interesting insight into actual activity in relation to the concept of the Rapid Response Team. Once again, context appeared to be playing an active role in the activities of the three teams studied.

In the next section, the Rapid Response Team will be discussed in relation to the three teams' accounts of their likely activity in the face of the routine aspect of practice presented to them in the epistemic object exercise.

The Rapid Response Team in the Harebell primary care team

In line with the Joint Future Group recommendation, the mediating artefact of the Rapid Response Team was raised by Harebell team participants during the epistemic object exercise when considering likely activity in response to the hypothetical patient's needs:

Harebell, group interview, epistemic object exercise, 2006:

P3: ...there is a Rapid Response service with the nurses, and if they feel that extra help is needed with somebody... they will set that up for the few days until.. you get clarification about what's happening long term... [until any test results awaited arrive]

INT: So... are they district nurses?

P1: Yeah, they're district nurses –

P2: I think social work's involved –

P1: Yeah, as well –

P2: I think it's a mix, you know.

P1: yeah, it's a good service, you know.

INT: So they would then go and visit the person... do you know what they would do when they got there?

P2: They would do what you've asked. So it might be an overnight service or a "tuck-in", or a home help twice a day, that sort of thing. They would put that in place.

Here, the team's activity would possibly involve contacting the Rapid Response Team in order to provide the support for the patient at home, whilst the GP awaited the results of investigative tests to make a diagnosis and agree a course of action with the patient to help her recover and retain her independence. Used in this way, the Rapid Response Team would help prevent an admission to hospital, which in the Harebell team's area would be the DGH. This seemed to echo the type of situation envisaged in the policy-

related documents which urged the introduction of such schemes in all areas of Scotland (Joint Future Group, 2000; Kerr, 2005a).

Whilst this part of the discussion related to what would happen Monday to Friday, between the hours of 9am and 5.30pm approximately, it became clear through subsequent discussion that the situation was not as straightforward towards the end of the “normal” working day or during the Out-of-Hours working period in primary care:

INT: So in your experience...what happens if it happens later in the day, say around 5.30?

P1: Would you use the Rapid Response then? [addressed to the two clinician participants]

P3: I don't know, I think you would maybe involve the district nursing team for overnight and then enacting the Rapid Response the following morning – I think that's probably what would happen in that situation.

INT: [to P2 and P3] Do you both do shifts on the Out of Hours rota? [confirmed] You do. What happens if this type of thing happens out of hours? What process then takes place?

P2: Quite often it'll end up being admission, if somebody's going, you know - through the night I've probably got a lower threshold for sending somebody in if they're on their own and they've had a fall, I would probably tend to send them in, because you can't get access to – the district nurses are on 24/7, but you can't access the Rapid Response team and stuff like that...

Comparing these two extracts from the Harebell group discussion, it is possible to see that team activity would not always be mediated by the Rapid Response Team, even if it were indicated by the patient's condition and circumstances. In fact, although the Rapid Response Team could provide an overnight service as mentioned by participant 2 in the first extract, the organising arrangements for that service meant it was effectively unavailable after around 5.30pm on the day when the type of problem it was designed to mediate emerged.

This may be the case particularly when the aim is to prevent hospital admission in situations similar to that presented through the epistemic object exercise. As participant 2 indicated, the safety net of a hospital referral remained available and primary care team activity would then be mediated by the hospital instead of the Rapid Response Team. As the diagrammatic representation of the Harebell group discussion showed, this would result in different collective activity in relation to all aspects of the activity system. In other words, depending upon the way the object of activity was mediated, the primary care team's composition, the way it would be organised, and the actual actions carried out would be different. Ultimately this would mean a different experience (and perhaps a different outcome) for the patient, as the object of activity would be differently mediated and therefore differently constituted (Leont'ev, 1978).

This may also happen in reverse if the same type of patient were discharged from hospital but would be unable to cope alone at home until they had fully recovered:

Harebell participant 2, 2005:

INT: And do you have much interaction with social work?

P: When it's gone pear-shaped, yeah. When there's a poor old biddy and you end up having to get the Rapid Response involved - the usual at five o'clock on a Friday, because they're being discharged early and they've got no family and they're in a mess...

In such a situation there would be a clear need to organise home support to a greater or lesser degree, and if a night service (to support the person in her own home overnight) were required, the only way to provide this would be through the Rapid Response Team. However, if the patient's needs were not as great, and the Rapid Response Team were unavailable as in the situation described through the group interview (2006), the GP would contact the Out-of-Hours or "on call" district nursing service, as indicated by participant 3 in the first group discussion (2006) extract. This would not be the district nursing staff "attached" to the primary care team during daytime hours, but a separate "on-call" rota of district nurses (participant 3, group discussion, 2006). This highlights an interesting situation, since during the group discussion it was suggested that the Rapid Response Team included district nurses in its membership. However, when the actual activity of the district nurses involved with the Rapid Response Team was taken

into consideration, this somewhat confusing situation became clearer as explained by a Harebell team Practice nurse who had previously been a district nurse:

Harebell, participant 12, 2005:

P: Well, I was on the District [attached to] one Practice for about 20 years, and... I knew that in the job I was in I wouldn't get any further so I applied for the job with the Rapid Response, which I didn't like once I'd got in – it wasn't what I thought it was going to be. I thought the Rapid Response were going to go in, work as a team of nurses and maybe do what we had to do, but I was a Home Help supervisor, and...we didn't do any "hands-on", which isn't, didn't suit me.

Those nurses involved with the Rapid Response Team were not there to practice nursing ("hands-on" as described by participant 12), but to organise other social work employees who were not trained as nurses to carry out a range of necessary support tasks (similarly the case in the Primrose team: participant 4, 2006). This is also known as "personal care", the responsibility for the provision of which had been moved from the NHS to local council social work departments in Scotland (Scottish Parliament, 2002). The data from the Harebell team suggested that some of those who had previously provided that service "hands-on" had been recruited to organise unqualified staff to fulfil this obligation. But this did not seem to simply translate into a "like-for-like" service:

Harebell, participant 12, 2005:

P: Their [District Nurses] role has changed as well... The personal care - we let that go so the social work now do that – I personally think we should never have let that happen and quite a few of the girls think the same, because we're now getting all the problems back from – not problems, but things... are happening that nurses would have noticed beforehand. Even our auxiliaries [nursing staff with no formal nursing qualifications but practical experience] would have noticed it beforehand.

INT: So when you're doing something out in the District you might be looking at... how are they moving around? "How cheery are you, how depressed"?

P Hmm-hmm, their weight, their skin. Yes, all these wee things like that nurses picked up and as I said, the auxiliaries picked up on them as well because they had worked with the nurses for a long time. Whereas I don't feel that – because it's social work, different agencies that are doing it, [patients are] not getting the same people all the time.

This suggested a period of transformation during which collective activity, in the form of the flow of patient care, had become more fragmented for the Harebell primary care team's patient population. It seemed that continuity of care for patients had diminished, partly due to a change in the rules governing the way services were organised and partly due to the resultant changes in the division of labour, in relation to the object of collective activity. Despite the existence of the Rapid Response Team it might not mediate activity; for the Harebell team, this might become (or perhaps more accurately, remain) the province of other related activity systems, such as secondary care health services in the form of “the hospital” (DGH).

The Rapid Response Team in the Primrose primary care team

In common with members of the Harebell primary care team, Primrose team participants mentioned the Rapid Response Team as a potential mediating artefact of activity during their epistemic object exercise discussion. This arose as clinician participants recounted their likely assessment of the risks faced by patients who found themselves in the situation presented, in relation to their entire Practice area (see page 187 for data extract).

The potential of the Rapid Response Team as a mediating artefact in the Primrose primary care team's activity was briefly explored in relation to the hospital as a mediating means for the Primrose team. However for the purposes of the discussion here, the focus is on the place of Rapid Response Team itself in relation to the Primrose team's activity

The restricted nature of Rapid Response Team availability was evident in the comment of participant 2, page 187: “Yeah, I think we tend to forget...” As a practitioner faced with the ambiguities involved in dealing with the needs of patients in circumstances

such as those presented in the epistemic object exercise, the Rapid Response Team did not spring readily to mind as a mediating means. Participant 1 had an additional role organisational in everyday activity which involved discussion about issues including ways to reduce hospital admissions for the locality. This aspect of overall activity may have heightened this participant's awareness of the Rapid Response Team rather than its use in mediating the participant's clinical activity, although this was not clear from the discussion. What was clear, however, was the agreement between participants about the limited scope of this potential mediating artefact in actual routine activity.

The initial omission of the Rapid Response Team from the group discussion could be interpreted as a reflection of the infrequency with which it would actually be used to mediate team activity. This signified that it was unlikely to carry much meaning for the practitioners in this team and that, as the brief discussion showed, it remained an abstract entity rather than a concrete means of dealing with routine situations for the Primrose team.

The discussion suggested that this was as a result of the spatial composition of the Practice population, most of whom lived out-with the area within which the Rapid Response Team operated. Despite the proximity to the nearby town (where the RGH was located) of one part of the Practice area as indicated by participants, the Primrose primary care team area was characterised by large swathes of rural and even remote areas where many elderly patients lived (approximately 800 square miles in all as a conservative estimate). During initial research interviews, Primrose team participants highlighted this spatial aspect of their area in relation to a key local difficulty they experienced as part of their activity, namely the sustainable recruitment and retention of primary care team members: for example, a health visitor position had remained vacant for over a year (participants 2, 3, 4, 9, 2005).

These concerns prompted the team to deal with the problem through novel methods, such as the Practice successfully taking over the neighbouring previously single-handed Practice, which had been run by a series of locum GPs since the retirement of the previous GP quite some time before. The Practice employed a salaried GP to take care of that Practice list and in so doing successfully enlarged the pool of GPs in the locality. They hoped this would provide stability for patients and improve the sustainability of

the local health economy, particularly in relation to covering the locality Out of Hours sessions from which all local Practices opted out when the nGMS contract was introduced (BMA and NHS Confederation, 2003).

The difficulty of recruiting and retaining health professionals in such a rural and often remote Practice area seemed to limit the range of possible service provision across a large part of the Practice area, as demonstrated by the examples of the neighbouring Practice and health visitor post. Whilst team members created solutions to resolve these problems where they could, such limitations often left the primary care team members exposed and unsupported in trying to deal with actual patient problems which presented in their community. This was exemplified by the discussion relating to the epistemic object exercise. The fact that the district nursing service was restricted to the hours of 9am to 5pm, whilst the availability of the only 24-hour service in the form of the Rapid Response Team was severely limited for the Primrose team's population, meant the team's potential ability to look after such patients in their community was restricted. This experience and the resultant infrequency of use of this social work-organised service to mediate team activity may have contributed to the less than positive view of social work services amongst some members of the Primrose team:

Primrose, participant 10, 2005:

P: Well, social work's social work. [dismissive] It's about as much use as a man short, but that's their normal [laughs].

INT: Is that because there's not many of them or...?

P: Och, no. They work with *very strict rules*, which is fine if you're working with tins of beans. Not quite so fine if you're working with people. But, you know, they're no worse here than they are anywhere else and if you want somebody to do something constructive you don't want a social worker, because they won't do anything constructive.

So although there was a 24-hour service to prevent "unnecessary" admissions to the RGH by supporting patients in their own homes, its restricted availability meant that the further away from the RGH patients lived (and therefore the more isolated and unsupported they and the other members of the primary care team might be) the more

likely they would be to be admitted to the RGH, as indicated previously in the discussion of the role of the hospital as a mediating artefact of Primrose activity.

The Rapid Response Team in the Rowan primary care team

No mention of a Rapid Response Team was made during the Rowan group discussion in relation to the epistemic object exercise in contrast to the other two participating teams. One comment could perhaps have been interpreted as alluding to it but this was not developed any further:

Rowan, group interview, epistemic object exercise, 2006:

P2: ...I mean, in theory if they, they should be able to offer social service input at that stage, but rarely that would happen and would be that immediately...
[provided]

As the diagrammatic representation of likely activity in relation to the epistemic object exercise demonstrated, under most circumstances (apart from when orthopaedic or other surgical intervention might be required) the patient would usually be dealt with by primary care team members even when she was admitted to hospital. This was regardless of whether the call arose during “normal” hours or during the Out-of-Hours period. The nature of the local (community) hospital, where the medical input for daily working was provided by the local GPs and where the nursing and allied health professionals were regarded as members of the “extended primary care team”, has already been identified as the mediating artefact most likely to explain this situation. So despite the apparent absence of social work support to maintain patients at home, most remained within their local community cared for by a range of extended primary care team professionals. This was in marked contrast to the other two teams’ accounts of likely activity. As discussion of the hospital as a mediating artefact of those teams’ respective activities indicated, the lack of necessary local social work support would almost inevitably have resulted in referrals from primary care to a secondary care hospital consultant in either a DGH or RGH.

Rowan participants’ accounts of the importance of the community hospital in their activity suggested that there was less reliance on social work provision, as alternative

mediating means had been found to address the needs of the local population. The immediacy of local needs for social work support appeared to have been somewhat ameliorated. But although not immediately apparent, the local community hospital was not as straightforward as it appeared. As well as GP acute beds, to which the patient in the epistemic object exercise would probably be admitted, the hospital also contained some long-stay beds for elderly patients. These were the nominal responsibility of a consultant geriatrician based at the same RGH referred to in relation to the Primrose team's activity. However, whilst the any day-to-day care for those patients was provided by the nursing staff, most medical input required was provided by through the local GPs. Although there were obvious professional, organisational and contractual boundaries relating to those beds, the local GPs did not appear to distinguish greatly between the two groups of patients (long-stay and GP acute):

Rowan, participant 3, 2005:

INT: So the long term care of the elderly beds then, are you clinical assistants or hospital practitioners, what kind of - are they consultant beds at the moment?

P: [Laughs] Now that's old fashioned thinking!

INT: It is!? I'm trying to think of how - Because if they are nominally consultant beds just now, presumably that's something that'll end up being undone, won't it, if you shift them into the community?

P: ...From, from the care of the elderly perspective, the day to day running of the beds is really in the hands of the senior nursing staff on the ward. We... used to be paid under the bed fund contract so if they've got to stand up, fight and say "who controls the beds?" we can actually say we do [the Bed Fund represents a payment for contracted GP acute bed work – beds are officially GP designated]. But, having said that, the Health Board were very clear - they wanted the beds to be under the supervision of the consultant geriatricians - so the geriatrician in [RGH] has got the thankless task of running the geriatric unit in [RGH location], *plus* having responsibility for [Rowan community hospital], [place name – community hospital], [place name – community hospital], you know, there's a *huge* number of beds that she's nominally responsible for.

INT: Quite a grey situation that, isn't it?

P: Well that's right, yeah, but it doesn't really *matter*, provided the patient in the bed is getting the right care.

Although there did not appear to be a problem meeting the needs of patients within the Rowan team, the safety net of the community hospital and the extended range of clinical activity undertaken by the primary care team effectively obscured the difficulties created by the lack of local social work services.

However the comparative lack of availability of social work services was gathering momentum amongst team members as an issue which required to be addressed. This appeared to be partly related to changes taking place in the community hospital: this source of previous amelioration became a source of creative tension within the local activity system, particularly in relation social work services, as it underwent a complete redevelopment. This was augmented to an extent by the Scottish Executive's twin policies of shifting the balance of service provision for older patients (like the hypothetical research exercise patient) from secondary to primary care (SEHD, 2005b), and shifting responsibility for personal care to local authorities (Scottish Parliament, 2002), which combined to inject tension into the Rowan activity system.

So the traditional pattern of local activity for patients was undergoing a period of potential transformation, especially for older patients who did not recover sufficiently from an acute illness episode and developed long-term support needs. Such patients would normally have been admitted to the long-stay nominal consultant geriatrician beds at the community hospital. Now, the pressure began to build in the local system to address the previous gap in social work provision in order to meet the needs of these patients. The social work department became a focus for transforming local activity:

Rowan participant 12, 2005:

[Discussing changes taking place in clinical emphasis within the Rowan team which has been on acute care and immediate/emergency care]:

P: I think what'll probably change is the emphasis on the type of work and probably a realisation that yes, that work's important [emergency/immediate care/trauma, etc] – it's important from the community's point of view, it's important from the individual patient's point of view - but in terms of the actual population differences, it's older people's services and how we restructure and reconfigure them... And I'm really trying to reconfigure that type of service away from Continuing Care [in long-stay beds within the community hospital],

waiting until people basically become too old to manage in the community and then just provide them with a long-term care bed and that being the kind of limit of the service, into looking at how you prevent them from getting to that stage first of all – taking a step back, upstream if you like, and trying to intervene at an earlier stage: organising their care better, organising their social package better. And I think that's the other element of it is the involvement of social work – they're [going to be] in the same building - and even now things are happening, in that...social services are now talking about co-locating within the building, their community care workers along with the district nursing staff and so on. And that wasn't part of the agenda before... well, historically we set all of this up and went to them and said, "what part of this new building do you want?" They just wanted a box in the building that was going to be their social work department. They weren't interested in co-locating teams of workers... with the same interests, and now they are, so even to that extent things have moved ahead.

In situations like the epistemic object exercise, Rowan team members were engaged in reconstituting the object of activity so that such patients' needs would be mediated by social work in addition to, or even rather than, the community hospital. The hospital redevelopment offered an opportunity to address the shortage of services provided through the inter-linked social work activity system:

Rowan, participant 3, 2005:

P: Well, the care of the elderly beds -our challenge for that is that we've got to get away from the idea that we have people *in beds*, and begin to move people with care packages – or keep people with care packages - in the community, and build the teams... I mean one of the advantages of the new hospital is that we have a social department in the new hospital. And so we have much closer ties with social work. So when we have these meetings about care of the elderly, the social work department - and therefore the Council - are there.

Local efforts to create this transformation in activity seemed to be motivated by practical concerns identified through dealing with patients' needs:

Rowan, group interview 11, 2005:

P1: Social work's going to be in the hospital as well...

P6: Hmm hmm.

P1: ...so I think that's going to improve things cos the communication between ourselves and the social workers isn't great at times and hopefully that will...improve.

INT: Is that an important thing, would you say?

P1: Yes. Inter-agency. Yeah.

INT: What sort of differences will that make to what you actually do?

P1: I think we'll understand each other's *role* better.

P3: And we'll understand the pressures that each group of staff are under ...

P5: Yeah.

P3: ...cos, you know, we may have different priorities to, say, the hospital team who are trying to discharge a patient. You know, our kind of skills are very different to a hospital team's skills.

P1: But they just expect you more or less to attend meetings the next day, whereas if you've already got things *arranged* ...

P3: hmm, hmm - it's not quite so simple... so hopefully we'll all get a better understanding.

P2: And I, I think that what [name] said is right. I mean the [social work staff], their work rate is .. not half as fast as ours, is it?

P3: If we refer a patient to a social work team it can take days even to appoint a key worker, and in that timescale we could be looking at having a patient *home*. But because there's not anyone allocated to that case... So hopefully we can start to work together and see where each other are coming from.

In the Rowan team, the apparent absence of the Rapid Response Team highlighted the dearth of local social work provision. The nature of the local community hospital may have offered a partial explanation for this, since Rapid Response Teams seemed to be intended to prevent hospital admissions to secondary care and the community hospital largely enabled patients to be retained within primary care.

Another aspect of the Rowan team which may have contributed to this lack of provision was the rural and remote location of the team, as described in the team profile in chapter 5. This was a somewhat curious idea, given the location of the Council headquarters in the main town within the Rowan area, including the office of the Director of Social Work for the whole area including the Rowan and Primrose team localities. It is possible to suggest that locally provided social work input was less than comprehensive because the community hospital enabled almost all necessary care to be provided within the extended primary care team and patients' needs were met, even if this did entail an admission to hospital. But the picture became clouded by the grey area of nominal consultant geriatrician beds within the community hospital which meant that changes in the way services were organised, as a result of government policies, were becoming an issue which required to be addressed. This would be a challenge for members of the Rowan team and for their colleagues in social work. Given the different mediating means for team activity, different aspects were problematic for the Rowan team in contrast to the other two teams studied.

As the accounts of the three teams' activities illustrated, the policy of introducing Rapid Response Teams to all areas seems to have had a varied career. Consideration of the activity of each team, when centred upon the example of the elderly patient in the epistemic object exercise, showed that even where the same mediating artefact was employed the actual activity was different. Taking the example of the Rapid Response Team, although this mediating means appeared to be available to provide services to patients within the Harebell and Primrose teams, there were substantial differences between them. As the section discussing the apparently common mediating artefact of "the hospital" demonstrated, that which at first appeared to be the same revealed differences when viewed from an activity theoretical perspective. These differences will be briefly discussed in the next section.

The Rapid Response Team mediating three different activities

In relation to the Rapid Response Team, the different divisions of labour within the different teams meant that the notion of a Rapid Response Team was differently organised and carried different meanings in each location. As the Rowan site showed, patients' needs could be met in other ways. Historical and cultural differences between

the teams' activities meant that the task of enacting a blanket policy like the introduction of such a mechanism across all localities was likely to meet with difficulties, as noted by one research participant related to both the Rowan and Primrose teams:

Medical director, LHCC/CHP incorporating Primrose & Rowan teams, 2005:

INT: ...will you look at community based services as well?

P: In, in terms of what their overall cost is for that locality?

INT: Well, what [service] provision there is?

P: Oh yes, we have done. The areas where we've got lots of beds and next to no community services - and what we've had to do is close beds and say, "well, we're investing into nursing services or, or social care here." That balance is sometimes really, really bad.

INT: So you can find that folk get admitted because there's nothing, you can't...?

P: No, there's no alternative. That's right.

This meant that the notion of the Rapid Response Team largely remained abstract as it was not in use locally and did not mediate concrete activity. Therefore it did not acquire any legitimacy with local participants, but rather became disconnected (Blackler *et al.*, 1999a) from the activity of local participants who tended to "forget" it existed.

Close examination of the mutual mediating artefact of the Rapid Response Team enabled some insight to the ways in which the object of activity was constituted differently in the different teams: in part this could be attributed to the different ways it was mediated, which signified the differences between the ideal properties with which mediating artefacts were imbued (Illyenkov, 1977; Bakhurst, 1997).

As to the success of the Rapid Response Teams in fulfilling the aim of reducing inappropriate hospital admissions for which they had been recommended across Scotland (Joint Future Group, 2000), the examples of the three primary care teams within this research suggested this was equivocal at best. In fact in both of the primary care teams where the mediating artefact of the Rapid Response Team was apparently available, local contextual aspects combined with the way the Teams themselves were organised, resulted in failure to achieve this aim. This may be indicative of an aim

which may be appropriate in some contexts but not in all, rather than of “failure” on the part of those charged with carrying out the stated policy.

In the next section the “absolute differences” between teams’ activities, identified through initial analysis in chapter 7 of the data generated through the second research phase “epistemic object” exercise, will be discussed briefly in light of the further analysis of the three main mutual mediating artefacts presented here which concludes this section of the analysis presented in this chapter.

Re-viewing “absolute differences” in relation to “internal category differences”

In this chapter the three most important “internal category differences”, namely “the hospital”, “the ambulance” and the “rapid response team” have been analysed in depth. The other three aspects of activity identified as being common to at least two team accounts of activity in chapter 7 – the occupational therapy service, pharmacy provision and mental health input – are also of interest, but were generally related to the same range of issues identified through the other three examples discussed in this chapter. They have therefore not been pursued further within this thesis.

The in-depth analysis presented here of the three main mediating means of teams’ activities has revealed that each had different meanings attributed to them through those same activities. Therefore, what appeared the same on the surface was in fact different when viewed through the activity theoretical lens. But what of those differences mentioned in only one team’s account of activity? Closer examination of the “internal category differences” has shown that what were apparently “absolute differences” in activity (see table 6) were actually less *absolute* but more *complex* than they may have appeared initially.

When re-viewed in light of the further analysis of “internal category differences” presented here, these apparently absolute differences may be regarded as indicators of context: the focus on an apparently identical object of activity has enabled other aspects of the primary care teams as activity systems to be seen. The apparent differences between the activities of the three teams have therefore been accounted for, such as the mention of the community hospital by one team and the private nursing home by

another. When viewed as part of the overall activity of each particular primary care team as an activity system, these differences may be understood to be related to the complex nature of context conceptualised as activity.

Rather than looking at primary care teams as bounded entities, a picture of overlapping and inter-related activity systems has emerged to account for apparent differences in interpretation and understanding of mediating means through their use in activity. In this way, the differences between teams' activities indicate the active and mutually constitutive role played by context in each team's activity. Although inherently contextual and different from one another, there are similarities in the way that these differences may be explained. This requires internal activity system dynamics to be taken into account through a re-view of each team as one of a series of inter-linked spatial and temporal activity systems. This forms the basis for the contribution of this thesis and is set out and discussed in chapter 10.

The data presented in chapter 7 relating to the "epistemic object" exercise initially suggested similarities in primary care teams' activities from a distal perspective. But when considered from an activity theoretical perspective, differences emerged as demonstrated diagrammatically: teams were apparently doing the same thing differently. In this chapter closer analysis of the differences which emerged through those accounts, in relation to the main mediating means of teams' object-oriented activities, has demonstrated that teams were not doing the same thing differently. This deeper analysis from an activity theoretical perspective has shown that teams were actually doing *different* things in *similarly different* ways.

In order to complete this analysis and fully account for this finding, some re-consideration is required of how the object of activity, as presented through the "epistemic object" exercise, was constituted within the three teams. The remainder of this chapter will briefly consider this key aspect of the internal dynamics of primary care teams as activity systems.

Different objects: the constitution of objects of activity

Viewed through an activity theoretical lens as discussed in chapter 4, the object of activity is something which is partially given and partially emergent through activity (Engestrom, 1987; Miettinen and Virkkunen, 2005). Activity systems are understood to be inherently multi-voiced (Engestrom, 1993; Engestrom, 1995a; Engestrom, 2001), which indicates the negotiated nature of objects of activity. This process of negotiation often entails tension or contradictions within the system as the object becomes clearer (Blackler *et al.*, 2003; Blackler and Regan, 2006b). These contradictions or tensions often produce creativity when activity system members exhibit expansive learning in the face of emergent difficulties with current forms of activity and new ways of doing things come into being (Engestrom, 2001).

The data presented in chapter 7, together with the data presented in this chapter so far, illustrated instances of apparent contradictions within teams' activities. Examination of the mediating means of each team's activity suggested that activity was complex and sometimes contested. By continuing to draw on these established examples, the negotiated nature of the object of activity will be explored in this concluding section of the analysis. This will be achieved by focusing on the differences in interpretation of objects of activity as exemplified in the perspectives of managers and clinicians within the teams.

That differences in interpretation occur is not very surprising, since within activity theory the object is constituted through the collective activity of system members. As clinicians and managers do different things to achieve an apparently shared aim or objective, the object of activity is likely to be construed differently by the two groups. This simple observation shed light on what were sometimes confusing situations, arising through teams' discussions of activity throughout this research, and offers an explanation of different views of the object of activity despite a mutual overall aim or objective of that activity. These will be presented and analysed next.

Differences in managers' and clinicians' interpretations of objects of activity

In relation to the epistemic object exercise, differences emerged when considering differences between teams' accounts of likely activity, by examining the way activity was mediated. This pointed towards different conceptualisations of the object of activity by highlighting contradictions around notions of all three mediating artefacts considered in depth in this chapter. For example, whilst clinicians' object of activity was clearly to deal with the needs of the hypothetical patient, using means such as the hospital, ambulance and Rapid Response Team to mediate their activity in order to achieve their overall aim, this did not seem to be exactly the situation for managers when certain simultaneously enabling and constraining contextual aspects of activity were considered. This divergence was raised initially in clinicians' accounts of mediated activity in relation to the healthcare needs of patients like the one presented in the epistemic object exercise, for example:

Primrose, participant 4, follow-up interview 2006:

P: I suppose the other big thing is just that social work are having their problems in terms of funding community packages, and that certainly impinges on what we do in the community. It impinges in the hospital [RGH], so they have blocked beds, which then impinges on our – it comes back to budgets in the end...

This quote from a clinician in the Primrose team immediately shed light on some of the aspects of team activity relating to the use of both the RGH and local social work provision as mediating means for object of activity as exemplified in the epistemic object exercise. Social work difficulties appeared at least partially related to lack of funding to pay for the policy of reducing hospital admissions and caring for older people in their own homes, even when they required additional personal and/or nursing care to remain there and central funding had been made available to achieve this, as discussed in chapter 10.

For the purposes of this part of the discussion, the Primrose participant identified the importance of the activity of dealing with budgets and how this apparently organisational or managerial object of activity contradicted the desired clinical activity identified in healthcare policy (SEHD, 2005b).

The notion of the object of activity for managers being the management of budgets was reflected in discussion with other participants from all teams, especially those clinicians who performed a part-time organisational role within the NHS in addition to their day-to-day clinical role:

Primrose/Rowan clinician manager, 2005:

...our most expensive locality is [place name], with an acute hospital [RGH] that costs £10 million to run, versus our community hospitals that cost £3-£4 million - even for the largest ones, including all the staffing costs. That's a *big* difference. So I still think our services are cheap, but they cannot be...an alternative to nursing home provision, or instead of looking after someone at home. And it's quite important to keep the number of GP acute beds down and to avoid delayed discharges so that they are *active* units...We've actually got quite a big programme of closures of Continuing Care beds across [locality]. We've closed a hundred of them already, and we need to move out of *that* type of care and to more of the GP acute, rehabilitation, phased care.

INT: So will that take you into discussion with the Social Work department then?

A: Yes. Exactly. So there's lots of discussions about resource transfer and design of services.

This indicated the centrality of budgets in the activity of organising services for people like the hypothetical patient in the "epistemic object" exercise. The example of the Rapid Response Team as a mediating artefact of activity in that exercise raised various related issues concerning the provision of secondary care and social work services. A managerial participant from the Harebell team cited this as an example of the object of activity for NHS managers and their social work colleagues:

Harebell, (managerial) participant 13, 2005:

[discussion about problems of changing older people's services to deliver them in the community rather than the DGH]:

INT: Are there any areas where, in spite of the fact that you [council and CHP] agree and you want to do things together, that it proves difficult?

P: Many.

INT: And what is it that's making it difficult for you?

P I think, albeit our relationships are in general very good... - a lot of times if push comes to shove people naturally get very protective of their own areas. And the words "Joint", and putting funds on the table and saying, "you can access this and that" is – and I think that's at all levels in the organisation – if you speak to the Director of Finance in NHS in Argyll & Clyde about the closure of X number of hospitals and the transfer of millions of pounds to local authorities to facilitate that, invariably there's going to be deficits. And it's working towards minimising these deficits, or redesigning the service to try and make something that... we can deliver, a service that's hopefully better for the patients – with the resources that we have.

Ways to finance the new configuration of services in the community instead of in hospital, was a central aspect of activity for the social work managerial participant, who offered an insight from the local Council perspective, which indicated the object of activity for this participant:

Social work managerial participant, 2005:

P: ...from the top down, we're saying "here's the strategy, here's the principles that we've agreed to, we're not going to be doing Continuing Care in the next five years. No, stop all the Continuing Care beds. We're going to be looking at single care provision within residential homes, we're looking at a joint day service". So these kind of things have to inform what the local groups are doing...

INT: [So] for example the Continuing Care, will that mean a change of use of the [RGH used by Primrose team] and the [Rowan community hospital], [since] they have Continuing Care beds?

P: Yeah, and in the [psychiatric hospital in Rowan area] – that's set for closure.

INT: Will that make a material change for the people who are providing services?

P: We have to plan for sufficient community care services to be *there* in the community infrastructure that would enable us to manage without those beds. So we *know* we need to have more home care package money available, we need to have more places in day care and locally, we need to have more private providers of residential care delivering single care and maybe supporting them to do that, because of challenging behaviour because of dementia, something like that.

INT: Will that be a big material change on the ground?

P: Yeah, and that's why I'm saying it's so difficult just now because we're planning for the closure of [psychiatric hospital], that's also got to dementia beds. We're trying to make those *local*, but if we do that, there's not enough money to put anything in the community, there's only enough money to replicate the beds, as a first phase, to give us time... to put the services in place in a preventive way that will allow us to close *all* the beds, if you see what I mean? It's phased.

INT: It's like a double running, almost?

P: Yeah. And there's no bridging finance to do that, so, so that becomes very difficult. And the Councillors won't want to be seen to be accepting the responsibility that's formerly Health's, and then getting the blame for non-performance... I think it's a difficult time just now cos what we're trying to do is carry on *working*, but redesign the service at the same time. And that obviously takes you down two different roads simultaneously, and it's quite hard to do...

INT: Do you think there's more awareness in the Council [than in the NHS] about the fact that you do have to actually look at your budget all the time and work out...?

A: Yeah. Well it's not – that would be unfair, it's not that I think - they [NHS] don't know what their budgets are, but, they're more concerned with duty of care – which we are – but because we're accountable through policy committees, etc, we actually have to justify our actions in writing every time we do it, so, you've got two parallel systems working *differently* to try and achieve the same aim if you like... The other thing is that I don't think the centre's joined up. They keep sending us things to respond to individually rather than

together as a Joint Future... So I don't think they [Scottish Executive] know where they're going. And there's a kind of feeling that in Joint Future we all know what the policy's suggesting but we don't know what the *destination* is... we don't know whether they want us to be one organisation, cos they're saying "resist that – you're still two organisations", albeit the CHP and the legislation around that *allows* us to do certain things...

This participant identified some of the contradictory elements within the social work activity system and between those of health and social work. But the object of activity for managers was clearly indicated and related to policy implementation, financial management, accountability in a publicly funded body and meeting performance targets. In contrast, the "duty of care" mentioned in the quote would be more likely to form the core of the object of activity for most of the team participants within the three primary care teams.

Other managerial research participants from healthcare organisations directly related to the participating primary care teams identified similar aspects of the object of activity in their day-to-day work related to policy implementation. The following quote is taken from an interview with a healthcare managerial participant who worked directly with the social work participant quoted above, linked to the Primrose and Rowan teams.

NHS managerial participant, Primrose/Rowan localities, 2005:

...you couldn't actually say that your staff on the... community side... were any more in agreement with NHS management than the doctors and their teams on the primary care side, because NHS management is trying to steer a particular line which not everyone - whether it's politics with a small p or with a capital P - is signed up to at all. I mean, we're delivering on policy as the Government *determines* it, and you don't even agree with it yourself. So I think we have problems like that. But I think where *management* has... not succeeded, or not been as successful as it might in the past, is in believing that it will *control everything* and that it can get clinicians and practitioners to heel with policy, when actually - and probably the Government makes that first mistake [laughs] and then sets it up *for us* to deliver on... The NHS... always believed you could just *tell* people what to do, you know. So, I think the *new* way needs to be about

clinicians. And of course, as managers then, you have to be able to make *compromises* - because you won't get your own way, cos you won't always agree... and you have to make room for compromise then. Any change in the NHS *has* to be bought into by clinicians... so we need *leeway* to recognise that... Bits of this policy will get taken forward - and will *work* - if you let clinicians do it, but none of it will, if you just leave it to managers.....[GPs] mainly always had attached community nursing teams, but the senior [NHS management] nurses... controlled those teams, told them what their work was to be. And while those teams may have collaborated and been good colleagues and socialised together at Christmas and so on, we [the NHS] ostensibly were setting the work plan for the community nurses, the GPs had this other work plan... So if you're going to *really* make that work, surely we all have to be saying "Well the GPs' workload is *our* workload" - it's not something totally different. Of course, the GPs will also have to explain that what we do might be different to what they do, and *they* might not think it necessary but *we* do.

This participant raised an issue which clinician colleagues identified throughout the research, in relation to the futility of not linking the actual clinical activity of healthcare (and/or the social care activity of social work) with the organising activity of managers charged with responsibility for achieving organisational aims and implementing central and local government policy. This issue pinpointed the contradiction within primary care teams in relation to the different objects of activity which seemed to be contested between clinicians or practitioners and managers (Blackler and Regan, 2006b). This was echoed by clinicians with a managerial/organisational role who felt during interviews in 2005 that if managers were more prepared to engage with clinicians about co-creating a more aligned object of activity, the respective managerial and clinical aims might be achieved more easily. The following quotes used to illustrate these points exemplified consistent views amongst the participating clinicians from all teams in this research.

Harebell (clinical) participant 3, 2005

Well the way you bring it to their attention is to get, is to start us being in their team. And all of a sudden one of the things that happens is they go, "oh, we spend too much money on hospitals, we can't keep doing this, so we need to do things in the community. How can we get into this, how can we understand

what's happening in the community? What can we do?" What can they do? "How can we work together, how can we learn together?", blah, blah, blah. And that was where, going back to this whole idea of the CHP being everything, which I'm sure it will if you give it a few years, that could then - But I'm sure it's all very well, if you're looking at your waiting times [as a manager], you look at your waiting times but you don't even speak to *us*, about creating them.

INT: Because you're the people who actually see the people [patients]?

P Yeah, we're the people who actually create the waiting lists - well, we instigate the referrals, but no body thinks...

In many respects, the frustrations expressed by clinicians like this participant may have been indicative of a developing double bind within the healthcare systems, as the difficulties of these apparently incompatible or contradictory objects of activity caused more problems than they solved. During the second research phase in 2006, the views of this clinician had changed somewhat:

Harebell, participant 3, follow-up interview 2006:

P: I think... what people also appreciate is that you're helping them do their bit. Cause they've got, some absurdities... but - the *pressures* for the Health Board to deliver are really, really tough, and I think if we - I mentioned earlier on if you've got the legitimate management aims, the legitimate aims of the Health Board, and then you've got various things [laughs] that can quite often cut right across that in terms of expert opinion and vested interests and... then local politics shooting right across as well. And I think, if you can get some decent clinical leadership is that you can actually start to align these things more effectively, and if you do have a bit of credibility with your peers, you can say, "well, I know you don't like the feeling of this [referring to the "redesign" of services] but, here are some advantages you maybe haven't considered." You can also say to your management folk, "don't go down that road, it's just not going to work, and here's why it's not going to work". So I think that's what they want when they're paying you your sessions.

This may have reflected the participant's greater understanding of the intentions of managerial colleagues through participation in managerial collective activity, in addition to the collective primary care team activity. Linkages between the two areas of activity, which were interlinked within primary care, had become clearer to the participant. However, some differences remained and were likely to continue to do so:

Harebell, participant 3, follow-up interview 2006:

P: The management folk are quite good, pretty well meaning... But they have all sorts of other pressures that we don't even understand. Their whole value system is based on a kind of different management code, you know, various bottom lines that aren't my bottom line, so.

INT: How would you characterise that – what sort of things?

P: Well, there's a fantastic example – breaching waiting time targets. Right, if you [as a manager] breach a waiting time target then potentially there is a sanction on your operation from Scottish Exec, which could cost your organisation lots of money and potentially you your *job* – well, certainly your career.

These pressures mirrored those faced by the clinician in his day-to-day clinical activity, where professional scrutiny could potentially be applied in each encounter with a patient. Therefore, this may have enabled greater understanding of some of the enduring differences, but could also foster a more creative approach to resolving some of the less helpful aspects of the differences in objects of activity between clinicians and managers.

In the concluding section of this chapter, inter-subjective tensions within primary care teams as activity systems, as exemplified by differences between managers' and clinicians' views of the object of activity, have been explored and analysed. These differences show the contested and negotiated nature of the team's object of activity based upon the example of the epistemic object exercise. These tensions help to explain the contested meanings attributed to objects which mediate teams' activities and offer an insight into the internal activity system tensions which may provide the impetus for changes within teams' activities.

Based on the key concept of mediated activity, the ideal meanings attributed to the mediating means of those activities have been considered in detail in this chapter. This demonstrated that objects of activity were differently constituted within each team through inter-subjective tensions. Differences have therefore been accounted for in the mutually constitutive activity and context across the three participating teams, which suggested teams' activities differ in similarly different ways. This finding will be discussed in depth in chapter 10. In the meantime having shown the linkages between the concepts of activity and context, of which collective learning is an inherent part, this will be explored briefly but explicitly in the next chapter.

Chapter 9: Findings and analysis - learning through activity

In chapters 7 and 8 three contrasting accounts of primary care team activity were presented and analysed. Initial similarities identified through the first research phase were re-viewed from an activity theoretical perspective. The mutually constitutive nature of activity and context illustrated the role of context through the use of an epistemic object representative of mundane primary care practice or activity in the second research phase. Further analysis of the findings from this exercise demonstrated that teams' activities differed in similarly different ways. In this chapter the next step in the analysis of data generated through this multiple study of primary care teams will seek to explore explicitly the linkages between mutually constitutive context and activity, and learning as an intrinsic part of practising or performing activity. This will complete the foundation on which the argument has been built in order to address the research questions posed within this thesis.

Since the activity of each team was different from that of the other two teams in various ways and for inherently contextual reasons, from an activity theoretical perspective it is reasonable to suggest that collective learning would also be different for practitioners participating in the performance of local activity in each of the teams. In order to explore this suggestion, the experiences of two groups of practitioners from each team, for whom learning was evidently part of their daily or routine practice, will be analysed to assess whether the differences in activity between the teams were mirrored in collective learning through participation in those activities. The two groups of practitioners are doctors who were experienced GPs but were newcomers to the particular primary care team, and doctors who were novices in terms of general practice and were training within that specialty (GP registrars).

This chapter begins with a brief discussion of the basis of the specialty of general practice, in relation to the activity of training doctors within that specialty. The learning of these two groups of novices and newcomers within their respective primary care teams will then be examined based on data generated throughout the course of the research. The notions of the “universal” and “situated” curricula in that activity will be discussed and data will be presented to show that not only does context shape (but not

determine) activity and therefore is able to account for differences between teams, but it also shapes the collective learning which occurs through the process of practising within them.

Introduction

That context plays a part in the performance of practices has been established (Chaiklin and Lave, 1993; Nardi, 1996a; Franklin, 1997) and in its conceptualisation as activity, context has been employed to consider variations in practice (Engestrom, 1993, 1995b; Holland and Reeves, 1996) including the ways in which practices may be learned and expertise developed through participation in activity (Blackler, 1993).

An object of activity for healthcare organisations is the “implementation” of government health policy, as demonstrated in chapter 8. It has been suggested that those responsible for transforming this object through their collective activity have sometimes historically adopted a rational, managerialist approach to the organising of healthcare practice which seems to promote uniformity (Exworthy and Halford, 1999; Sheaff and Pilgrim, 2006). In contrast, the nature of primary care practice as demonstrated in the data presented in chapters 7 and 8, suggests that contextual issues must be embraced, which indicates that diversity is an intrinsic aspect of such practice. These two characteristics, uniformity and diversity, have been reflected in contradictions within healthcare activity generally and problems have frequently arisen when organisations attempt to eradicate that intrinsic diversity (Davies and Harrison, 2003; Farmer *et al.*, 2005b; RCGP, 2005, 2006). But as discussed in chapters 7 and 8, the conceptualisation of context as activity shows how it shapes (yet does not determine) practice across different situations. This raises obvious implications for collective learning, conceptualised as knowing-in-practice (Blackler, 1995; Gherardi, 2000; Nicolini *et al.*, 2003a).

In the next section, the framework for the activity of training novice general practitioners will be introduced to set the scene for the presentation and discussion of empirical data in this chapter.

Learning in general practice – the “universal” curriculum

The nature of General Practice as a medical specialty may be regarded as being characterised by complexity and diversity, as discussed in chapter 2. However, despite these characteristics, cultural and historical factors within Western society in particular meant a method of training doctors to become general practitioners was needed in order to assure the quality or standards of practice (Gesler, 1991). In order to achieve this,, a common professional curriculum (RCGP, 2006) for the training of GPs was created, upon successful completion of which a Certificate of Completion of Training (CCT) would be awarded by the Joint Committee on Postgraduate Training for General Practice (JCPTGP).

This certificate, together with other professional requirements applicable to all UK registered doctors, as set out in the key document, “Good Medical Practice” (GMC, 2002) http://www.gpcurriculum.co.uk/organisations/good_medical_practice.htm, would be required to obtain a licence to practice medicine in the UK.

The new GP curriculum (RCGP, 2006) mapped the GMC requirements against six domains of general practice which formed core competencies for all UK registered GPs. These cover three main areas of general practice and are underpinned by three essential features of practice. (Available on the European Association of Teachers in General Practice webpage: http://gpcurriculum.co.uk/international/european_definition_gp.htm):

Six domains:

1. Primary care management
2. Person-centred care
3. Specific problem-solving skills
4. Comprehensive approach
5. Community orientation
6. Holistic approach

Three areas of practice:

1. clinical tasks: the ability to manage the broad field of complaints, problems and diseases as they are presented; to master long-term management and follow-up.
2. communication with patients: the ability to structure the consultation; to provide information that is easily understood and to explain procedures and findings; to understand and deal adequately with different emotions.
3. practice management. To provide appropriate accessibility and availability to the patients; to effectively organise, equip and financially manage the practice, and collaborate with the practice team; to cooperate with other primary care staff and other specialists.

Three essential features:

1. Contextual: using the context of the person, the family, the community and their culture
2. Attitudinal: based on the doctor's professional capabilities, values and ethics
3. Scientific: adopting a critical and research based approach to practice and maintaining this through continuing learning and quality improvement.

General medical practitioners must therefore learn not only the practice of medicine within their own specialty, but also how to organise that practice, providing some linkage between practising and recognised practice. Primary care practitioners, in this instance GPs, need to know about how the wider healthcare arena is organised beyond their own organisations, usually known as Practices. Therefore, although local variation is an acknowledged feature of such practice, there is a clear expectation that local practice will meet the requirements pertaining to the practice of primary care overall.

This is not a simple matter in the UK healthcare system in 2007 which is characterised by simultaneously increasing fragmentation *and* uniformity. Whilst it has been suggested that modes of organising in healthcare have become more uniform rather than diverse in recent years (Iliffe, 2002; Currie and Suhomlinova, 2006) partially due to the rules relating to those forms of organising such as contracts for service provision, the force of such isomorphic rules may also be regarded paradoxically as the source of fragmentation resulting from contradictions between different sets of rules applied to the primary healthcare system.

An example of increasing uniformity would be the changes arising in the provision of general practitioner services to registered patients under the terms of the so-called UK-wide nGMS contract (BMA and NHS Confederation, 2003). This contract was introduced during a time of simultaneous change in the rules related to the training and registration of all UK doctors, as self-regulation of the medical profession became a focus for government policy (Exworthy and Halford, 1999; Greer, 2005). In addition, government policy itself underwent a series of changes following political devolution within the UK, resulting in an increasing divergence in devolved healthcare service delivery and organising issues, whilst the regulation and training of the medical profession has remained a “reserve matter” to be dealt with at UK government level (Exworthy, 2001; Greer, 2004).

This contract concerns modes of organising primary healthcare services, but it also seeks to influence some of the content of those services, through the introduction of a points system to reduce variability in practice. This scheme pays GPs for undertaking particular forms of clinical activity to achieve specific outcomes within their registered Practice population. But this same contract is also the source of greater fragmentation in healthcare provision. The most visible example has been the change in organising GP services through the highly controversial removal of GPs’ 24 hour responsibility for services to registered patients (House of Commons, 2007). This has resulted in “around 3,500 of the 4,000 GPs in Scotland” (NAO, 2006) choosing not to provide out-of-hours care whilst there has been an increase in numbers of primary healthcare providers during those hours, which has resulted in changes in the actual practice of the specialty of general practice.

These contractual changes meant that the rules for training UK GPs had to be revisited, since the actual practice of training novice GPs is undertaken by expert GPs within their Practice organisations, following the universal GP curriculum as indicated (RCGP, 2006). Therefore, whilst GPs’ service provision and practise may have changed in Practices to which GP registrars may be assigned for training purposes, the curriculum for these novices in general practice still required that registrars learn what is regarded as the full range of recognised practice for the specialty of general practice, in order to receive a Certificate of Completion of Training for UK General Medical Council registration, and therefore to become licensed general practitioners. This link between

recognised practice and practising, and between the organisation and content of that practice, has been identified by the relevant professional bodies. A position paper, endorsed by the general practice certification body, explicated the implications of the situation for practising:

The new contract (nGMS) has defined the normal working day for general practice to be between 08.00 and 18.30 on all weekdays, except public holidays. Thus, OOH is defined as that work undertaken between 18.30-08.00 and all day at weekends and on public holidays. However, for the purpose of this paper, OOH is also taken to mean the type and style of working that takes place in this time. This paper recognises that the processes for providing general practice and primary care, both during the normal working day and outside, have changed over the last decade and these processes provide different models of working, requiring different knowledge and competencies by GPs. It is important to make clear that these do not just refer to the management of emergencies, but also to the experience of dealing with patient contacts in a different quantity and context to the normal working day. In other words, emergency care is a feature of both in-hours and out-of-hours work but there are particular features of the out of hours period, such as isolation, the relative lack of supporting services and the need for proper self care, that require a specific educational focus... *The Joint Committee has debated this issue and has emphasised that their certificates license the holder to work in any capacity, unsupervised, in UK general practice.* They therefore concluded that GP training should continue to be designed to equip GP Registrars to deal with all work that currently forms part of UK general practice.

(COGPED, 2004 pp.2-4, italics added)

So the curriculum covers all aspects of general practice, 24 hours per day, for all GP registrars and uniformity is implied as successful registrars may become licensed autonomous practitioners anywhere in UK. This uniformity is at odds with the increasing fragmentation of the organisation of the specialty under the contract as discussed. Therefore, it seems clear that both the practising, and the recognised practice of general medical practice within primary healthcare, are undergoing a period of transformation which has not yet settled or become “fossilised” (Tolman, 1999).

When this situation is viewed through an activity theoretical lens, the overall activity system of primary healthcare (with general practice at its core) demonstrates the presence of a variety of tensions or contradictions as a result of recent changes. These may have been introduced to deal with secondary contradictions in the healthcare system (such as increasing the numbers of GPs in the UK or improving population health) but it is likely that there will be further change in primary care over time as policy makers and professionals seek to resolve the emerging tertiary contradictions (Engestrom, 1999c; BBC, 2007).

In the next section, the experiences of novice and newcomer GPs within the three participating primary care teams will be analysed and discussed in relation to the role of context in collective learning.

Collective learning through activity or practice

Although GPs who obtain a Certificate of Completion of Training are eligible to be registered with the General Medical Council and licensed to practise anywhere in the UK, the data presented here suggest that context shapes their practice. Qualified and unqualified alike, newcomers require to work through elements of a “situated curriculum” (Gherardi *et al.*, 1998) pertaining to the particular team of which they are a member together with contextual aspects related to the individual patients they see within their communities. This hidden curriculum covers informal aspects of practice and varies from team to team, contrary to efforts of “the profession” in its institutionalising or ideological role (Greer, 2004) and government, which seem to work together to pursue the eradication of variation in professional practice through the adoption of a particular view of “evidence-based practice” (Sackett *et al.*, 1996) or “best practice” (Sheaff and Pilgrim, 2006). The activity of novices and newcomers in participating teams will be discussed next.

Novices

GP Registrars needed to learn about the actual practice of the specialty of general practice, following the universal GP curriculum (RCGP, 2006), incorporating clinical and organising activity. The same actions were observed and reported in each team in

relation to this particular object. Novices within each team described how their training began by learning about consultation models through reflective practice techniques (Neighbour, 2005) and then moved on to deal with more clinical and diagnostic activities, augmented throughout the year by learning about organising techniques and issues in their chosen specialty. Tasks novices from all three teams had in common were: videotaping consultations for discussion with tutors and trainers for assessment purposes; undertaking a clinical audit of an aspect of practice (normally related to prescribing within their team, probably reflecting contractual obligations for each Practice); and a significant event analysis of an aspect of practice which in each instance within this research arose from problems encountered in the care of patients, but usually involved organising aspects of practice which had an impact on clinical practice in relation to specific patients (again, this probably reflected contractual obligations for the Practice). Whilst these tasks and the processes through which they were conducted were broadly similar, their content was influenced by contextual factors, as exemplified by the discussion of the significant event in the Harebell team (chapter 6, page 135-136).

Novices at the end of their year's training reflected on their experiences and the amount they learned during their year, typically:

Participant 9, Harebell (2005):

...you don't see it, because it's such a gradual thing – well, it's a steep learning curve at the beginning but then after that it's you're gradually learning new things. The appointment system goes from being twenty minutes to being ten minute appointments in steps, and you can't believe that you can work as fast as that. There's a load of things that I would have struggled to do in twenty minutes before, at the beginning, that now I can accomplish in ten minutes no problem, where I know what I'm doing. But even just knowing what goes where, how do I deal with this or that.

Participant 8, Rowan (2005):

Recently doing practice orals and things for our MRCGP, that's been *really* noticeable, cos we were all saying, if at the start of the year someone had sat down and said to you "OK, you think that one of the partners is, you know, you're worried about them clinically or you think that they're drinking or this,

that and the other is happening, someone's having an affair with someone...how do you deal with it?" and you have to talk about that for four minutes for the oral. At the start of the year none of us could have done that - and *now*, we all instantly go "Right, well, my duty's to do this, this, this and that and I'd need to go and look at Practice agreements and I'd need to get this, I'd need to collect information, I need to respect confidentiality" and all these things - and you suddenly go "Where did all that come from?" Suddenly I kind of vaguely know where I would start going with that. That's *not* something any of us have revised, because...you can't really revise for the oral, it's just kind of things that you've got along the way and they'll give you a difficult consultation and say "How would you manage this?"... and you're thinking yourself through the situation which again, is something that you couldn't have done at the start of the year, so I suppose it's a change in responsibility that you take as well.

But all agreed that the end of the training period didn't mean the end of learning about general practice, for example:

Participant 9, Harebell (2005):

...there's so much more still to do...and I know from myself and [participant's sister who is a GP], and from [name] who was the registrar before me, that you seem to learn an awful lot more probably in the first year after you've finished your training year, I think when you've not got that safety net of having somebody there and just ask.

Participant 8, Harebell (2006):

...I think particularly when you're coming towards the end [of your year of training] when you think, by August I'm going to be out working as a GP somewhere [laughs]... and my group were talking about it last night ... and one of them was saying, "I'm not ready to be a partner!" [laughs] Cause, I mean, it's a small business...and he had to visit a Practice where he was going to apply for a job, and...it was going to be salaried for a year and then look at partnership after that, and the GP had said to this other Registrar, "it never used to be like that, it used to be two or three years to parity". And that's what the Registrar was saying last night, "I don't even know what that means"! [laughs] ...So, I

don't think you learn everything you need to learn this year – it is something that you need to continue learning about, and you possibly won't really learn about until you are a partner...

Participant 8, Rowan (2005):

As a registrar people are supporting you. They are kind of backing you up... I think that would be different, particularly probably as the junior partner if you've gone into a Practice and you're trying to shove through an audit they don't like or trying to change something, then that would be different.

These comments reflected the need to consider the situated curriculum (Gherardi *et al.*, 1998) through which new team members learned when entering a new situation. This was evident from the comments of experienced practitioners who were new to the teams studied, whose accounts of learning the new form of local practice will be discussed in the next section.

Newcomers

The major issue which experienced GP newcomers identified in the teams visited were cultural and social differences relating to mediated activity within each of the three teams. For example, in the Harebell team, the main difference experienced by the relative GP newcomer there related to working with other GPs in a team with more extensive membership than that which the doctor had experienced before (Harebell, participant 4). Although working relationships were more complex because of the numbers of people involved, the work environment was also more supportive than previous experience of practice had been.

However, the same could not be said for newcomers to the Rowan and Primrose sites. Here, new aspects of practice were learned by newcomers in relation to most aspects of activity, including: identifying the object of activity, the mediating means of those objects, how the team was organised, which rules pertained to the local activity, and what the local community was like (and within that, how the professional team was regarded and worked).

The areas which caused most difficulty seemed to be related to cultural issues, particularly where people from urban cultural backgrounds came to live and work in rural primary care teams. This was evident as participants became accustomed to having a visible profile as a resident and doctor within the local community, as well as in relation to the differences in clinical working and patterns of practice from those they had experienced previously. These included patients' expectations of their service and their doctor, and what this meant for practice.

INT: Did you get much clinical variety in that [previously urban] pattern of practice?

Participant 5, Rowan (2005): The answer is no and that's one good reason why I decided I was going to have to move. There was very little hands-on medicine, very little - apart from the ordinary surgeries... But I think it has to be said not everyone would want to do this. Not everyone wants to move so far away from the city and the facilities like - tennis, there's no tennis here. [Laughs] I've completely had to give up tennis, there's no cinema and there's no theatre. There are no big shops, no - facilities. Schools can be a problem. These things you have to think about.

Participant 9, Rowan (2005):

If you do a regular GP job... it can become very mundane. And if you work in a highly urbanised area you can just deal with social problems and you see very little medicine... because you just refer everybody you see because you've got the tertiary hospital beside you. So I really was looking for somewhere that was saying... we actually can do a whole lot more than just refer people - and this is what this Practice does... I've never really worked in a rural area before - you're very accountable for what you've done... You'll be reminded in the Co-op as well too, they'll [patients] be around - I'm very acutely aware that not only are you doing a job... but also you will be remembered for something you did six months ago. So yeah, it's a very, very different set-up. That will be my biggest difficulty, the loss of privacy... I do find that a little bit difficult, I have to be honest... It's quite interesting, in the Practice, how different GPs have different ways of dealing with it. Some GPs don't get involved at all with the community side of things, they've really had enough they want to go home, and that's it.

And then there are the other GPs in the Practice who are much more visible... They say, “to hell with that, I’m going to go and cycle down the middle of [local village] if I want to and nothing’s going to stop me”, and I find that quite difficult actually. That’s quite strange coming from a city.

Participant 10, Primrose (2005):

Patients won’t... call you unless there’s a good reason for it, certainly in [part of Primrose Practice area], and if somebody phones and says they don’t feel very well, you can translate that as they’ve got crushing central chest pains and the world’s going black (*laughter*) So you tend to drop everything and run. But they are *very* independent and have a local support system which isn’t there in urban society... [Area] is incestuous, you have to be very careful what you say to who[m]... because they’re going to be related to somebody... I think those who want to work in rural practices normally train in rural practices. You *choose* what kind of work you want to do. Why would you want to work somewhere where you’re under such *horrendous* time constraints that you can’t do anything properly?... I made lots and lots and lots of money in [affluent area in South East England] but didn’t do the kind of job I wanted to do, and fourteen hour days take their toll. Costs you more than money... and your consultations are not good. Your patients go out feeling rushed because you’re trying to see fifty people in a morning.

In fact, a noticeable feature was that many GPs within the three teams studied had either trained within that Practice or in a similar Practice. Those who raised issues of local difficulty tended to be people from city areas who were now practising in rural areas, or vice versa, which suggested cultural and societal issues in relation to the meanings attributed to various aspects of activity within the teams such as the role of the doctor or the way practice was organised in relation to other aspects of healthcare, as discussed in chapter 8 (for example, proximity and type of local hospital as a mediating artefact for local team activity).

However, caution should be exercised in using the urban/rural dichotomy to explain the differences in activity between the teams, as demonstrated by the analysis of teams’ activities in chapters 7 and 8. This revealed that the differences between the activities of

the two rural teams studied (Rowan and Primrose) were more marked in some ways than the differences between the Primrose (rural) and Harebell (urban) teams, where (albeit different) notions of “the hospital” played such a central mediating role.

Therefore, from the accounts of the practitioners examined here, despite the same curriculum being in place in relation to the training of general practitioners, context could be seen to shape the content of that curriculum for novice GPs, and augmented it for newcomers, through the “situated curriculum” which reflected local cultural, historical activities.

In the next section, an example of the influence of context in relation to collective learning will be presented and discussed which demonstrates the transformative role of context in situations where double binds develop between rules and local activity.

The role of context in learning through activity

As was seen to be the case with other areas of apparently similar activities, contradictions arose in the activity of training doctors in primary care teams. In relation to the three participating teams in this study, contradictions were most pronounced in the case of the Rowan team where the official curriculum did not produce doctors who were able to practice according to the local practice or activity of that team. Both the expert GP members of the team and their GP Registrar felt there was a mismatch in expectations about local practice in relation to more widely recognised practice:

Participant 4, Rowan (expert GP, 2005):

How are they going to train up and produce partners in the future? There are people coming to this vocational training scheme, they’re going [in] the opposite direction [from the model of local practice]. They’re no longer able to suture. We have a registrar who - and it’s not her fault - she can’t *stitch*. And that’s not unusual. She did a casualty [A&E junior doctor] job [for] six months. Couldn’t put plasters on, couldn’t interpret an ECG... It’s not her fault. That was the programme. That’s *madness*. So they’re coming and they can’t – it’s enough for them to get through their year and do their videos and stuff. So there’s a real shortfall.

Participant 8, Rowan (GP Registrar, 2005):

[discussing the local general practice model]:

...it's *our* kind of general practice but it's not most people's kind of general practice, I mean, they're intubating people from road traffic accidents and stuff and ventilating them, and the next thing they're going off on helicopters, it's not what other people do, but it suits them... But it's a *big* life commitment to work somewhere like this... We've got a really good Registrars' group and... I'm the only person with a community hospital and the "on call" rota that I have.

INT: How do you feel about all of that?

Participant 8: I think I knew I'd commit myself to it, so I knew when I was coming that I was going to be doing twenty-four hour on-calls... I was getting paid *absolutely exactly* the same as the [place name] GP registrar who has to do ten twenty-four hour sessions of out of hours in the whole year. And they'd go and sit in an on call centre with their trainer and do some on call. Whereas I was here overnight...with people having heart attacks and phoning helicopters and dealing the trauma and all this kind of stuff and that was fine, I'd committed myself to it - but you do suddenly think "oh, this is a bit unbalanced" [laughter]... So I mean we do discuss it at the Reg group and most of the other Regs...whereas they're maybe doing rural practice but not in the same way.

INT: Do you enjoy that clinical side of it?

Participant 8: I think I don't particularly enjoy the trauma side of it. I *don't* have enough casualty experience really to back it up and whilst I could build on that, I think that I've realised over the years there's things I'd rather build on... At the start of the year I thought, this is what I want to do, I really want to do community hospital work and that's really, really changed over the year, and I've begun to kind of crystallise what the reasons are that I don't want to do that rather than just, "I find that hugely stressful". It's been, like, "what is it that's stressful about it?" and it's like, "well, it's this and this, and *that's* where I need to improve my skills and do I want to do that? *No!*" [laughs] There are *so many types* of Practice that I will find somewhere that suits... and that uses the skills I want to use, so it's been a nice, *safe* way to try it out... I did get a buzz from it. It was great having a person comes in with an MI and you thrombolyse them and treat them and they get better and all the rest of it... and you think, "oh, that's

good, saved that one”, they wouldn’t have survived if you hadn’t done that. You can *see* where that buzz is coming from – *but*, I can live without that buzz.

Not only did the doctors coming to the area to train as GP Registrars not meet local criteria at that stage, but the difference in the local GPs’ activity had become sufficiently marked from that of most other Practices, that they pushed to introduce a new form of training for fully qualified GPs in recognition of the extent to which their role had developed (raised by 13 out of 15 Rowan participants interviewed). This was partially in order to provide extra capacity to deal with the local workload and partially to try to ensure the durability of this particular form of practising:

Participant 3, Rowan (2005):

We’re also developing a model of care that you know, other people from outwith the Practice, and Health Board and now the Scottish Office, are interested in... We’ve got two intermediate care fellows. So we’re pushing as hard as we possibly can to promote this idea of intermediate care and...we’ve got trainees, we’ve got fellows, we’ve got registrars, we’ve got undergraduates. So we’ve got as *heavy* a teaching commitment as we can possibly take on, because we feel that’s the only way - that was the [only] avenue... that we had in order to be able to promote what *we* think is a *sustainable* model of care in terms of value for money, in terms of patient care... in terms of people having rewarding careers... We’re hoping that they’re going go away from here with the ideas of how we work, and seed it into other Practices. That’s the idea. We have some of them we will retain as vacancies become available in the Practice and so part of the reason for us putting such an effort into training is that we’re trying to make sure [of] our own survival, but...now with outside funding from the Health Board for Fellows, we’ve also taken on the responsibility...to provide future practitioners for other Practices doing similar things to us.

An imminent change for the Rowan team was the completion of a new health and social care facility which would house the primary care, social work and community hospital aspects of primary healthcare services in one new site, as discussed in chapter 8. Some members of the team had been struggling to get government approval and funding for a new community hospital since the 1980s (participants 3, 4, 10, 12) and the new facility

developed the idea beyond a simple redevelopment of the community hospital to a new integrated, “intermediate care” facility which would provide most services to the local population, including hosting visiting tertiary and district general hospital consultants. The new healthcare facility was seen to be linked to the enhanced training of already qualified GPs, in order to sustain the local model of care and to enhance local clinical capacity:

Participant 5, Rowan:

...if the Intermediate Care Fellows, if that position hadn't been created then... it's quite likely that we wouldn't have had any extra pairs of hands - because if we'd advertised the jobs, say a year ago, I think we might have found that there was very little interest. We were *afraid* of that happening, that we might be forced in to accepting some, not forced, but might have felt obliged to accept somebody who wasn't really what we were looking for whereas...at the moment it may look very healthy but - it could very easily change. And then you know that the particular reason why it might seem *very* unattractive is because of the Out-of-Hours work and, and that's very much part of the job here and very few GPs want to do Out-of-Hours work. It's very much an *exception* and at the moment - people see that as part of the job [ability to opt out of Out-of-Hours] then you - it was quite likely they might be turned off...

INT: What made you look at it as an opportunity rather than a millstone?

P5: [Pause] I think it's all tied up in the idea that by doing this type of work we get more satisfaction... out of treating acute illness - fracture management or, or RTAs [Road Traffic Accidents], whatever it may be... If we don't stay in it the whole...we think that it'll disappear, rapidly disappear. So it's all part of this variety and the hands-on medicine idea and if you opt out of one part then it's, you're on the slippery slope away. Most general practice has been.

The two views of Rowan participants 3 and 5 were interesting in that participant 3 had been in the team for more than twenty years, whilst participant 5 was a relative newcomer, having previously practised in an urban team. The culture or attitude towards general practice from these participants was clear and was echoed in every encounter and document relating to this primary care team. Each participant viewed practice in a particular way, which was definitely different from the views of either of

the other two teams participating in this study. These differences were found to relate to contextual aspects revealed when considering each primary care team as an activity system. But they also needed to be considered as part of a number of other interlinked activity systems, such as secondary and tertiary healthcare providers and social work provision locally.

Local cultural aspects were found to be important in shaping the attitudes and values, which in turn coloured the way various mediating artefacts such as the local hospital were regarded, together with the resultant local division of labour, the composition of the collective subject and how the object of activity was conceptualised. Given the trend towards eradicating variation in practice within healthcare as exemplified in government and professional policies, it seemed curious that this team exhibited what appeared to be such a markedly different form of practice.

Differences were most obvious in the management of seriously ill patients (participants 3, 4, 6, 12). During fieldwork, one such episode was observed when a seriously ill 40 year old male patient required airway management and stabilisation at the community hospital for several hours, performed by medical and nursing team members. This culminated in two undergraduate medical students on attachment with the team at the time making the helicopter journey with the patient and Rapid Retrieval Team to the tertiary hospital with which the local team had links. This was not an unusual occurrence locally and although it seemed to cause controversy amongst primary care colleagues from other teams in the region and from some healthcare organisations, local team members defended their position robustly because contextual aspects meant this activity met a human need despite going against the grain of generally accepted primary care practice:

Participant 3, Rowan (2005):

...ten days ago we had a young lad came in, road traffic accident. Crushed in the car. Needed [to be] cut out. Came into casualty. Initially his Glasgow Coma score was running at about nine, and then started going down...and down, and you're thinking, "[he] needs to be ventilated. Got an airway compromised here - if we don't do something now, he's going to go." So what d'you do? I've had a stand up discussion [laughs] with the Professor of Anaesthetics from X about

this, at a BASICS meeting. What he was saying is that, “no, you shouldn’t use drugs in a situation like that - when the patient gets to the stage that you can tube them without drugs, that’s what you should do”. Now, there’s good evidence that if you wait until you can tube them without drugs, you might as well just do it: they’re too far gone... He has then got zero chance of having a useful life out of hospital, if he even has that. So do you wait until you’ve got unsalvageable patient, or do you intervene? Our argument is that our duty [is] to intervene and to try and keep the outcome for that patient as good as it can possibly be. So we’re saying, “yeah, well we are working off protocols, we do have limited training. We’re not anaesthetists. But the bottom line is - this is a *bad, bad* situation. If we don’t act, he’s going to have a *really* bad outcome and therefore we have a duty to do something about that”. We don’t have universal acceptance of that and people will say “No, you can’t do that without full anaesthetic training” and we’re saying - well, I would say - that’s nonsense... And there’s no doubt in my mind that had we *not* done what we had done on Friday night, that young lad would have died. *Now* he’s making really good progress and he’s out of ITU.

Participant 6, Rowan (2005):

It is a job where you learn. I think folk coming here from big areas – years ago we had a girl who came here from A&E and she had worked in the big hospital, and was [pause] quite brave til the first time when something happened and she was just, “oh, where’s the back-up, where’s the doctor?” – well, if you can’t [immediately] find the GP, you need to get on with it until they come, and that – it is, it’s a big... We cover a large area, and the roads round about are not good. We’ve got high, high incidence of road accidents, we have a lot of trauma, we really do. We’re probably the busiest community hospital for trauma... So we’ve got that and because the GPs are forward thinking - I mean we keep our own MIs [myocardial infarctions] and things like that, uncomplicated ones, so that you’re working at high levels. And because you don’t have the medical staff on site we’re all doing ECGs for the big hospital, whereas somewhere else somebody else’ll be doing them for you. We’re all taking bloods, a lot of staff canulate now as well, you know, to continually expand our role. We’re doing IV-antibiotics, so it is...

Participant 4, 2005:

We had, ten days ago a car with four young lads in [it]. Went at speed under a low loader. One head injury, lost his airway and started fitting... Another became obstreperous and difficult, had a fractured skull. Rapid retrieval team was called [from tertiary hospital, in helicopter] but before they were called he “went off” and lost his airway so he had to be paralysed and ventilated by us before he went. A similar thing happened two and a half months ago with another young guy in his thirties had fallen asleep at the wheel and driven into a cliff and in the fall had three fractures in his [?], so clearly there’s a need for that kind of support. We’ve been doing rapid sequence induction for eight, nine years here now.

This local need was potentially mirrored in other remote locations although none established specifically recognised training for already qualified GPs as was the case with the GPs in this area. This may have been due to a combination of specific organisational and professional issues in relation to the location of this team. This seemed to be the case particularly in relation to the links with their tertiary colleagues who were willing to support them by offering training placements in tertiary hospital departments to trained GPs, not usually the attitude displayed by other areas of the profession, as exemplified in the description of inter-professional “discussion” provided by Rowan participant 3. The local situation seemed to have created both clinical and organisational tensions, as evidenced by the financial difficulties experienced by the Health Board which was dissolved by the Minister for Health in March 2006, during the course of this research. These tensions may have been due in part to the challenging nature of both the urban *and* rural areas of this region. This created serious problems for an organisation trying to implement healthcare policy across its area characterised at one end by severe urban deprivation within a culture of centralised secondary and tertiary health care provision (Harebell), whilst at the other end the rural areas were historically autonomous and featured some of the most challenging topography and geography in Scotland (Rowan/Primrose) if one’s object is to transfer very ill people to Glasgow or Edinburgh.

The local GPs established a training package based on training in other remote and rural areas (notably Australia) to enable future generations of GPs to acquire the skills and abilities they perceived were required to work in an area such as theirs. By agreeing to continue to provide Out-of-Hours care, local GPs struck a deal with their Health Board, in itself against the prevailing practice for organising this aspect of service provision throughout the UK (clinical management participant 1, Primrose/Rowan). Under the terms of this agreement, the Rowan team would provide care for their registered population twenty-four hours per day, every day, and in addition would provide Out-of-Hours cover for patients registered with surrounding Practices at some distance from the Rowan location.

In return, they were paid a substantial sum which they agreed to invest in enhancing local clinical capacity to meet most of the healthcare needs of those populations by looking after them in either their own homes or in the local community hospital. The Practice funded enhanced training for local casualty nursing staff and established the Intermediate Care Fellow training scheme for fully trained General Practitioners who had had some form of extended rural and/or emergency care experience. They would undertake additional training such as airway management, advanced life support, dealing with obstetric emergencies, head injuries, and all with support from tertiary care colleagues. This indicated a clinical need for such a local service which was contrary to most professional guidelines. Whilst the Health Board supported this development at a regional level, the local team had been unable to secure the support of the official organisation responsible for overseeing all healthcare professional training and development:

Participant 4, Rowan (2005):

[It] has been really disappointing really, it seems just everything you think of a quango - unresponsive, lack of vision, mis-coordinated, not speaking with one voice. We've had very little joy from them. I'm very disappointed... They [are] not *really* interested in this...

INT: Why is that, d'you think?

P4: We're a threat - where do we fit in? Most General Practitioners in the UK don't wish to be doing this and certainly the Royal College didn't want to be seen to... be supporting a model [for which] everyone else has abandoned ship.

But the Royal Colleges see us as a threat, they are not happy about the integrated care model developing in the [a district general hospital in the same region] where physicians are replaced by General Practitioners which is, well, looks like it's going to run now. So we have a lot of enemies within the system...[discussing the intermediate care scheme:] It's quite unrecognised. But if we'd have gone about getting it recognised before we did it, it would have taken *ten years*. It would *never* have happened... It's not effective to get everything done within the system. Doesn't work. You have to move between the lines really if you want to get anything done...

This drive to go against established practice demonstrated a situation where the overall healthcare organisation and the local team activities generated a contradiction in activity and there was a discontinuity in practice. But in order to meet the local need, which was exacerbated by the centralising and uniform tendencies of Scottish healthcare policy and management since the late 1990s, local team members created their own solution to the double bind they began to experience in order to sustain their own model of practice for their own context.

The tensions were clearly evident to the previous health board, but when this was dissolved, the whole issue came under renewed scrutiny when the team was absorbed within a new Health Board, which paradoxically had several remote and rural areas within its region (2nd stage follow up interview, 2006, participants 4 and 6). The local team had reacted to a tension within their activity system by forging links with other activity systems, based upon their historical and cultural circumstances. They sought to change practice in their area which went against the general trend but which they felt would enable them to counter what they perceived to be the development of new patterns of practising which threatened the sustainability of their mode of practice and health services for their local population. This resulted in substantial changes to the roles within the local team so that everyone assumed additional responsibilities in order to retain the model of extended primary care provision within their own context. By doing this, the local team consciously created a mediating artefact which was contrary to that generally in use in order to suit their needs.

In this chapter, the linkages between mutually constitutive context and activity, and collective learning within primary care teams, have been identified explicitly through the experiences of new members of each team, some of whom were novices to their activity whilst others were established practitioners. Against the backdrop of an apparently similar object of activity involved in the training of doctors (the GP curriculum), the way that this was shaped within each team as part of inherently contextual team activity suggested that what *seemed* the same, was not actually the same. The changes in activity for experienced practitioners as they moved from one to another primary care team illustrated the way in which context shaped the socialisation of those professionals into their new activity system. In this way, collective learning was shown to be shaped by participation in inherently contextual activity.

Chapter 10: Final analysis and discussion

The relevance of context in collective learning

The central questions of this thesis concern how and why context is relevant or important in relation to organisational learning. In order to address these issues, two complementary practice-based conceptualisations of these phenomena have been selected: organisational or collective learning has been conceptualised as knowing-in-practice (Gherardi, 1999, 2000; Nicolini *et al.*, 2003b), and context has been conceptualised as activity (Chaiklin and Lave, 1993; Nardi, 1996a). Both conceptualisations may be located within a cultural-historical activity theory approach (Engestrom *et al.*, 1999b).

Within this empirically-based theoretical approach it has been suggested that context and activity are mutually constitutive (Holland and Reeves, 1996; Franklin, 1997) and that learning is an intrinsic aspect of collective practice or activity (Engestrom, 1987; Lave, 1993). Therefore, collective learning becomes inherently contextual, located within any collective practice or object-oriented activity. These linkages between context, activity and learning are important when thinking about organising. From this perspective, the notion of organisation becomes re-conceptualised, moving from a static, structural notion to a dynamic process within which collective learning and doing are inherent aspects (Brown and Duguid, 1991; Blackler, 1995; Gherardi, 1999).

These theoretical issues were explored through detailed data and analysis in Chapters 6 to 9, the findings from which may be summarised as follows:

- In chapter 6, organisational learning was shown to be something people do in the course of their everyday collective activity and therefore acontextual conceptualisations of learning and knowledge as separate entities were unhelpful in considering these phenomena. A somewhat confusing picture of collective learning emerged which suggested re-analysis taking a practice-based approach would be helpful.

- In chapter 7, the findings from the initial research phase presented in chapter 6, together with accounts of each team's likely activity in relation to a mundane or routine aspect of primary care work from the second research phase were re-considered from an activity theoretical perspective. This showed there were differences in activity between the three teams although all were ostensibly doing the same thing, all were part of the same overall healthcare organisational structure and all were subject to the same healthcare policy.
- In chapter 8, these differences were analysed further. Findings were presented which showed how context and activity could be seen to be mutually constitutive through analysis of mediating artefacts which appeared to be common to each team. Through this analytical approach things which seemed to be the same on the surface were shown to be different which accounted for the differences in activity across the three teams.
- In chapter 9, findings were presented relating to the learning of one particular professional group of novice and newcomer practitioners across the three sites. This demonstrated explicitly how mutually constitutive activity and context shaped the content of the collective learning of practitioners in each team.

Therefore the various nodes or aspects of each activity system or team were examined, analysed and discussed in preliminary fashion, in order to produce these findings. These aspects of activity have been the subject of previous empirical studies, which have informed the work presented here as referenced throughout. However, the nature of the cases studied here provides an opportunity to develop these empirical insights.

In the remainder of this chapter, the various aspects of activity considered in chapters 6 to 9 will be drawn together, presented with brief reference to data, and discussed holistically in relation to one another and in relation to the other two contrasting activity systems or teams studied. The emergent picture of contrasting inter-linked horizontal and vertical activity systems, based upon the analysis of these combined findings, will be discussed and a possible explanation which seeks to address the research questions of how and why context is relevant and important in relation to collective learning will be proposed. This forms the basis for the contribution of this thesis.

Contradictions within and between activity systems

The fluid and complex nature of activity makes analysis of inherently contextual collective learning in activity systems simultaneously easier and more difficult. Things which occupy the position of object may also be seen in other areas of the activity system model under different circumstances, for example as mediating artefacts or rules (Engestrom, 1996). In chapters 6 to 9, an attempt was made to untangle (as much as such complex empirical data would allow) the different aspects of each activity system or participating primary care team in order to try to show, in the linear fashion demanded by academic norms, how context is important in collective - and in this case expansive - learning (Engestrom, 1987). In order to offer an explanation as to why this is the case, these aspects must now be re-considered as the fluid and dynamic whole activities and activity systems of which they are constituent parts (Engestrom, 1996). In order to clarify this move, the same examples identified through the epistemic object exercise will continue to be drawn upon. This next necessary step in the argument will be developed in this section through discussion of those examples.

Each participating team's account of likely activity related to the epistemic object exercise demonstrated the inherently contextual nature of their object-oriented activity. Differences in teams' activities, categorised as "absolute" and "mutual", were subsequently identified as being related to specific mediating means of each team's activity, as presented in chapter 7. Those mediating means, categorised as "mutual" because they were present in each team, were actually different from one another as they were imbued with different ideal properties, meanings and values through their use in team activity (Bakhurst, 1997). This observation provided the starting point for the presentation and analysis of these findings in chapter 8. The dynamic nature of inherently contextual activity was demonstrated through the identification of contradictions between these mutually present but different mediating means (through which team objects were differently constituted) and other activity system aspects within each participating team, particularly the frequently externally-imposed, centrally driven rules (Illyenkov, 1977).

As explained in chapter 4, four types of contradiction have been articulated within activity theory: primary, secondary, tertiary and quaternary (Engestrom, 1987). Such contradictions perform an essential role as generators of collective learning and change within activity systems arising from double binds experienced by activity system members (Illyenkov, 1977; Engestrom, 1987; Groleau *et al.*, 2007). The focus of the argument presented here concerns not only the contradictions inherent and essential *within* each activity system to explain team learning over time (for example, as demonstrated in chapter 8 by the different objects of activity identified by different members of the same team), but more importantly those which arose *between* inter-linked and inter-dependent teams or activity systems.

In his proposal of the notion of expansive learning, Engestrom suggested Marx's concept of contradiction to account for the occurrence of transformative or deuterio learning (Bateson, 1972b; Engestrom, 1987). The primary contradiction identified by Marx between use value and exchange value through the division of labour (Marx, 1906) encapsulates the crux of this thesis when it occurs *between* activity systems, for example during episodes of "knot-working" (Engestrom *et al.*, 1999a).

This crucial contradiction arises between the use value encapsulated in the materials being used by individual internal activity system members (such as members of the family or tribe, or in this case the team) *within* the team to create the product of their activity, and the exchange value encapsulated in the contact which occurs *between that team and other teams and activity systems* when they exchange those products:

Exchange does not create the differences between the spheres of production, but brings what are already different into relation, and this converts them into more or less interdependent branches of the collective production of an enlarged activity.

(Marx, 1906 p.345)

When this interdependence between teams occurs, the importance of mutually constitutive context and activity in each team may be seen in the formation of a complex and complicated web of interlacing activity systems, through which new objects are, often painfully, co-configured (Blackler *et al.*, 1999b; Blackler *et al.*, 2003).

Continuing with the examples from the three participating teams generated through the epistemic object exercise, these co-configured objects may be illustrated as having arisen from the *interdependence* of four main activity systems in “mycorrhizae”-like formations (Engestrom, 2006), each of which was further inter-linked with other activity systems. The four interlinked activity systems, identified by team participants through collective reflection upon and discussion about their respective collective activities, were: the primary care team; social work (linked to the local council); secondary and/or tertiary care; and the health board (linked to the Scottish Executive Health Department).

These emerged through the analysis of the “mutual” mediating artefacts (particularly “the hospital” and “the rapid response team”) identified as relevant to each team’s activity in relation to the epistemic object presented to them. These are merely examples and it should be borne in mind that if another object had been considered, other related activity systems may have been identified. For the purposes of this discussion however, the important point to note is the way activity systems articulated with one another around partially given and partially created but conflicted objects (Blackler and Regan, 2006b). Co-configured through the contradictions which arose between these interlinked activity systems, this process seemed to contribute to the production of larger or “superordinate” objects of activity (Blackler and Regan, 2006b), for example, organising to meet the health and social care needs of the Scottish population.

Analysis of each primary care team’s activity in relation to the epistemic object revealed the activity systems with which each team was linked and how and why this was the case, as described above. These have been depicted conceptually in the abstract (see figure 7) as four activity system models linked by their mutual object of activity, in this case the elderly lady or patient (depicted as the central “P” forming an extension from the object node of each activity system model), whose healthcare needs required to be met through the collective activity of these interlinked activity systems:

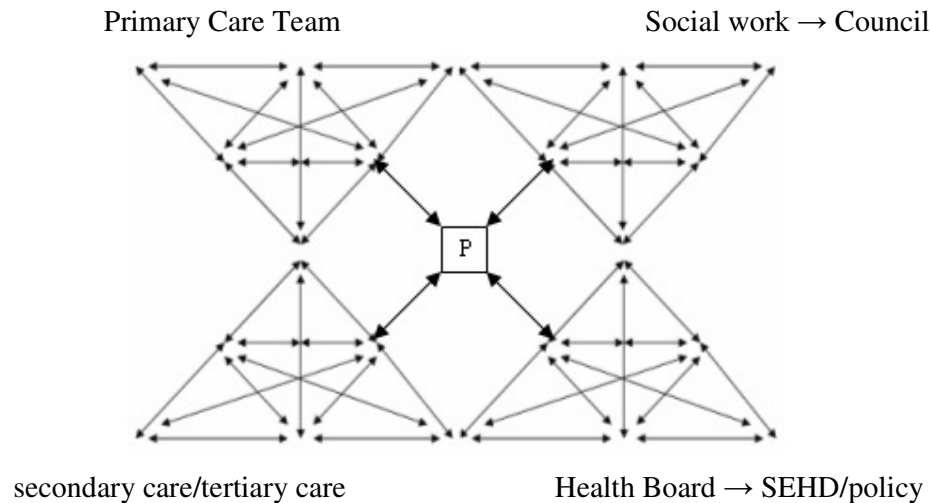


Figure 7: inter-linked activity systems identified through epistemic object exercise

However as the discussion here suggests, this picture changed when examples of concrete activity, and therefore context, were drawn upon. As discussed in detail in chapters 7 and 8, the mediating means of each team's activity indicated the presence of linkages between each primary care team and the three other activity systems involved as illustrated above. However in practice the exact formation of these linkages differed. These differences became visible through the analysis of teams' activities and the associated differences in the ways in which they were mediated, which shaped the way the relevant activity systems over-lapped or inter-linked. Therefore the relevance of the examples of "the hospital" and "the rapid response team" relates to the importance of mediating artefacts or means. These are of crucial importance to any consideration of context conceptualised as activity (and vice versa).

In the next section, empirical examples of linkages between horizontal and vertical activity systems, related to the three participating primary care teams and the other three activity systems, will be briefly demonstrated and discussed. Although it may appear that the discussion is about everything *other* than primary care team activity, the focus here is necessarily upon the activity systems with which each of the teams was interlinked in order to identify the contradictions arising between them. As discussed, this is important if one wishes to identify instances of collective deuterio or expansive learning arising through those contradictions. In this way the importance of context may be demonstrated, as it brings to the fore the specific configuration of contextual aspects

related to each of the originating activity systems, evident in the object of the “interdependent branches” of the new and “enlarged activity” (Marx, 1906).

Mediating means in inter-linked activity systems

As explained in chapter 4 and empirically demonstrated in relation to the examples of each team’s activity in chapter 8, the way in which objects become imbued with ideal properties has been conceptualised as the ascent from the abstract to the concrete (Illyenkov, 1977; Bakhurst, 1997; Tolman, 1999). The contested nature of the attribution of meaning has been identified within practice-based studies (Marshall and Rollinson, 2004; Yanow, 2004), including through the process of objects ascending to the concrete through activity (Blackler and Regan, 2006a). These studies indicate that tensions, or contradictions, within and between activity systems may give rise to fundamental changes in the ideal properties with which mediating artefacts have been imbued; this may subsequently influence collective learning through activity. This fundamental aspect of activity theory - that all human activity is mediated and is therefore inherently contextual - explains the need to consider the nature of mediating artefacts (such as “the hospital”) in any discussion of activity.

In the cases studied here, the co-configuration of what were effectively new objects of an “enlarged” activity emerged through the particular formation of contradictions which arose between the identified interlinked activity systems. These are illustrated in figures 8, 9 and 10, which depict the specific way in which both horizontal (or spatial) and vertical (or temporal) activity systems overlapped in each of the participating primary care teams (Engestrom, 1999a). These visual representations of the co-configured objects of activity locate the patient, whose needs the activity system members collectively transformed, in different positions relative to those interlinking activity systems. The differences in this positioning may be attributed to the specific contradictions arising within and between the particular configurations of these inter-linked activity systems.

Inter-linking horizontal or spatial activity systems

In figure 8, the Harebell patient's position within the horizontal or spatial interlinked activity systems was shaped by the contradictions arising between those four activity systems. Briefly these involved the access afforded to the primary care team to the 24 hour rapid response team (social work activity system) which was limited to specific times during "office hours" when care packages could be arranged; the probable ensuing admission outwith "office hours" to the unit within the DGH established to deal with the ongoing needs of elderly patients both in hospital and the community (secondary care through the district general hospital); the responsibility of the local health board and CHP to "implement" the Joint Future policy to reduce hospital admissions for elderly patients through the introduction of objects such as the rapid response team, together with the movement of long-stay service provision for elderly people from hospitals like the local Harebell DGH to the local council social work department (SEHD policy); and the primary care team members to whom the patient's problem would be presented and who would then seek to initiate mediated activity to meet the patient's needs, probably through the use of the rapid response team or referral to the DGH unit.

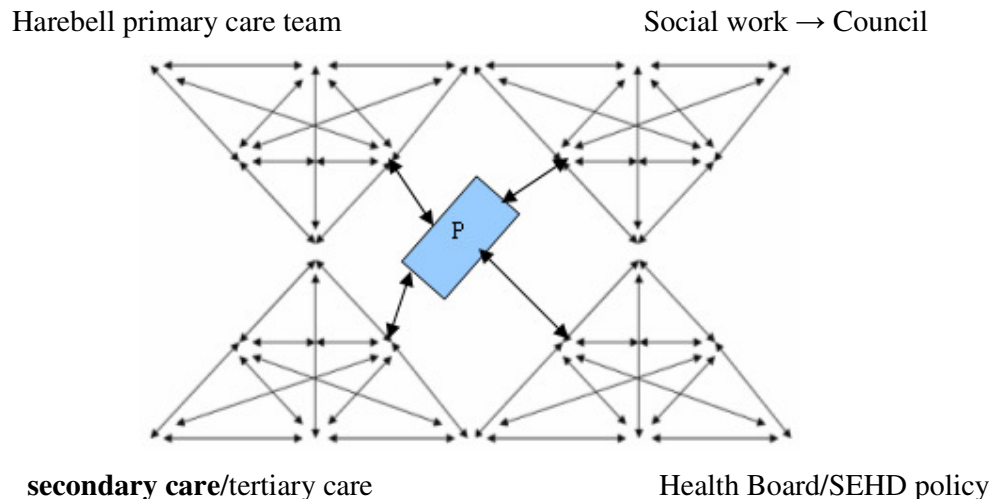


Figure 8: Object of inter-linked activity systems related to Harebell activity

In figure 9, the patient's position within the horizontal or spatial interlinked activity systems was co-configured in a different way to that of the patient in figure 8. In summary, the almost complete absence of services provided by the rapid response team meant that most of the likely activity to meet the needs of the elderly presenting patient would be carried out by members of the Primrose primary care team activity system, mediated by the nearby secondary care activity system in the form of the rural general hospital. This highlights the obvious contradiction between the Joint Future policy and the responsibility of social work to provide 24 hour access to packages of care or support through the introduction of mediating artefacts such as the rapid response team. This brought another inter-activity system contradiction to the fore as the social work department was attempting simultaneously to re-provide the service for elderly patients, which previously had been provided through the long-stay beds within the nearby DGH, through the local care home within the Primrose area and for whose residents care was provided by the Primrose team members.

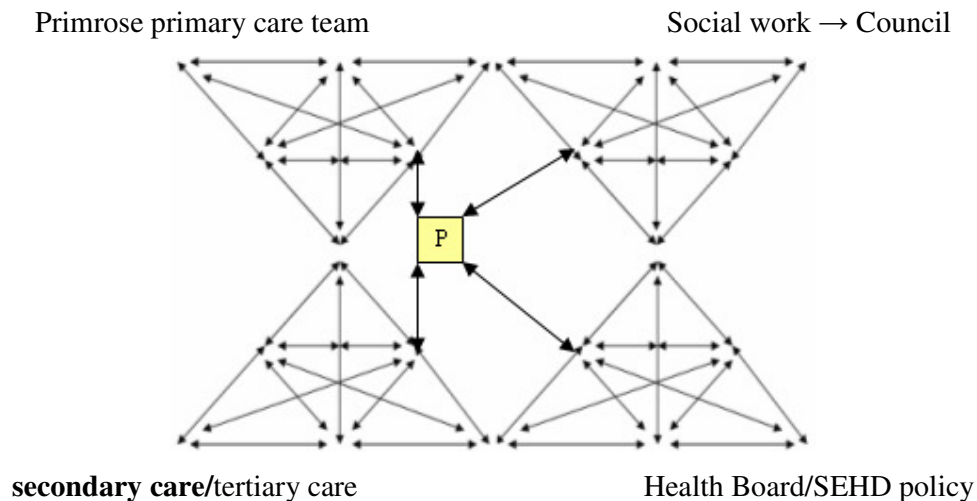


Figure 9: Object of inter-linked activity systems in relation to Primrose activity

Finally, in figure 10, the location of the patient within the horizontal or spatial interlinked activity systems demonstrates the range and scope of activity within the Rowan primary care team, most of which was mediated through the artefact of the local community hospital. This form of activity was partially related to the lack of social work provision in the area as indicated by the lack of rapid response team provision, together with the simultaneous efforts of the local social work department to re-provide the long-stay care of the elderly inpatient beds within the Rowan community, which

were currently located within the local community hospital. But it was also partially related to the links between the local primary care team incorporating the community hospital, and the tertiary hospitals providing specialist support to the local team in order to avert the need for patients to travel for three to four hours in order to access services.

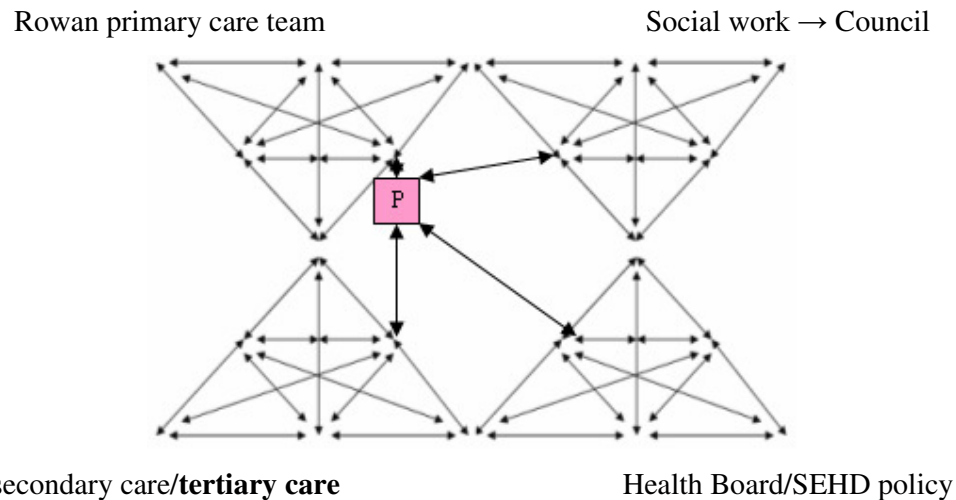


Figure 10: Object of inter-linked activity systems in relation to Rowan activity

Interlinking vertical or temporal activity systems

In vertical or temporal terms, the linkages between the four activity systems were also different from one another and complemented the differences highlighted by the horizontal or spatial linkages, which they had partially shaped. Two obvious vertical activity systems were identified through the analysis of the empirical examples of activity presented here, related to the way in which activity was mediated. These involved the development of “the hospital” as an object, and developments in modes of transport relative to location and topography. These vertical activity systems, and the linkages between them, continued to be of contemporary relevance due to the way in which meanings had been attributed to the mediating artefacts of the activity of each primary care team studied in relation to the epistemic object presented to them.

Of course, mediating artefacts (whether material or psychological) are objects in themselves, produced through one collective activity and then used to mediate another collective activity (Leont'ev, 1978; Engestrom, 1999a). As objects in themselves, mediating artefacts retain traces of past activity as well as being shaped by (and

shaping) current activity (Nicolini, 2006). In historical terms, the exact constitution of an object changes in relation to other aspects of activity related to it, exemplifying the process of change in the ideal properties attributed to objects as described above. An example of this involved the hospitals which mediated teams' activities in this research.

Bearing in mind the definitions of hospitals offered in chapter 8, traces of past activity dating from the nineteenth century relating to the development of hospitals (in tandem with developments in the medical profession), may be found in the various present day conceptualisations of the hospital as an object (Mays, 2000) and the way in which these differences mediate current activities. For example, so-called "voluntary hospitals" were originally used by both GPs *and* consultants, providing similar types of service (Powell, 1997). The differences in conceptualisations of "the hospital" began as divisions of labour and expertise in the medical profession began to be established. This became evident through the activity of doctors who took the title of consultant and established their professional status by providing, free of charge, most of the teaching for trainee doctors in the voluntary hospitals located in larger conurbations, whilst acquiring their income through private practice (Moss and McNicol 1995). These voluntary hospitals which became the early teaching hospitals – the forerunners of today's tertiary, teaching and sometimes district general hospitals - did not allow GPs admitting rights. Meanwhile, GPs continued to provide in-patient care for their patients in what are now termed community hospitals, which tend to be located in rural areas where no other version of hospital provision developed. The notion of the community hospital came into being when these changes in the role of medical professionals were enacted, with the first record of a Scottish community hospital dating back to 1860 in Aberdeenshire (Ritchie, 1996).

In the nineteenth century deal agreed between the new consultants and their GP colleagues, only clinically "interesting" patients, suitable for training purposes, would be accepted for treatment in such hospitals (Mays, 2000). In return for acquiring the status of monopoly provider of inpatient medical services within those hospitals and the concomitant professional status such a move provided, consultants agreed patients could only gain access to those services through the referral of a GP (thereby ensuring at that time that GPs continued to receive a fee for their input to that process).

GP referral patterns therefore became important mediating means in the co-configuration over time of different types of hospital. These in turn mediated the different activities of the newly emergent categories of doctors through the negotiated division of labour within the medical profession. Traces of these vertical professional activity systems continue to be relevant to the inter-linked activity within current healthcare activity systems (Kendrick and Conway, 2003), as indicated by the findings presented in chapters 7 and 8.

The influence of these vertical activity systems, evident in contemporary activity through the mediation of different types of hospital, was augmented by the influence of other vertical activity systems, especially those which concerned modes of transport relative to location and topography. Population density and spread, together with rural or urban locations, seemed to be issues which indicated the presence of traces of vertical activity systems in contemporary activities. However, the usual dichotomy between rural and urban areas in relation to assumptions about patterns of activity was shown not to be a sensitive enough indicator of actual activity, based on the examples of the teams studied here. For example, it did not explain the differences between the two rural teams which were in many ways more pronounced than those between the urban and rural teams. It seemed likely that the issues were more subtle and complex than that.

Closer analysis of the activities of the three participating primary care teams provided an insight into such subtleties and complexities and suggested how vertical activity systems may continue to be influential, but remain relatively invisible, due to the taken-for-granted aspects of contemporary life at any given time. One such example emerged through analysis of issues raised by participants in relation to the activity of each team. This concerned teams' mutual proximity to the sea and their shared topographical feature of a long and complex coastline. When considered in relation to development of prevalent modes of transport and related infrastructure linking different areas of Scotland over time, reasons for the difference between the three teams' activities began to emerge.

The most common and easiest method of linking the various areas along the local coastline was by sea. But the process of industrialisation of the late 1800s and early 1900s brought a move of the population and the centralisation of various activities in the urban areas around Glasgow and Edinburgh. In activity theoretical terms, the ascent to the concrete of roads used as the major thoroughfares, together with the corresponding descent to the abstract of the role of the sea as the main mediating means of travel, meant that some areas (such as the Rowan and Primrose areas), became remote whereas they had previously been easily accessible in relation to other services and activities by sea (Ascherson, 2004).

As demonstrated in chapter 9, these changes in perception of the areas of the teams studied, for reasons of topography and location relative to the development of modes of transport and the related infrastructure, influenced contemporary activities in those primary care teams. In healthcare terms, this has resulted the creation of measures of “clinical peripherality” (Kerr, 2005a) relating to the provision of various services which mediate healthcare activities, including those of the places featured in this study. Paradoxically, this contributed to making links to specialist services more important for the Rowan and Primrose teams than for the Harebell team, for whom such services were located nearby. However, this raised further questions about the differences in activity between the two rural teams, and indeed between all three teams, which had emerged through consideration of the epistemic object exercise.

Consideration of the combined vertical activity systems evident through the analysis of contemporary team activities enabled some suggestions to be made as to the reasons behind those differences in activities. As discussed, three different types of hospital were identified through the epistemic object exercise. These were the district general hospital (Harebell team), the community hospital (Rowan team) and the rural general hospital (Primrose team). This variation in the types of hospital seemed to be related to the vertical activity enacted in earlier times. The precise mix of the two main vertical activities discussed here, regarding service and professional development on the one hand, and location and topography relative to transport infrastructure and population spread and density on the other, provided a complex historical backdrop to current primary care team activities. This linked the overlapping vertical activity systems of the past with the overlapping horizontal activity systems of the present through the ways in

which respective teams' activities were mediated. The attribution of meaning to those mediating means linked the "there and then" and the "here and now."

In this section the empirical findings presented in chapters 7 to 9 have been drawn upon to discuss the related ideas of interlinking horizontal and vertical activity systems and the importance of contradictions in the attribution of ideal properties to the artefacts which mediated the activities of those interlinked activity systems. The examples introduced here will be discussed further in the next section, in order to discuss why context is important in expansive learning within and between activity systems.

The durability of objects and ideal properties

The historical development and attribution of ideal properties to objects over time, as in the example of the three emergent versions of "the hospital" as an object, is of immediate relevance when considering the importance of context as mutually constitutive of activity. This was evident in the activities of the three teams studied here. Indeed, analysis of the activities of the three primary care teams in relation to the hypothetical healthcare needs of an elderly patient demonstrated that the attribution of ideal properties to mediating objects, such as different versions of the hospital, continued to develop and change through those very activities. This highlights the concept of the durability or otherwise of objects over time and the dynamic nature of activity (Engestrom and Blackler, 2005). Through this process some objects might become mediating artefacts in relation to other objects of activity, as was the case with hospitals in relation to the needs of patients. This forms the basis of discussion in this section in relation to the empirical examples provided by each participating team.

Ideal properties linked to Rowan activity

In relation to the activity of the Rowan team, the relevant version of the hospital was the community hospital. Although potentially regarded as the one about which least is known amongst the types of hospital identified here (Ritchie, 2003), when considered from an historical perspective its longevity became apparent (Ritchie, 1996). Clearly, as demonstrated through this research, its presence as a mediating artefact of activity within the Rowan primary care team – in addition to its place as part of the collective

subject within the Rowan activity system - was of major importance in shaping local activity and learning. Experiencing varying (but not usually high) levels of support from policy makers over the years (Ritchie, 1996), these facilities represent an extension of the primary care teams and form an intrinsic aspect of local activity, as participants from the Rowan team repeatedly emphasised.

The ideal properties with which the Rowan community hospital was imbued facilitated an extended and decentralised yet integrated model of primary care and general practice activity. This was characterised by continuing efforts to maintain continuity of care for patients which clearly met a local need. Yet this was contrary to the prevailing trend towards simultaneous and contradictory fragmentation, centralisation and (sub)specialisation within general practice and the medical profession as a whole (Iliffe, 2002; Temple, 2002; BMA and NHS Confederation, 2003). As such, it could be suggested that the durability of the form of activity mediated by the community hospital would be unsustainable (which may prove to be the case in the as yet undetermined future). However, as the data presented demonstrated, the community hospital was a strong mediating influence used consciously by the local healthcare practitioners to shape their collective activity (see chapter 9). This received somewhat unlikely and perhaps unpredictable support from colleagues who were actively involved in local activity, albeit from other related activity systems (tertiary care practitioners and managers at the local health board during the initial research phase).

Whilst the community hospital as a mediating artefact of Rowan activity might have proved durable over time, this should not imply it was static. Indeed it provided an example of an object which seemed to be undergoing a period of transformation through its mediating role in activity. This became evident through the various contradictions within the Rowan activity system, and between the Rowan team and the other interlinked activity systems with which it was connected through activity. Particularly relevant were the contradictions between the social work department activity locally (to re-provide the long-stay care of the elderly beds currently part of the service provided through the community hospital) and the other interlinked activity systems, such as the rural general hospital which mediated the Primrose team activity, as well as the local council responsible for the overall social work provision across the region (including enacting the policy of introducing rapid response teams in every area):

Rowan participant 3, 2005:

P: ...the Council have produced figures which show that there was quite a distortion of the funding for geographical areas within [locality including both Rowan and Primrose].

INT: Where were you placed in that?

P: We were right at the bottom... what you find is that there's very high spending on care of the elderly in [another locality area] which is where the nursing homes are... and [Rowan area] has got virtually no facility and no funding package... So they close a whole ward in care of the elderly [locality RGH linked to Primrose], and the money stays in [RGH location]. For years they've been shouting that, "Oh no, [RGH], it's a district general hospital." If it's a district general hospital, and it's a district general ward, why is the money not shared around the district? That doesn't seem quite fair to us. They've got good packages of care in [other area within locality] and we're getting starved of cash. Their explanation at the Council is - because it's an independent Council - when it comes to things like that, everyone's just scrapping for their own wee patch and there isn't a party political policy...

This demonstrates the inherently inter-linked nature of over-lapping activity systems and the way in which contradictions arise between them. It seemed the social work department was struggling with incompatible priorities (Blackler *et al.*, 1999b), provoked by the introduction of the policy which shifted responsibility for providing "non-medical" care for elderly people from healthcare to social work. This gave rise to competing responsibilities which were different in the different local areas due to the existing different patterns of mediated activity in those local areas. As the participant here indicates, these patterns of activity involved complex and often hidden linkages between various inter-linked activity systems. For example, consideration of the social work responsibilities in the Rowan area would not at first glance seem to involve the RGH (which mediated Primrose team activity). Yet these activity systems were quite clearly linked through the budgetary allocation of the Health Board which required to be transferred to the Council to fund their new social work obligation. This created various contradictions between the four directly involved activity systems identified through the epistemic object exercise, as well as other activity systems to which they were linked,

such as the Council and the Scottish Executive Health Department together with the Scottish Executive department responsible for local government.

The role and importance of context in the collective activity and the collective learning of the Rowan team members was revealed through the presence of these various contradictions. These produced a re-consideration by Rowan team members of the “where”, “why” and “how” of their own mediated activity in a potentially expansive learning phase concerning the ideal properties with which the community hospital was imbued through their collective activity (Engestrom, 2001).

Ideal properties linked to Harebell activity

Perhaps the more obviously durable version of the hospital was the one which mediated the activity of the Harebell team. As a District General Hospital, it was arguably the most readily recognisable of the three versions of the hospital identified in this research, mediating arguably the most familiar form of primary care and general practice activity in contemporary terms. However this particular version of the hospital, which seemed to play its role as a mediating artefact in uncontroversial style, was undergoing a period of potential or actual transformation relative to other changes within the activity systems linked to the Harebell primary care team.

What became apparent through analysis of the data presented here was the likely impact that the potential transformation in the Harebell primary care team’s activity would have upon the ideal properties with which the local DGH was imbued. These properties were under pressure as demonstrated by various contradictions between various interlinked activity systems related through the Harebell team’s activity. Two sets of rules in particular seemed to be fuelling these contradictions: one was the government’s policy in relation to services for elderly people (Joint Future Group, 2000; SEHD, 2001b) and the other was the changes in configuration of local healthcare services which were related to increasing (sub)specialisation within the healthcare professions, notably in medicine (Argyll & Clyde NHS Board, 2005; SEHD, 2005b, 2005c). Such contradictions became more explicit over time and appeared to influence the Ministerial decision to dissolve the existing Argyll & Clyde Health Board in 2006, which changed the way healthcare was organised within the area. The mediating role played by the

DGH, exemplified through the example of the epistemic object exercise, was contradicted by those interlinked activity system changes as noted by one participant:

Harebell, (clinical) participant 3, 2nd stage interview, 2006:

P: ...what's coming across pretty clearly to me - there are Berlin Wall-type arrangements particularly around funding, because... their opinion [the new health board] is that they've already made all these hard decisions and we've been wantonly just lining the place with ten pound notes... we should have been way ahead with our Older Person's redesign, our Mental Health redesign, but - there's been endemic inertia in various structures in Argyll & Clyde around making some difficult decisions. Because they were so frightened to make the decisions...they didn't even think about the opportunities. And then if you look logistically, you're left with far more in-patient beds for this compared with that. Pretty good areas of service, but the redesign wasn't done to actually pay for that new community based service out of that.

The changes anticipated by this participant through the collective activity described as the “redesign of services” would probably produce transformations in the actual collective activity carried out by practitioners in the DGH, the social work department and the primary care team itself. The exact content and outcome of those transformations was yet to be determined through the co-configuration activities of the members of the various activity systems involved. This included the local population and their elected representatives as discussed in chapter 8, which demonstrated the unpredictable nature of such potentially expansive learning episodes.

Ideal properties linked to Primrose activity

In line with the complex nature of the mediated activity demonstrated within the Primrose activity system through the epistemic object exercise, the mediating artefact of the hospital within that system was in some ways the most complex of the three varieties illustrated through this research. As discussed in chapter 8, although the version of the hospital which mediated the Primrose team's activity was categorised officially as a District General Hospital of (substantially) less than 250 beds by the NHS

Information Statistics Division, a more accurate portrayal would be the emergent description of the Rural General Hospital (Temple, 2002; Kerr, 2005a).

Analysis suggested that of the three versions of hospital related to the three respective primary care teams, this was the one which seemed least durable in its form as a DGH due to the increasing contradictions between the various activity systems exemplified through the example of the epistemic object exercise in relation to the Primrose team's activity. During discussions with local participants about some of those inter-activity contradictions, which mirrored those evident in the inter-activity systems related to both the Rowan and Harebell teams' activities the historical development of the local hospital, and therefore the attribution to it of its ideal properties demonstrated through its classification as a "DGH", were discussed. It appeared the contradictions relating to the social work, hospital, primary care team and policy making activity systems might create a change in those ideal properties through which collective activities were currently mediated:

Participant (Clinician/manager) Primrose and Rowan areas (2005):

INT: How will you try to handle that?

P: The challenges in keeping a small DGH that's consultant led and junior doctors providing it?

INT: Yes, and... the change to general practice, because general practice will also change... if the things go through - in the Kerr report...

P: Yeah, and the extended skills of GPs and so on?

INT: Yes.

P: Yeah, I mean the GPs that actually came to [RGH location] - we used to have a community hospital, we used to cover...

INT: In [RGH location]?

P: Yeah... it closed when the new hospital opened. We lost all our GP beds.

INT: And are any of the GPs who were here then still here?

P: Aye, I'm still here! Yeah... Until about ten years ago used to provide all the A&E cover for the [Name] Hospital. We did GP obstetrics. So lots of the GPs who are longer than ten years here have worked in that environment. It's actually the younger ones that are probably more [pause] anxious about change... although we've opted Out-of-Hours now, all the Practices locally - it's

really staffed by the three Practices [one of which is the Primrose Practice]... So it's the local GPs who are providing the [Out-of-Hours] service [co-located at RGH]

INT: Different configuration [from before nGMS]?

P: It is – just sharing it across the Practices now, whereas we all used to do our own on-call. And the real challenge for the [RGH] is particularly going to be [during] the overnight period whe[n]...there won't be junior doctors with Modernising Medical Careers. And actually we're meeting tonight to look at the role of the GP within that, because they will have nurse co-ordinators and nurse leads at night in the hospital-at-night scheme, but the GP could also act, partly in the hospital, covering the hospital, and covering the community - [a] fourteen thousand population's not a lot of people to cover for one GP in comparison to other Out-of-Hours services. So there's actually a potential to maximise the role across the two [Out-of-Hours primary care and the RGH], and I think that will be a more secure future for the twenty seven services in [the RGH].

Therefore, ideal properties with which the hospital was imbued, which gave meaning to its status as a DGH and defined its mediating role in local activity, including that of the Primrose team, seemed to be undergoing a period of transformation. It seemed the status of DGH may have been about to descend from the concrete to the abstract, and the properties which had previously given it meaning as a community hospital may have been about to be partially re-attributed through a partial ascent from the abstract to the concrete, enacted through changes in local activities. This provides a good indication of the relationship between the content of activity (and therefore of learning) and the attribution of ideal properties: as indicated by the participant, the actual activity of local practitioners changed when they “lost” their GP beds and ceased to provide A&E and obstetric medical input to the local hospital. Although it was being resisted as the participant above described, there was evidence of a partial descent and re-ascent of the hospital's previous properties through changes in activity such as the imminent discussion of plans to re-provide hospital cover during the Out-of-Hours period, albeit enacted in a different way.

This potential re-attribution of previous properties to the nearby hospital was also evident through changes in local activity within the Primrose team. These arose through contradictions between the inter-linked activity systems:

Primrose, participant 2, 2005:

P: ...we've got a sixty bedded nursing home here over the last eighteen months - we've got more beds there than the geriatrician has in the hospital. I asked her if she would be prepared to come out maybe once a month and meet with me and discuss problem cases to save the patients having to go in. She started doing that and it's marvellous. So she comes out once a month and I will keep the cases that need to be reviewed, and I think from the carer's point of view just to know that they've [the person receiving the care] not been put in a nursing home, they're left with the GP, they're never seen again by consultants. But that's really worked really well and she's [the geriatrician] happy to come out. I think that the biggest difference. The other reason why I started it was first really for my own learning need, and I thought it would help the relatives. But also we were getting a bit of friction between the hospital ward and the nursing home, and that's completely gone. Because she [the geriatrician] sees the care... and the whole thing has settled. We've had no more aggro between the two sets of staff!

When this account of a transformation in local activity is set against the historical perspective in the previous quote, the values and meaning attributed to the hospital by members of the Primrose activity system are evident in the comments of participant 2 about "being left with the GP and never seen again by the consultant". This was an extremely strong value amongst Primrose participants who felt very protective of the DGH status accorded to the nearby hospital, relative to its possible re-creation as a community hospital.

However this highlighted a contradiction within Primrose activity system in terms of values and actual activity, which arose between local team support for the hospital retaining its status as a DGH (which represented the local availability of consultant medical services) and changes in local primary care team activity. The relative support amongst Primrose team members through their own activity of providing increasing

levels of medical input to patients re-located to the local nursing home, through the move of responsibility for providing services for elderly patients from healthcare services to social work, could be seen to undermine the status of the local hospital as a provider of such services. But as indicated through a variety of empirical sources (the quote from the clinician/manager participant above; discussion at a locality meeting attended during the course of the research in 2005; an interview with Primrose clinician participant 4, 2006), there was an increasing level of input by primary care team members to actively bolster services provided through the hospital in order to mitigate events which might consciously or otherwise remove its DGH status. Therefore, it could be suggested that solutions to what was apparently a developing double bind for the Primrose team members were being “tried out” in a process of potentially expansive learning, as the ideal properties attributed to the hospital were under review.

In this section the process of (potential) expansive learning has been explored through discussion of the contradictions which arose *between* inter-linked and overlapping horizontal and vertical activity systems, relative to what was ostensibly the same object of activity. Drawing upon the theory of the ideal (Illyenkov, 1977; Bakhurst, 1997), the importance of the attribution of ideal properties to objects acting as mediating artefacts of activity has been discussed. Based upon the empirical findings presented in chapters 6 to 9, the attribution and influence of those ideal properties, in relation to the co-configured object of activity of the inter-linked horizontal and vertical activity systems, was demonstrated. Through these combined and contrasting empirical findings, an explanation of not only *how* but also *why* context is important in relation to collective (particularly expansive or deuterio) learning has been proposed to address the central research questions of this project.

Importance of context for learning in inter-linked activity systems

The contribution of this thesis has been to provide an empirical account of how context is important in collective learning and also why it is important, drawing upon an analytical framework of cultural historical activity theory. The clear differences between the activities of the inter-linked horizontal and vertical activity systems studied illuminated the mutually constitutive role of context and activity, and demonstrated the inherent importance of context in the collective learning of the members of those inter-linked and overlapping activity systems.

However, this does not mean that nothing can be said about the role and importance of context in collective learning beyond the activity systems from which those empirical examples were derived. The use of observable and reportable cultural historical activity theory (Nicolini, 2006) has enabled the identification of issues which reach beyond each activity system and facilitates generalisation from the particular about context and collective learning in complex inter-related activity systems, based upon empirical examples from this instrumental study of multiple cases. These issues form the basis of discussion in the remainder of this chapter.

The nature of mutually constitutive context, activity and collective learning

Firstly, learning has been shown to be a collective and inherent aspect of activity and is not a separate entity (see chapter 6). This indicates it is neither something to be manipulated and controlled in a predictable way, nor something immutable and inaccessible, as suggested by some conceptualisations of both context and organisational learning (discussed in detail in chapters 3 and 4). The contribution of this study regarding this widely-made point rests upon the empirical exploration of complex episodes of “institutionalised knot-working” (Blackler and McDonald, 2000), when emergent forms of co-configured activity, and the organising of that activity, occurred through “mycorrhizae-like formations” composed of inter-linked and overlapping activity systems (Engestrom, 2006).

The simultaneously durable and stable, yet flexible and dynamic, nature of mycorrhizae-like formations offers a useful metaphor to describe forms of organising in long-established groupings to enact emergent and uncertain forms of activity, as demonstrated through this study. An example of this was the way in which the mediating artefact of the Rapid Response Team had been co-configured between existing established activity systems of social work and community nursing in order to provide a new form of emergent activity in two of the inter-linked activity systems studied. Illustrative of this was the transfer of individuals from their previous membership of primary care teams as district nurses, to become social work employees where they co-ordinated the efforts of untrained staff to carry out ostensibly the same activity they had previously enacted. However, as indicated by the Harebell participant who had had such an experience temporarily, the activity was not the same (see page 209, chapter 8). This, together with the other examples presented, illustrated the importance of mutually constitutive context and cyclical activity in the co-configuration of organising for episodes of knot-working (Engestrom *et al.*, 1999a).

Filtration and translation, not transfer - the case for variation

The conceptualisation of collective learning as an inherent aspect of mutually constitutive activity and context by definition renders decontextualised learning impossible (Lave, 1993). This prompted the reappraisal of a prevalent but somewhat taken-for-granted notion in the practices of healthcare policy-making and management: namely, the implementation of “best practice” based on “evidence-based” practice (Scottish Office, 1998; Cabinet Office, 2001; OFPSR, 2002; McNulty, 2003; NES, 2006).

Evidence-based practice, of whichever type, stems from a particular positivist perspective which borrows ontological and epistemological perspectives from the natural sciences which are then applied to the social world (Dopson and Fitzgerald, 2005a). But caution has been urged about the way in which that application should be undertaken (Black, 2001; Cohen *et al.*, 2004), which suggests the assumption that outcomes from such an approach will be the same should be regarded critically. Even advocates of (in this case, medical) evidence-based practice have been at pains to

emphasise the continuing need for discretion and judgement on the part of practitioners (Sackett *et al.*, 1996).

Healthcare has proved fertile ground for the growth of initiatives to promote evidence based- and best-practice, such as the clinical governance framework which encapsulates the prevailing conceptualisation of organisational learning within healthcare (Sheaff and Pilgrim, 2006). This may be explained by the multi-faceted nature of healthcare as a collection of practices based upon applied science which are enacted in the social world (Malterud, 1995; Norman, 2000; Malterud, 2001). Examples of the promotion of such an approach include the co-configuration of evidence-based guidelines and protocols relating to some objects of activity, such as treating illness and disease or promoting healthier living (for example: SIGN, 2001) through which best practice may be “rolled out” across all healthcare services and practice. However, studies of the application of such artefacts to mediate activity have suggested they are unlikely to succeed (Berg, 1998; Gabbay and le May, 2004). A recent application of the technique concerned the Quality and Outcomes Framework of the new GP contract (BMA and NHS Confederation, 2003). This has had mixed reviews upon application as contradictory objects of activity emerged, as indicated in the subsequent criticism of “unintended consequences” arising from the contract as a whole (BMA and NHS Confederation, 2003; Fleetcroft and Cookson, 2006; Guthrie *et al.*, 2006; Lipman, 2006; NAO, 2006; Sutton and McLean, 2006; Wang *et al.*, 2006; House of Commons, 2007).

These tensions arising between different objects of activity (e.g. illness/disease/health on the one hand, and the organising of services to perform activity related to them on the other) indicate the presence of a fundamental difficulty in the concept of evidence-based practices, including policy. Arguments from a variety of perspectives for a more balanced and subtle approach in relation to healthcare have increased since the late 1990s (Sweeney *et al.*, 1998; Ferlie *et al.*, 2003; McNulty, 2003; Hood, 2006). The findings of this study suggest insights as to why such an approach seems to fail in mediating what seems to be its own motive-laden object of activity: eradicating variation and establishing uniformity of pre-determined practice, arguably to reduce political and/or financial risk (Hood, 1998; Harrison, 1999b; Morrell, 2006; Sheaff and Pilgrim, 2006) through the notion of “implementation of policy” (Dopson and

Fitzgerald, 2005a). Indeed, the findings presented here suggest the outcome of this approach may be the reverse effect of that which was intended (Smith, 2003; Greer, 2005; Fleetcroft and Cookson, 2006).

An example of this which arose frequently concerned the policy recommendations of the Joint Future Group (Joint Future Group, 2000), the outcome of which was intended to be smoother and more co-ordinated service provision to meet the needs of older people (SEHD, 2001b; EGHOP, 2002). As discussed in chapter 8, in practice this policy produced contradictory priorities for the activity system members to whom responsibility for its “implementation” had been delegated. These seemed to stem from the attribution of ideal properties to new and existing objects which mediated the activities of the inter-linked systems studied (such as Rapid Response Teams or long-stay beds for elderly people). These ideal properties, intrinsic to mediating artefacts or objects, produced different contradictions between each grouping of inter-linked activity systems through each primary care team’s activity, as discussed earlier in this chapter and in chapter 8 (see page 219) as a result of the attempted implementation of a uniform policy with an intended uniform organising outcome (introduction of Rapid Response Teams). The problem was succinctly described by a social work participant who identified simultaneous and contradictory priorities (Primrose and Rowan, 2005, p226).

As discussed, the intended outcome was largely not visible in the actual activity of the three teams studied for reasons which may specifically be described as contextual from an activity theoretical perspective. Competing aspects of local activity resisted the ascent of the externally-promoted mediating object (the RRT) from abstract concept to concrete activity. This offers one explanation as to why uniformity cannot be achieved which seems to mirror an assertion proposed by Engestrom:

When an innovation is rejected [by management] but has conceptual coherence and need-based anchoring in the daily realities of a collective activity system, it is not likely to disappear. Reappearances in modified forms are much more likely.

(Engestrom, 1999b p.397)

The findings of this research suggested this observation works in two directions. The example of the RRT policy shows it in reverse: if an externally imposed rule does not meet a local need, it will be more likely to disappear or be filtered out, or if retained to be modified or translated to meet local requirements. But there were also instances of Engestrom's observation about local innovations persisting in the face of external resistance or opposing ideals (for example, the model of practice exemplified by the introduction of the Rowan team's Intermediate Care Fellows in chapter 9). This indicates that in practice a translation model of activity and learning rather than a transfer model of "packages of knowledge" (Gherardi, 2000; Yanow, 2004) which may be "implemented" operates, through which the "active role of context" may be discerned (Dopson and Fitzgerald, 2005b) across interlinked horizontal and vertical activity systems.

These findings call the whole basis of the notion of "best practice" based on "evidence based practice" into question. As recently suggested:

... "best" is context-dependent"... In short, 'best practice' implies the existence of a 'single best way' rather than the 'most appropriate way contingent on the circumstances at the current time', an implication that is hard to support from most theoretical perspectives... Even organizations with very similar structures and objectives will have their own unique cultures and histories, priorities and needs, all of which will affect the impact of performance improvement approaches such as benchmarking...

(Francis and Holloway, 2007 pp.183-184)

The activity of each primary care team was inherently contextual and different from the other two, but in similarly different ways. Looking at these different teams as part of an overlapping and interlinked series of activity systems did not undermine or diminish the presence and importance of these differences as a reductionist approach might have done, but rather enabled an understanding of the role of and requirement for such differences. They enabled the continuation of necessary day-to-day activity whilst providing enough flexibility for new ideas (usually about the activity of organising) to emerge and be considered in locally relevant ways through the diachronic and dialectical process of activity. This provides an empirical example of context in a

simultaneously enabling and constraining role, as proposed in activity theory. In this way, the differences between the exact combinations of interlinked horizontal and vertical activity systems, and the nature of the contradictions between them through which potential expansive learning would be enacted, offered an explanation of why context is both relevant and important in that process. Essentially, whether externally-imposed policies or rules are output- or outcome- driven becomes immaterial: each is equally unpredictable because the activity systems into which they attempt to transfer are not vacuous. As Brown and Cole observed:

That is the lesson of context. Problems that one set of institutions work through as a matter of course in one setting can be disastrous in another setting.

(Brown and Cole, 2002 p.11)

Returning to the “epistemic object”

This discussion has been based upon various data which have coalesced around, and often been derived from, the collective consideration of the partially given, partially created (by members of participating primary care teams) “epistemic object”. Through this exercise, insights into three examples of inherently contextual activity and learning were gained. But what of the nature of the “epistemic object” itself? Given the argument presented so far, some final consideration is required to offer some perspective on the complexities of this motive-laden object and the issues it raised.

The epistemic object presented to each team concerned a situation regarding the healthcare needs of an elderly woman. This exercise enabled differences in activities to be demonstrated, thus indicating the crucial point about objects: they are not entirely givens, but are created through activity which is mutually constitutive of context. That which appears to be the same is not the same. Proposing an explanation for this observation has been the object of activity of this thesis (or one of them at least!).

The complex nature of objects has itself been the object of recent academic debate (Engestrom and Blackler, 2005) and as demonstrated here, their multiple roles and positions in activity makes precise discussion of them difficult. The epistemic object presented here was a hypothetical example of what was undoubtedly a routine object of activity for primary care teams and other related interlinked and overlapping activity

systems. A key aspect of this epistemic object which this study was unable to capture, other than through the interpretation of the data generated from the multiple sources drawn upon (discussed in chapter 5), was the agency of the hypothetical woman in each instance.

This highlights an important aspect of activity involving the needs of human beings which form the object of activity for other groups of human beings. The woman herself of course was not the object, but her “needs” were. What this demonstrated was the different cultural, historical and societal values and norms which shape the way objects are collectively construed and how activity system members negotiate ways of organising the series of actions which form their collective activity (Leont'ev, 1978).

In relation to primary care team activity in particular, there were added complexities in that the hypothetical woman would play several active roles within that activity: she would be a member of the collective subject of the activity system because she would have a crucial role in the collective decision taken about her needs and how (or if) to meet them; but she would also be a member of the community and as such would have contributed in the various ways to the co-construction of local values and norms or “webs of belief” (Bevir, 2000) relating to local healthcare services. In this way, she would also ultimately be a member of the activity system responsible for voting on healthcare policy, as would the other eligible members of the local community, given the publicly funded and therefore inherently political nature of health and social care in the UK.

This complexity addresses the multiple mediating instrumentalities present in any consideration of activity (Engestrom, 2006) which acknowledges the radical localism which has been suggested is a foundational aspect of activity (Engestrom, 1999a).

The relevance of context in collective learning

The epistemic object presented here brought forth a picture of (potential) expansive learning episodes for each primary care team and their associated activity systems. This indicated a much wider process of expansive learning concerning the very nature of the epistemic object, personified by the hypothetical elderly woman, which goes some way

to addressing the linkages between purposeful activities and the process of organising them (and therefore the activity of organising *per se*).

The data presented here suggested that the ideal properties attributed to the needs of older people, particularly in Western societies, are being re-considered and re-negotiated across a range of interlinked activity systems. This process became evident through the inter-activity system contradictions which suggest that attempts are being made to de-medicalise “old age” and to re-position it so that it is no longer understood as a medical or healthcare need, but a societal and social responsibility (as evidenced through policies attempting to shift activity from health to social work). This would appear to be meeting a collective need regarding the way some countries, such as the UK, have chosen to seek to change mediated activity to deal with an increasingly large and ageing population, under conditions of finite financial resources as the size of the working population declines. The situation might well alter if the demographic profile changes, perhaps through reductions in numbers of live births or with increasing levels of premature death amongst pre-retirement sections of the population. (NHS Health Scotland, 2004a; 2004b).

The epistemic object enabled a demonstration of the filtration and translation of ideas, and the attribution of ideal properties to them, through the formation of new objects of activity within overlapping and interlinked activity systems. This showed that context shapes and is shaped by activity through which organising, as an activity of social order, is performed. The role of contradictions would appear to be the stimulation of instability in order to achieve a new or re-balancing of activity over time. So rather than resolution which implies a finality and destination, activity seems to be an inherently and necessarily partially unstable or *wobbly* process. The main issue here is that the exact nature of how this will be enacted is unpredictable and cannot be second-guessed or planned in advance. This is the importance of context in relation to collective learning.

In this chapter mutually constitutive nature of activity, context and learning has been discussed. Wide-ranging issues relevant to contemporary activity and the organising of that activity have been identified based on the particular examples in this study. It has been suggested that the inherently contextual nature of learning may be understood by

acknowledging that the ideal properties attributed to all types of objects seem to be translated through local activity. This offers a justification for necessary local variation in activity and perhaps explains why efforts to introduce uniformity tend not to succeed, unless the specific proposals meet a specific local need (but are still likely to be locally translated). Re-considerations and re-negotiations of the ideal properties attributed to objects across the wider interlinked activity systems of which society is constituted are likely to occur over time. This represents a form of expansive learning which is simultaneously far-reaching and local, and illustrates the necessarily wobbly nature of activity and its inherently creative contradictions.

Chapter 11: Conclusion

In this chapter the argument presented here will be concluded. This begins with a brief re-statement of the research questions addressed by this thesis and a summary of the contribution it makes to the debate about organisational or collective learning. Some critical reflection on the approach through which this contribution has been made will then be offered, identifying the strengths but perhaps more importantly the limitations of such an approach. Bearing those in mind, there will be a brief discussion of the implications raised by the argument presented here and what these might mean for policy, practice and theory. Finally, some suggestions will be made for how these implications might be addressed through future research in order to advance understanding of the issues involved further.

Contribution of this thesis

This thesis has addressed the following research questions:

- How (if at all) is context relevant and important in relation to organisational learning?
- Why is this so?

Through the activity of addressing these questions, this thesis has produced the following empirical contribution to the debate about organisational or collective learning:

- Context has been shown to shape collective learning within and between activity systems. Through the study of purposeful, object-oriented activity enacted between three contrasting but similar interlinked and overlapping combinations of horizontal and vertical activity systems, distinctive patterns of activity emerged. This revealed the role of context as mutually constitutive of activity across systems, as new and particular objects were co-configured by the members of those interlinked systems. It appeared that rather than doing the same thing differently, interlinked activity system members were doing different things in similarly different ways. This indicated the relevance and importance of context in shaping activity and through activity, collective learning.

- Further analysis revealed the presence of different contradictions between each specific combination of those inter-linked activity systems. These contradictions, which provide the catalyst for collective learning from an activity theoretical perspective, suggested that these differences in activity were likely to be related to the meanings attributed to the objects through which inter-linked and overlapping activity was mediated. Exploration of mediating artefacts of activity identified as being present across all three combinations of interlinked activity systems indicated that, although these appeared similar on the surface, they were each imbued with meaning shaped through the particular cultural, historical and inherently contextual activity which they mediated. This offered an explanation of why context is relevant and important in relation to collective learning as an inherent aspect of collective activity.

Strengths and limitations of the approach adopted

Perhaps the major strength of the practice-based approach of cultural-historical activity theory adopted in this research is that context and learning are conceptualised in ways which render them amenable to exploration and analysis.

As discussed in chapters 4 and 5, conceptualising context as activity turns what is an abstraction into a process which may be talked about, participated in, and observed; therefore it may be studied. Since activity itself is conceptualised as a collective undertaking, this transcends the problem of “levels of analysis” created by the necessity to differentiate between individual and organisational (or even institutional), or “micro” and “macro”, levels of society. These issues frequently paralyse research efforts concerning context.

Conceptualising context as activity invites a conceptualisation of learning as a situated, collective process which is unavoidably part of what people do in whichever activity they undertake. In contrast to other conceptualisations of learning as a separate thing which may be managed, measured and manipulated at times and places to suit the needs of the independently existing organisation, thinking about learning as part of object-oriented activity enables it to be studied as a normal part of everyday happenings. Different types of learning may also be accounted for, including the gradual, routine,

mundane and hard-to-notice learning in addition to the more identifiable formal learning episodes which take place as part of activity. Importantly, the focus on activity illuminates accidental and sometimes sudden episodes of learning which often occur when things go wrong or there are problems (Blackler *et al.*, 1999b; Yanow, 2004). The idea of expansive learning (Engestrom, 2001) provides a useful method to deal with these different types of learning in work situations, including the elusive type III or deuterio learning which usually occurs as a result of disturbances (often slowly over time) in current forms of activity. In other conceptualisations of organisational learning as a separate entity, the level at which learning happens must be differentiated (it must be at the “organisational level”) and linked to the type of learning taking place (it must be triple loop or type III) before any findings about “organisational learning” may be produced. This makes organisational learning notoriously difficult to study empirically: it is difficult to establish how to identify it, to know when it is happening, and not least because (as demonstrated in chapter 6) it difficult to discuss and convey to research participants.

Therefore, the major strengths of conceptualising collective learning as inherently contextual activity is that it offers a theory or way of thinking about these phenomena which makes empirical study possible in a way which arguably captures at least some of the complexities of the “messiness” of real life happenings in real life settings.

If these are the main strengths of the approach, what about its limitations? Paradoxically, the experience gained through this empirical study suggests that one of its major strengths is also one of its major limitations: the flexibility which characterises this dynamic approach, through which so much of the complexity and complication of people’s collective activities may be captured, makes the research it permits complex and complicated to execute. The mobility of objects which may be found at different points of the activity system model means that, although having an object of activity focuses the analytical eye, the flexibility objects enjoy through their various roles in activity makes analysis complex.

Furthermore, this is difficult to report in practice. Better ways of presenting complex, interlinked and overlapping activities are required in the two-dimensional medium most frequently used for the purpose (a linear account through the written word, presented on

paper). The most frequently used triangular model of activity (Engestrom, 1987) needs to be developed. An attempt has been made here to augment the diagrammatical representation of activity through the use of a painting to assist understanding of the concept of activity but this is unhelpful for analytical purposes, particularly when moving beyond one activity system. Therefore, although a method of seeking to represent a co-configured object has been found, it is too static to clearly illustrate the points which required to be made. Additionally, while it is necessary to use the precise language of activity theory to make relevant points, its expression in the English language is cumbersome. This makes writing and talking about it arduous for all concerned!

In relation to the specific way the approach has been utilised here, although some measure of new contribution has been made, there are obvious limitations which may be identified.

The main limitation has been the use of a hypothetical, rather than an actual, example of real-time mundane activity. As explained in chapter 7 the hypothetical example presented was likely to be a reasonable or even good approximation of what may actually become an object of activity for the participating primary care teams. But the hypothetical patient, whose needs became the object of teams' activities, was not an actual member of the activity system as would have been the case had an actual elderly woman's experience been studied through her participation in actual activity. However, the use of a hypothetical partially given epistemic object did provide what might be described as a neutral example which could be brought to life by the collective reflection of each team, thereby capturing the differences in likely team activity, if any. This might have been difficult to achieve had a real-life person's needs within each team been studied: the complexity of context may well have overwhelmed and undermined comparative analysis had that situation pertained. In the hypothetical situation some things were lost and some gained: a real person did not participate in the co-configuration of activity as she would do in real life, but this made at least some analytical comparison of likely activity across the teams possible.

Another obvious limitation of the approach was that it relied on accounts of likely activity rather than the (observed) performance of the actual activity being described. Although the complementary multiple sources of data offered a method of assessing the consistency of those accounts over a period of time, this did not provide the rich picture of what would happen in actuality. However, it did provide a multi-voiced account based on collective reflection upon repeated experiences of similar types through which sometimes surprising differences between team members surfaced.

Finally, putting boundaries around the study in terms of time and the unit of analysis proved difficult. In order to gain a better picture of collective or expansive learning it would be necessary to study the activity over a longer timeframe so that some view as to how expansive and durable the learning had been could be taken. In addition, studying activity across activity systems in more depth would require more data regarding the historical position and more than one researcher. Here the issue of boundaries of the units of analysis becomes important. As work activity becomes more decentred and fragmented it is difficult to decide how many interlinking and overlapping activity systems to include when following the constitution and re-constitution of the object of activity between systems. This in turn begins to make conceptualisations of characteristics like “local” difficult to define.

These are a few of the limitations of the approach adopted in this research and the way it has been employed. Bearing these in mind, the implications of the argument presented here will be discussed next.

Implications for theory, policy and practice

Various implications from this research may be relevant to three areas of activity: theorising organisational learning, making healthcare policy and practising in primary care. They can be broadly grouped around four linked themes which emerged from analysis of the empirical data concerning the activities of the three primary care teams studied: diversity, variation and uniformity; control and autonomy; issues of governance; and purpose and intentionality.

Diversity, variation and uniformity

The empirical phase of this research began with an exploration of the nature of collective learning in groupings called primary care teams, which were reputedly diverse in nature. Although this anecdotal diversity was the prevailing view both inside and outside primary care (a usual phrase which occurred in conversation with research participants was, “well, every Practice is different”), this axiomatic knowledge has proved difficult to pin down empirically. Whilst some studies have made attempts to deal with this problem, for example by analysing workloads in different primary care settings, defining the primary care team itself is difficult and defining the criteria of diversity is also problematic. Therefore, the approach taken in this research was partially chosen through prior knowledge and partially through participant views generated during the exploratory research phase. The patient-centred activity approach ‘grounded’ the research and meant diversity was not a problem but became a point of interest which allowed for differences of whichever sort.

In fact it appears that *diversity* has been used as an interchangeable term with the notion of *variation*. Of course by definition the term ‘variation’ suggests that something varies from a pre-determined norm, such as ‘best practice’. This study has shown that not only was each of the three primary care teams studied was different (diverse) but it did different things from the other two (demonstrating variation), depending on the focus of activity at that particular time. Therefore, it seems reasonable to suggest that difference, in terms of diversity *and* variation, is a key characteristic of primary care and associated activity or practice.

This research has shown that context is important and relevant in relation to collective learning because it shapes activity and therefore the content of collective learning. The apparently “uncontroversial observation” (Dopson and Fitzgerald, 2005b) that context is important actually has some arguably controversial implications for activities concerning theory, policy and practice through the explanation offered here as to how and why it is important.

The implication for theory is that organising and learning are intimately woven into the grain of inherently contextual activity or practice and as such cannot be separated,

managed and measured against pre-determined outcomes or indicators in the way some conceptualisations of organisational learning theory propose. In relation to practice-based cultural historical activity theory, Engeström wrote in the introduction to the 1999 German version of his book outlining the theory of expansive learning that more work was needed to identify the implications of activity theory ‘going global’ and being used in different cultures outside Finland where it originated. The findings presented here suggest that such work needs to be done regardless of the international element which has been introduced: the differences attributable to activity identified in three locations within one region of a small country, with a small population, suggest this may be a fruitful line of enquiry.

Given that the aspects of organisational learning theory drawn upon by policy makers in relation to healthcare tend to favour the reductionist approach to continuous improvement, this has implications for the activity of making that policy. Attempts by policy makers to reduce or even eradicate what tends to be unspecified diversity or variation (sometimes described as equity, but of what is often not clear) through the introduction of a variety of pre-determined outcomes and indicators (for example, access to services, admission rates, waiting times, clinical outcomes) have proved to be unstable and unpredictable in the everyday complexity of interlinked activities as demonstrated through this research.

The implications for the practice of primary healthcare are complex. That patterns of activity differ from one primary care team to another, as shown here, seems to tell practitioners something they already know (“every Practice is different”). But it offers insights to those practitioners to think about the influence of context in shaping the way they learn to be a practitioner and the content of their learning, and about how context shapes and is shaped by their ensuing collective activity, including how they organise their activity.

This raises issues of central importance in the practising of primary care, relating directly to the care of patients and the potentially contradictory effects that some aspects of context (as activity) have for each - and every - patient’s needs. The discussion around individual patient’s needs in each consultation (that the context of each patient should be accounted for) and the healthcare needs of the aggregated population tend to

mirror the dichotomous approach to learning and doing as operating at different levels as separate entities at the heart of healthcare policy. Practitioners find themselves confronted by a confusing picture of competing and contradictory aims, as discussed through the data presented here. The drive of policy makers to eradicate diversity and/or variation, and therefore by definition to encourage uniformity, results in notions such as quality becoming associated with uniformity. This is a contradictory situation for primary healthcare practitioners whose values, norms and practice itself associate quality with diversity, in the form of meeting the particular needs of particular patients in particular situations over time and across their registered population. Indeed, individual patient and Practice population seem to be fused within primary care activity, there is no artificial distinction. These values become contradicted in the face of evidence-based healthcare policy which is based on a reductionist epistemology and diminishes the “personal significance of both the doctor and patient” (Dopson and Fitzgerald, 2005a p.136), or indeed any other primary care practitioner engaged in activity, including the patient. Policy and primary care practice seem to have different objects of activity although ostensibly they share the same objectives. This sometimes results in confusion, fatigue, frustration and a “fixation with checking rather than doing” (Gray *et al.*, 2005 p.7), as some of the accounts of practitioners presented here attest.

From the perspective adopted in this research these implications for primary care practice have, in return, implications for policy. The rising contradictions described here between practising in primary care and policy making taking a reductionist approach to healthcare policy (which form two overarching, inter-linked activity systems), provide an opportunity for expansive learning. The empirical findings of this research suggest this may be underway although its future is as yet unclear.

Control and autonomy

The corollary of the drive to reduce diversity and/or variation in primary healthcare practice reflects an aspect of policy making activity which is often delegated to official bodies related to primary healthcare, such as health boards: the introduction and ‘implementation’ of measures to introduce uniform practice by exerting remote control over healthcare professionals’ practice. Sometimes termed ‘best practice’, this seems to reflect the view of those supporting an evidence-based approach to actual practice. Yet

what seems to be a helpful approach conceals hidden difficulties which are illuminated when the impact of context as part of activity or practice is considered.

The findings presented in this study suggest that the identification of a distal account of the optimum way to do something, or indeed of what should be done, may be at odds with the proximal experience of meeting the specific presenting needs of specific patients in their own settings. Sometimes, the two will coincide but there will also predictably be many occasions when they do not. This has implications for theory, policy and practice.

Depending on which conceptualisation of theory is under discussion, this observation has different implications. If organisational learning is conceptualised and studied as a separate entity through which continuous improvement in organisational performance may be planned and managed against pre-set criteria, which usually privileges the view of the activity of management over other forms of activity, the implication might be that the measures being used were inappropriate. This might suggest that new ways of exerting control over practitioners required to be identified and ways of implementing them considered. But if the view of inherently contextual activity and learning is adopted, the implications are fewer: the findings confirm what has already been found with regard to the relative benefits of viewing practice from distal and proximal perspectives. However, they also suggest that more needs to be done to understand the linkages between the twin-edged activities of practising the core activity (such as primary care) which provides the *raison d'être* of the organisation and the activity of organising of that core activity itself (usually management, but in relation to primary care this also involves policy making).

The implications of policy are self-evident: efforts to increase control are unlikely to work at best and at worst may create more unforeseen difficulties than they resolve. Attempting to spread what is 'best practice' in one situation to other situations is likely to have mixed fortunes. Indeed, the use of the term 'best' is unclear in policy (Francis and Holloway, 2007). It may mean the optimum way to do something, but it may also mean seeking to provide the best services in the situation or comparative to the services provided by all other healthcare providers. The lack of clarity around the use of the term means the notion is open to interpretation which in itself reduces control and provides

space for diversity, which in turn undermines the original aim. But more than anything else, the very nature of professional practice means control cannot be a viable aim when the mastery of practice involves exerting judgement in any given situation (Blackler and McDonald, 2000; Yanow, 2000; 2004).

In terms of practice, the implications are mixed. Whilst participating practitioners in this research were (very) supportive of improving the quality of service and practice, this reflected interpretations of practice which stemmed from their own inherently contextual activity. What counts as best or even good practice is predictably shaped by context. So while the basic science of medicine and healthcare interventions might have been established necessarily through reductionist methodologies, when these are enacted different attributes and practices apply. Practitioners acknowledged the necessity for professional judgement to be applied on a case-by-case basis and had a more nuanced approach to issues of quality of practice. They offered insights which suggested they were possibly more likely to identify sub-standard performance within their sphere of practice whilst acknowledging the need for appropriate levels of autonomy across professional groups commensurate with what was being done, by whom, where and when. This again has important implications in return for policy, as eloquently argued recently by Rhodes:

Governments fail because they are locked into power-dependent relations and because they must work with and through complex networks of actors and organizations. To adopt a command operating code builds failure into the design of the policy. Such centralization will be confounded by fragmentation and interdependence which, in turn, will prompt further bouts of centralization.

(Rhodes, 2007 p.1258)

This reflects an unfortunate situation: much of the performance of primary healthcare practice is carried out by professionals. By its very nature, professional work requires performers to exercise judgement based on their professional knowledge and experience. Autonomy is therefore an integral part of professional practice, yet it is something which seems at odds with the practice of policy makers. This provides another instance of tension between these two interlinked activity systems.

Issues of governance

The tensions identified through these implications of the finding that context is important in relation to activity and learning coalesce around the central concept of governance. Another contested notion, it is in this concept that the seat of many of these tensions is located. As indicated at the beginning of this research, current healthcare policy seeks to “improve” the “quality” of healthcare services, including primary care, by means of various mediating means including a framework of clinical governance. This is directly relevant to the topic of this thesis as the clinical governance framework is where health policy efforts to promote organisational learning have been shown to reside (Sheaff and Pilgrim, 2006). Through this mechanism, amongst other things policy makers seem to be promoting uniformity (although of what exactly is unclear, as discussed above) in the face of necessary and actual diversity of practice and exerting control which has the unfortunate effect of hindering necessary professional autonomy. Indeed, the term (clinical) ‘governance’ had been:

...officially appropriated to refer to a set of rather hierarchical arrangements for controlling members of the medical profession.

(Harrison, 1999a p.12)

The findings presented here demonstrate that the efforts by policy makers, and the managers to whom they delegate the task, of controlling by remote means actual local activity and practice is doomed to failure as suggested by a growing body of social science research (for example, see Bevir, 2004; Dopson and Fitzgerald, 2005a; Hood, 2006; Morrell, 2006). There are growing acknowledgements that activity and practice, including the practice of politics, are decentred phenomena which cannot be controlled through the metaphor of machinery. As demonstrated here, the contextual filtration and translation of ideas, policies and practices ensures that outcomes may be at best unpredictable. The implications of this trend are that once again, contradictions between these two activity systems of policy and practice are becoming so strong that it is possible to suggest a double bind (Bateson, 1972b) is ensuing.

The importance of this for theory, policy and practice should not be underestimated. In terms of theory, this offers an opportunity to gain more understanding of some of the fundamental issues of organising, about power and control, in an area of activity which transcends corporate governance as understood and implemented in the world of private business. However, the corporate model has been embraced since the 1980s in the organisation of publicly funded services (Johnsen, 2005), and this takes the issues of context, learning, activity, and organising of activity, straight to the heart of the relationship between the individual and civic society. Calls for an alternative approach are growing which suggests the approach which conceptualises learning as integral to inherently contextual practice or activity may be a promising place to start:

An interpretive turn encourages us to give up management techniques and strategies for a practice of learning by telling stories and listening to them. While statistics, models and claims to expertise all have a place within such stories, we should not become too preoccupied with them. On the contrary, we should recognize that they too are narratives about how people have acted or will react given their beliefs and desires... Decentred narratives offer a different approach to policy advice. Instead of revealing policy consequences through insights into a social logic or law-like regularities, they enable policy makers to see things differently; they exhibit new connections within governance and new aspects of governance. In short, a decentred approach treats policy advice as stories that enable listeners to see governance afresh.

(Rhodes, 2007 p.1257)

Purpose and intentionality

The findings presented here have enabled empirical study of “the relationships between local practices that contextualise the ways people act together, both in and across contexts” (Lave, 1993 p.22). It seems the acknowledgement of the problems caused by reductionist approaches to such complex and complicated areas of activity or practice may lead to a fundamental re-think of the way organising, learning and practising relate to one another. This would require consideration of the intentions of the various parties involved. This opens up new and arguably problematic avenues of discussion and issues for consideration, including intentionality:

The problem of intentionality is that of understanding the relation obtaining between a mental state, or its expression, and the things it is about... Intentional relations seem to depend on how the object is specified or... on the mode of presentation of the object.

(Oxford Dictionary of Philosophy, 2005 pp.188-189)

This has obvious implications for theory, policy and practice as the whole basis of the way things are done in today's society, at least in the UK, would require to be revisited. But this may be a process which has begun as tensions heighten in the way demonstrated through the findings of this research. The adoption of an activity theoretical lens to analyse the importance of context in collective learning raises such fundamental questions about abstract concepts such as intentions, context and variation which may otherwise be regarded with a measure of "false concreteness" (Bateson, 1941). Therefore, the "problem of intentionality" (Oxford Dictionary of Philosophy, 2005) seems to be a partner for the "problem of context" (Lave, 1993):

...people's intentions are the product of local and situated – as opposed to autonomous and universal – reasoning.

(Bevir, 2004 p.614)

So, context is a problem only if one seeks to eliminate it from aspects of the social world, such as the practice of primary healthcare. But as already indicated when considering the implications of the findings presented here, this approach becomes more problematic when applied to social phenomena such as the practice of primary healthcare, characterised by variation between teams. Whether or not a problem with such variation exists depends upon the interpretation of variation, in itself an abstraction (Bateson, 1941). A problem only exists if there is perceived to be a pre-determined correct position, which would permit variation from the norm (Bevir, 2000). Seeking to utilise predicate calculus as a form of logic to generate theory about inherently contextual situation-specific phenomena becomes a problem in itself - an inappropriate use of such logic (Bourdieu, 1977; Flyvbjerg, 2001).

So things have come full circle. Context does seem to be important in collective learning because it filters, translates and shapes activity, and therefore the content, of collective learning. This is anything but uncontroversial. The implications arising from these albeit limited findings suggest a lively future research agenda.

Applications for future research agenda

A variety of ideas for future research arise from the work presented here. These have been alluded to in the fore-going discussion of implications arising from the findings presented here, including the following:

- Further research relating to the implications for the theory of expansive learning of differences between practice or activity across different contexts to identify issues related to local culture and the filtering effects of context.
- Further studies into the linkages between two activities: the activity of organising, including management as it is currently popularly understood, and its related core activity for which the organisation exists (for example, in healthcare the clinical work to meet the healthcare needs of patients and the management and organisation of the services which exist to undertake that clinical work).
- Further research is needed into the issue of governance (not only corporate governance) from a practice-based perspective in order to understand the implications of the ever-increasing tensions and contradictions between simultaneous centralised forms of organisation and decentralised forms of work respectively.

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